

J - PIN VOLTAGE CHARTS

1998 Toyota Supra

1998 ENGINE PERFORMANCE
Toyota - Pin Voltage Charts

Avalon, Camry, Celica, Corolla, Land Cruiser, LX470, RAV4,
Sienna, Supra, Tacoma, Tercel, T100, 4Runner

INTRODUCTION

Pin voltage charts are used for diagnosing intermittent symptoms and faults that are unable to be resolved during self-diagnostics. Pin voltage tests ensure the Engine Control Module (ECM) is receiving and transmitting proper voltage and other signals. Before performing pin voltage tests, ensure engine mechanical condition has been thoroughly inspected and self-diagnostics has been attempted. Technical Service Bulletins (TSBs) may also be helpful in correcting a hard to diagnose problem.

NOTE: Unless stated otherwise in testing procedures, perform all voltage tests using a Digital Volt-Ohmmeter (DVOM) with a minimum 10-megohm input impedance. Voltage readings may vary slightly due to battery condition or charging rate.

CAUTION: When battery is disconnected, vehicle computer and memory systems may lose memory data. Driveability problems may exist until computer systems have completed a relearn cycle.

ENGINE CONTROL MODULE LOCATION

For Engine Control Module (ECM) location, see ECM LOCATION table.

ECM LOCATION TABLE

Model	Location
Avalon & Camry	Behind Glove Box
Celica	Below Passenger's Side Of Instrument Panel, Underneath Carpet Near Center Console
Corolla	Behind Stereo On Instrument Panel, Just In Front Of Center Console
Land Cruiser & LX470	Above Glove Box, Near Passenger's Side Of Instrument Panel
RAV4	Behind Instrument Panel, Near Front Of Center Console
Sienna	Passenger's Side Of Instrument Panel, Just Below Glove Box
Supra	Below Passenger's Side Of Instrument Panel, Underneath Carpet On The Floor, Below Glove Box
Tacoma & Tercel	Behind Glove Box
T100	Behind Passenger's Side Kick Panel
4Runner	Behind Glove Box

NOTE: On Avalon and Camry equipped with engine Immobilizer system and Land Cruiser and LX470, if ECM is replaced, ECM must be programmed with proper ignition key code for engine Immobilizer system. For programming procedures, see appropriate ENGINE IMMOBILIZER SYSTEMS article in ACCESSORIES/SAFETY EQUIPMENT section.

PIN VOLTAGE CHARTS

PIN VOLTAGE CHART INDEX

For appropriate pin voltage chart figure reference, see PIN VOLTAGE CHART INDEX table.

PIN VOLTAGE CHART INDEX TABLE

Model	Figs. No.
Avalon	1-6
Camry	
2.2L 4-Cyl.	7-12
3.0L V6	13-18
Celica	19 & 20
Corolla	21 & 22
Land Cruiser & LX470	23-25
RAV4	26 & 27
Sienna	28-30
Supra	
Non-Turbo	31 & 32
Turbo	33-35
Tacoma	
2.4L 4-Cyl. & 2.7L 4-Cyl.	36 & 37
3.4L V6	38 & 39
Tercel	40 & 41
T100	
2.7L 4-Cyl.	42 & 43
3.4L V6	44 & 45
4Runner	
2.7L 4-Cyl.	46 & 47
3.4L V6	48 & 49

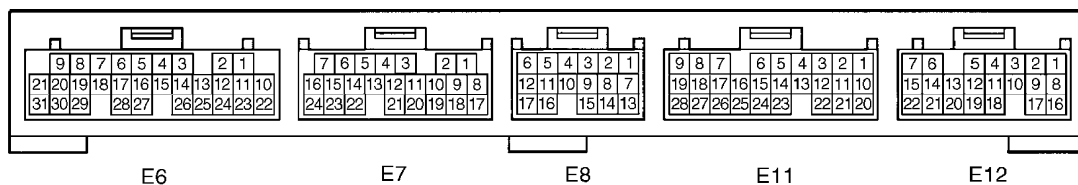
NOTE: When using pin voltage chart, it may be necessary to determine wire color by using wire color abbreviation. See WIRE COLOR ABBREVIATIONS table.

WIRE COLOR ABBREVIATIONS (1) TABLE

Color Code	Wire Color
B	Black
BR	Brown
G	Green
GR	Gray
L	Blue
LG	Light Green
O	Orange
P	Pink
R	Red
V	Violet
W	White
Y	Yellow

(1) - Example: L-Y is a Blue wire with a Yellow tracer.

NOTE: For wiring circuit identification, see appropriate wiring diagram in L - WIRING DIAGRAMS article.



Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
BATT (E12 - 1) - E1 (E7 - 17)	B-Y ↔ BR	Always	9 ~ 14
+B (E12 - 16) - E1 (E7 - 17)	LG ↔ BR	IG switch ON	9 ~ 14
VC (E7 - 2) - E2 (E7 - 18)	L-R ↔ BR	IG switch ON	4.5 ~ 5.5
VTA1 (E7 - 23) - E2 (E7 - 18)	B-Y ↔ BR	IG switch ON Throttle valve fully closed	0.3 ~ 1.0
		IG switch ON Throttle valve fully open	3.2 ~ 4.9
VG (E7 - 10) - E2G (E7 - 19)	R ↔ R-B	Idling , A/C switch OFF	1.1 ~ 1.5
THA (E7 - 22) - E2 (E7 - 18)	L-B ↔ BR	Idling, Intake air temp. 20°C (68°F)	0.5 ~ 3.4
THW (E7 - 14) - E2 (E7 - 18)	G-B ↔ BR	Idling, Engine coolant temp. 80°C (176°F)	0.2 ~ 1.0
STA (E12 - 7) - E1 (E7 - 17)	B-R ↔ BR	Cranking	6.0 or more
#10 (E7 - 5) - E01 (E6 - 21)	W ↔ W-B	IG switch ON	9 ~ 14
		Idling	Pulse generation
#20 (E7 - 6) - E01 (E6 - 21)	Y ↔ W-B	IG switch ON	9 ~ 14
		Idling	Pulse generation
#30 (E6 - 1) - E01 (E6 - 21)	B ↔ W-B	IG switch ON	9 ~ 14
		Idling	Pulse generation
#40 (E6 - 2) - E01 (E6 - 21)	L ↔ W-B	IG switch ON	9 ~ 14
		Idling	Pulse generation
#50 (E6 - 3) - E01 (E6 - 21)	R ↔ W-B	IG switch ON	9 ~ 14
		Idling	Pulse generation
#60 (E6 - 4) - E01 (E6 - 21)	G ↔ W-B	IG switch ON	9 ~ 14
		Idling	Pulse generation
IGT1 (E6 - 11) - E1 (E7 - 17)	L-B ↔ BR	Idling	Pulse generation
IGT2 (E6 - 12) - E1 (E7 - 17)	Y-R ↔ BR	Idling	Pulse generation
IGT3 (E6 - 13) - E1 (E7 - 17)	G-R ↔ BR	Idling	Pulse generation

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Fig. 1: Pin Voltage Chart (Avalon - All Calif. Emission Vehicles & Except. Calif. Emission Vehicles With Engine Immobilizer System &/Or TRAC System - 1 Of 3)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
IGF (E6 - 25) - E1 (E7 - 17)	W-R ↔ BR	IG switch ON	4.5 ~ 5.5
		Idling	Pulse generation
THG (E7 - 13) - E2 (E7 - 18)	G-R ↔ BR	IG switch ON	4.5 ~ 5.5
G22+ (E6 - 10) - NE- (E7 - 24)	B-W ↔ L	Idling	Pulse generation
NE+ (E7 - 16) - NE- (E7 - 24)	B-R ↔ L	Idling	Pulse generation
ELS (E12 - 19) - E1 (E7 - 17)	G ↔ BR	Taillight switch ON	7.5 ~ 14
		Taillight switch OFF	0 ~ 1.5
ELS2 (E12 - 18) - E1 (E7 - 17)	B-R ↔ BR	Defogger switch ON	7.5 ~ 14
		Defogger switch OFF	0 ~ 1.5
EGR (E6 - 18) - E01 (E6 - 21)	B-W ↔ W-B	IG switch ON	9 ~ 14
ACIS (E6 - 17) - E01 (E6 - 21)	R-Y ↔ W-B	IG switch ON	9 ~ 14
FC (E12 - 3) - E01 (E6 - 21)	G ↔ W-B	IG switch ON	9 ~ 14
		Idling	0 ~ 3.0
EVP (E7 - 7) - E01 (E6 - 21)	B-R ↔ W-B	IG switch ON	9 ~ 14
RSC (E6 - 15) - E01 (E6 - 21)	Y-B ↔ W-B	IG switch ON Disconnect E6 of ECM connector	9 ~ 14
RSO (E6 - 16) - E01 (E6 - 21)	G-B ↔ W-B	IG switch ON Disconnect E6 of ECM connector	9 ~ 14
OXR (E7 - 11) *1 - E1 (E7 - 17)	W ↔ BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
OXL (E7 - 12) *1 - E1 (E7 - 17)	R-L ↔ BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
OXS (E11 - 8) - E1 (E7 - 17)	B ↔ BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
HTL (E7 - 4) *1 - E03 (E6 - 30)	L-R ↔ W-B	Idling	9 ~ 14
		IG switch ON	Below 3.0
HTR (E7 - 3) *1 - E03 (E6 - 30)	L-B ↔ W-B	Idling	9 ~ 14
		IG switch ON	Below 3.0
HTS (E11 - 9) *1 - E03 (E6 - 30)	P-B ↔ W-B	Idling	9 ~ 14
		IG switch ON	Below 3.0
KNKR (E6 - 27) - E1 (E7 - 17)	W ↔ BR	Idling	Pulse generation
KNKL (E6 - 28) - E1 (E7 - 17)	W ↔ BR	Idling	Pulse generation
NSW (E11 - 20) - E1 (E7 - 17)	B-W ↔ BR	IG switch ON Other shift position in "P", "N" position	9 ~ 14
		IG switch ON Shift position in "P", "N" position	0 ~ 3.0
SPD (E11 - 22) - E1 (E7 - 17)	V-W ↔ BR	IG switch ON Rotate driving wheel slowly	Pulse generation
TC (E6 - 6) - E1 (E7 - 17)	L-W ↔ BR	IG switch ON	9 ~ 14
W (E12 - 6) - E01 (E6 - 21)	G-R ↔ W-B	IG switch ON	Below 3.0

*1- Except California emission vehicles.

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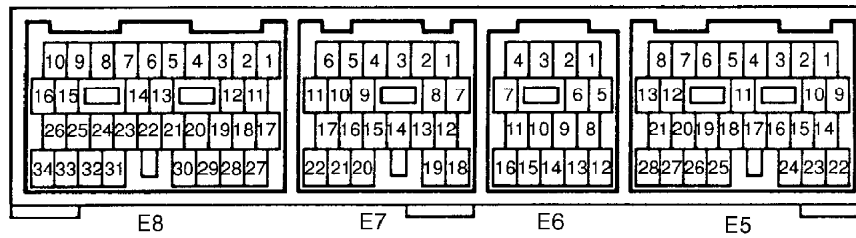
Fig. 2: Pin Voltage Chart (Avalon - All Calif. Emission Vehicles & Except. Calif. Emission Vehicles With Engine Immobilizer System &/Or TRAC System - 2 Of 3)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
PS (E7 - 9) - E1 (E7 - 17)	P-B ↔ BR	IG switch ON	9 ~ 14
ACT (E11 - 13) - E1 (E7 - 17)	LG-B ↔ BR	A/C switch OFF	Below 2.0
		A/C switch ON at idling	9 ~ 14
A/C (E11 - 25) - E1 (E7 - 17)	B-Y ↔ BR	A/C switch ON at idling	Below 2.0
		A/C switch OFF	9 ~ 14
CF (E6 - 29) - E1 (E7 - 17)	B-Y ↔ BR	Electric cooling fan is operating on high speed	9 ~ 14
		Electric cooling fan is operating on low speed or OFF	0 ~ 2
TACH (E11 - 27) - E1 (E7 - 17)	B ↔ BR	Idling	Pulse generation
TPC (E12 - 9) - E01 (E6 - 21)	W-L ↔ W-B	IG switch ON Disconnect the vacuum hose from the vapor pressure sensor	9 ~ 14
PTNK (E12 - 17) - E1 (E7 - 17)	P ↔ BR	IG switch ON	3.0 ~ 3.6
		IG switch ON Apply vacuum 2.0 kPa (15 mmHg, 0.6 in.Hg)	1.3 ~ 2.1
SIL (E12 - 11) - E1 (E7 - 17)	W ↔ BR	During transmission	Pulse generation
STP (E12 - 15) - E1 (E7 - 17)	G-W ↔ BR	IG switch ON Brake pedal depressed	7.5 ~ 14
		IG switch ON Brake pedal released	Below 1.5
EGLS (E6 - 22) - E1 (E7 - 17)	R-W ↔ BR	IG switch ON Apply vacuum (0 kPa, 0 mmHg, 0 in.Hg) to EGR valve	0.4 ~ 1.6
		IG switch ON Apply vacuum (17.3 kPa, 130 mmHg, 5.12 in.Hg) to EGR valve	3.2 ~ 5.1
AFR+ (E7 - 11) - E1 (E7 - 17) *1	B-W ↔ BR	IG switch ON	*2 3.3
AFR- (E7 - 20) - E1 (E7 - 17) *1	L ↔ BR	IG switch ON	*2 3.0
AFL+ (E7 - 12) - E1 (E7 - 17) *1	BR ↔ BR	IG switch ON	*2 3.3
AFL- (E7 - 21) - E1 (E7 - 17) *1	B-R ↔ BR	IG switch ON	*2 3.0
HAFR (E7 - 3) - E04 (E7 - 1) *1	L-R ↔ W-B	Idling	Below 3.0
		IG switch ON	9 ~ 14
HAFL (E7 - 4) - E05 (E7 - 8) *1	B-R ↔ W-B	Idling	Below 3.0
		IG switch ON	9 ~ 14
KSW (E8 - 11) - E1 (E7 - 17)	R-Y ↔ BR	At the time of inserting the key	Below 1.5
		In the condition without the key inserted	4 ~ 5
RXCK (E8 - 5) - E1 (E7 - 17)	Y ↔ BR	At the time of inserting the key	Pulse generation
CODE (E8 - 4) - E1 (E7 - 17)	B-R ↔ BR	At the time of inserting the key	Pulse generation
IGSW (E12 - 2) - E1 (E7 - 17)	B-O ↔ BR	IG switch ON	9 ~ 14
TXCT (E8 - 10) - E1 (E7 - 17)	G ↔ BR	At the time of inserting the key	Pulse
IMLD (E8 - 16) - E1 (E7 - 17)	V ↔ BR	In the condition without the key inserted	Pulse
MREL (E12 - 8) - E1 (E7 - 17)	B-O ↔ BR	IG switch ON	9 ~ 14

*1 - California emission vehicles.

*2 - ECM terminal voltage is fixed regardless of output voltage from the sensor.

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Fig. 3: Pin Voltage Chart (Avalon - All Calif. Emission Vehicles & Except. Calif. Emission Vehicles With Engine Immobilizer System &/Or TRAC System - 3 Of 3)
Courtesy of Toyota Motor Sales, U.S.A., Inc.



Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
BATT (E5 - 14) - E1 (E6 - 16)	B-Y ↔ BR	Always	9 ~ 14
+B (E5 - 23) - E1 (E6 - 16)	LG ↔ BR	IG switch ON	9 ~ 14
VC (E7 - 1) - E2 (E7 - 22)	L-R ↔ BR	IG switch ON	4.5 ~ 5.5
VTA (E7 - 7) - E2 (E7 - 22)	B-Y ↔ BR	IG switch ON Throttle valve fully closed	0.3 ~ 1.0
		IG switch ON Throttle valve fully open	3.2 ~ 4.9
VG (E7 - 8) - E2G (E6 - 7)	R ↔ R-B	Idling, A/C switch OFF	1.1 ~ 1.5
THA (E7 - 21) - E2 (E7 - 22)	L-B ↔ BR	Idling, Intake air temp. 20°C (68°F)	0.5 ~ 3.4
THW (E7 - 20) - E2 (E7 - 22)	G-B ↔ BR	Idling, Engine coolant temp. 80°C (176°F)	0.2 ~ 1.0
STA (E8 - 13) - E1 (E6 - 16)	B-R ↔ BR	Cranking	6.0 or more
#10 (E8 - 10) - E01 (E8 - 34)	W ↔ W-B	IG switch ON	9 ~ 14
		Idling	Pulse generation
#20 (E8 - 9) - E01 (E8 - 34)	Y ↔ W-B	IG switch ON	9 ~ 14
		Idling	Pulse generation
#30 (E8 - 8) - E01 (E8 - 34)	B ↔ W-B	IG switch ON	9 ~ 14
		Idling	Pulse generation
#40 (E8 - 7) - E01 (E8 - 34)	L ↔ W-B	IG switch ON	9 ~ 14
		Idling	Pulse generation
#50 (E8 - 6) - E01 (E8 - 34)	R ↔ W-B	IG switch ON	9 ~ 14
		Idling	Pulse generation
#60 (E8 - 5) - E01 (E8 - 34)	G ↔ W-B	IG switch ON	9 ~ 14
		Idling	Pulse generation
IGT1 (E8 - 24) - E1 (E6 - 16)	L-B ↔ BR	Idling	Pulse generation
IGT2 (E8 - 16) - E1 (E6 - 16)	Y-R ↔ BR	Idling	Pulse generation

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Fig. 4: Pin Voltage Chart (Avalon - Except. Calif. Emission Vehicles Without Engine Immobilizer System &/Or TRAC System - 1 Of 3)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
IGT3 (E8 - 15) - E1 (E6 - 16)	G-R ↔ BR	Idling	Pulse generation
IGF (E8 - 12) - E1 (E6 - 16)	W-R ↔ BR	IG switch ON	4.5 ~ 5.5
THG (E6 - 14) - E2 (E7 - 22)	G-R ↔ BR	IG switch ON	4.5 ~ 5.5
G22+ (E7 - 17) - NE- (E7 - 6)	B-W ↔ L	Idling	Pulse generation
NE+ (E7 - 5) - NE- (E7 - 6)	B-R ↔ L	Idling	Pulse generation
ELS (E5 - 3) - E1 (E6 - 16)	G ↔ BR	Taillight switch ON	7.5 ~ 14
		Taillight switch OFF	0 ~ 1.5
ELS2 (E5 - 2) - E1 (E6 - 16)	B-R ↔ BR	Defogger switch ON	7.5 ~ 14
		Defogger switch OFF	0 ~ 1.5
EGR (E6 - 12) - E01 (E8 - 34)	B-W ↔ W-B	IG switch ON	9 ~ 14
ACIS (E6 - 6) - E01 (E8 - 34)	R-Y ↔ W-B	IG switch ON	9 ~ 14
FC (E7 - 18) - E1 (E6 - 16)	G ↔ BR	IG switch ON	9 ~ 14
		Idling	0 ~ 3.0
EVP (E6 - 2) - E01 (E8 - 34)	B-R ↔ W-B	IG switch ON	9 ~ 14
RSC (E8 - 22) - E01 (E8 - 34)	Y-B ↔ W-B	IG switch ON	9 ~ 14
		Disconnect E8 of ECM connector	
RSO (E8 - 23) - E01 (E8 - 34)	G-B ↔ W-B	IG switch ON	9 ~ 14
		Disconnect E8 of ECM connector	
OXR (E7 - 13) - E1 (E6 - 16)	W ↔ BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
OXL (E7 - 19) - E1 (E6 - 16)	R-L ↔ BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
OXS (E5 - 18) - E1 (E6 - 16)	B ↔ BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
HTL (E6 - 10) - E03 (E8 - 28)	L-R ↔ W-B	Idling	9 ~ 14
		IG switch ON	Below 3.0
HTR (E6 - 11) - E03 (E8 - 28)	L-B ↔ W-B	Idling	9 ~ 14
		IG switch ON	Below 3.0
HTS (E5 - 17) - E03 (E8 - 28)	P-B ↔ W-B	Idling	9 ~ 14
		IG switch ON	Below 3.0
KNKR (E7 - 15) - E1 (E6 - 16)	W ↔ BR	Idling	Pulse generation
KNKL (E7 - 14) - E1 (E6 - 16)	W ↔ BR	Idling	Pulse generation
NSW (E8 - 14) - E1 (E6 - 16)	B-W ↔ BR	IG switch ON Other shift position in "P", "N" position	9 ~ 14
		IG switch ON Shift position in "P", "N" position	0 ~ 3.0
SPD (E5 - 12) - E1 (E6 - 16)	V ↔ BR	IG switch ON Rotate driving wheel slowly	Pulse generation
TC (E6 - 5) - E1 (E6 - 16)	L ↔ BR	IG switch ON	9 ~ 14

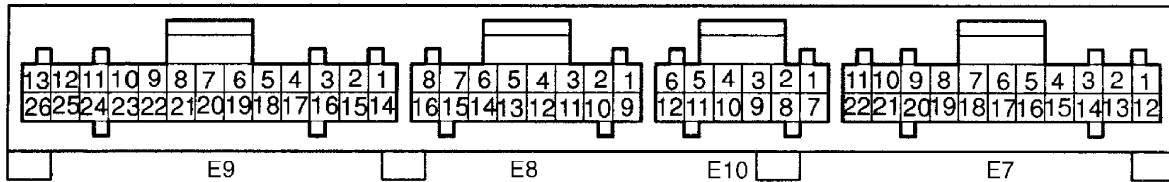
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Fig. 5: Pin Voltage Chart (Avalon - Except. Calif. Emission Vehicles
Without Engine Immobilizer System &/Or TRAC System - 2 Of 3)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
W (E6 – 3) – E1 (E6 – 16)	G–R ↔ BR	IG switch ON	Below 3.0
PS (E8 – 31) – E1 (E6 – 16)	P–B ↔ BR	IG switch ON	9 ~ 14
ACT (E5 – 5) – E1 (E6 – 16)	P ↔ BR	A/C switch OFF	Below 2.0
		A/C switch ON at idling	9 ~ 14
A/C (E5 – 16) – E1 (E6 – 16)	B–Y ↔ BR	A/C switch ON at idling	Below 2.0
		A/C switch OFF	9 ~ 14
CF (E6 – 9) – E1 (E6 – 16)	B–Y ↔ BR	Electric cooling fan is operating on high speed	9 ~ 14
		Electric cooling fan is operating on low speed or OFF	0 ~ 2
TACH (E5 – 13) – E1 (E6 – 16)	B ↔ BR	Idling	Pulse generation
TPC (E6 – 8) – E1 (E6 – 16)	W–L ↔ BR	IG switch ON Disconnect the vacuum hose from the vapor pressure sensor	9 ~ 14
PTNK (E6 – 13) – E1 (E6 – 16)	P ↔ BR	IG switch ON	3.0 ~ 3.6
		IG switch ON	1.3 ~ 2.1
		Apply vacuum 2.0 kPa (15 mmHg, 0.6 in.Hg)	
SIL (E5 – 8) – E1 (E6 – 16)	W ↔ BR	During transmission	Pulse generation
STP (E5 – 24) – E1 (E6 – 16)	G–W ↔ BR	IG switch ON Brake pedal depressed	7.5 ~ 14
		IG switch ON Brake pedal released	Below 1.5
EGLS (E6 – 15) – E1 (E6 – 16)	R–W ↔ BR	IG switch ON Apply vacuum (0 kPa, 0 mmHg, 0 in.Hg) to EGR valve	0.4 ~ 1.6
		IG switch ON Apply vacuum (17.3 kPa, 130 mmHg, 5.12 in.Hg) to EGR valve	3.2 ~ 5.1

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Fig. 6: Pin Voltage Chart (Avalon Except. Calif. Emission Vehicles
Without Engine Immobilizer System &/Or TRAC System – 3 Of 3)
Courtesy of Toyota Motor Sales, U.S.A., Inc.



Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
BATT (E7 - 2) - E1 (E9 - 24)	B - Y ↔ BR	Always	9 ~ 14
+ B (E7 - 12) - E1 (E9 - 24)	B - Y ↔ BR	IG switch ON	9 ~ 14
VC (E8 - 1) - E2 (E8 - 9)	Y ↔ BR	IG switch ON	4.5 ~ 5.5
VTA (E8 - 10) - E2 (E8 - 9)	LG ↔ BR	IG switch ON Throttle valve fully closed	0.3 ~ 1.0
		IG switch ON Throttle valve fully open	3.2 ~ 4.9
PIM (E8 - 2) - E2 (E8 - 9)	B - Y ↔ BR	IG switch ON	3.3 ~ 3.9
		Apply vacuum 26.7 kPa (200 mmHg, 7.9 in. Hg)	2.5 ~ 3.1
THA (E8 - 3) - E2 (E8 - 9)	Y - B ↔ BR	Idling, Intake air temp. 20°C (68°F)	0.5 ~ 3.4
THW (E8 - 4) - E2 (E8 - 9)	G - B ↔ BR	Idling, Engine coolant temp. 80°C (176°F)	0.2 ~ 1.0
STA (E7 - 11) - E1 (E9 - 24)	*1 GR ↔ BR	Cranking	6.0 or more
	*2 B - O ↔ BR	Cranking	6.0 or more
#10 (E9 - 12) - E01 (E9 - 13)	L ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#20 (E9 - 11) - E01 (E9 - 13)	R ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#30 (E9 - 10) - E01 (E9 - 13)	Y ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#40 (E9 - 9) - E01 (E9 - 13)	W ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
IGT1 (E9 - 23) - E1 (E9 - 24)	B ↔ BR	Idling	Pulse generation
IGT2 (E9 - 22) - E1 (E9 - 24)	Y - R ↔ BR	Idling	Pulse generation
IGF (E9 - 17) - E1 (E9 - 24)	W - R ↔ BR	IG switch ON, Disconnect ignition coil connector	4.5 ~ 5.5
		Idling	Pulse generation

*1 - Toyota Motor Corporation (TMC) vehicles.

*2 - Toyota Motor Manufacturing Kentucky (TMMK) vehicles.

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Fig. 7: Pin Voltage Chart (Camry 2.2L 4-Cyl. With Engine Immobilizer System - 1 Of 3)

Courtesy of Toyota Motor Sales, U.S.A., Inc.

G \oplus (E10 – 11) – NE \ominus (E10 – 6)	B – W \leftrightarrow L	Idling	Pulse generation
NE \oplus (E10 – 12) – NE \ominus (E10 – 6)	B – R \leftrightarrow L	Idling	Pulse generation
FC (E7 – 14) – E01 (E9 – 13)	G – R \leftrightarrow BR	IG switch ON	9 ~ 14
EGR (E8 – 15) – E01(E9 – 13)	P – B \leftrightarrow BR	IG switch ON	0 ~ 3
RSC (E9 – 6) – F01 (E9 – 13)	B – O \leftrightarrow BR	IG switch ON Disconnect E9 of ECM connector	9 ~ 4
RSO (E9 – 7) – E01(E9 – 13)	W \leftrightarrow BR	IG switch ON Disconnect E9 of ECM connector	Below 3.0
*1 OX1 (E8 – 5) – E1 (E9 – 24)	W \leftrightarrow BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
OX2 (E8 – 13) – E1 (E9 – 24)	B \leftrightarrow BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
*1 HT1 (E9 – 1) – E1 (E9 – 24)	L – Y \leftrightarrow BR	Idling IG switch ON	Below 3.0 9 ~ 14
HT2 (E9 – 14) – E1 (E9 – 24)	P – B \leftrightarrow BR	Idling IG switch ON	Below 3.0 9 ~ 14
KNK (E8 – 12) – E1 (E9 – 24)	W \leftrightarrow BR	Idling	Pulse generation
*2 NSW (E7 – 22) – E1 (E9 – 24)	B – W \leftrightarrow BR	IG switch ON Other shift position in "P", "N" position IG switch ON Shift position in "P", "N" position	9 ~ 14 0 ~ 3.0
SPD (E7 – 8) – E1 (E9 – 24)	V – W \leftrightarrow BR	IG switch ON Rotate driving wheel slowly	Pulse generation
TE1 (E8 – 7) – E1 (E9 – 24)	L – W \leftrightarrow BR	IG switch ON	9 ~ 14
W (E7 – 4) – E1 (E9 – 24)	G – R \leftrightarrow BR	Idling IG switch ON	9 ~ 14 Below 3.0
EVP (E9 – 3) – E1 (E9 – 24)	V – W \leftrightarrow BR	IG switch ON	9 ~ 14
TPC (E8 – 16) – E1 (E9 – 24)	V \leftrightarrow BR	IG switch ON	9 ~ 14
PTNK (E8 – 8) – E2 (E8 – 9)	P \leftrightarrow BR	IG switch ON, Disconnect vacuum hose from vapor pressure sensor Apply vacuum (less than 66.7 kPa, 500 mmHg, 19.7 in.Hg)	2.9 ~ 3.7 Below 0.5
*3 AF \oplus (E8 – 6) – E1 (E9 – 24)	W \leftrightarrow BR	Always (IG switch ON)	*4 3.3 fixed*4
*3 AF \ominus (E8 – 14) – E1 (E9 – 24)	O \leftrightarrow BR	Always (IG switch ON)	*4 3.0 fixed*4

*1 - Except California emission vehicles.

*2 - A/T models only.

*3 - California emission vehicles.

*4 - ECM terminal voltage is fixed regardless of output voltage from the sensor.

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Fig. 8: Pin Voltage Chart (Camry 2.2L 4-Cyl. With Engine Immobilizer System – 2 Of 3)

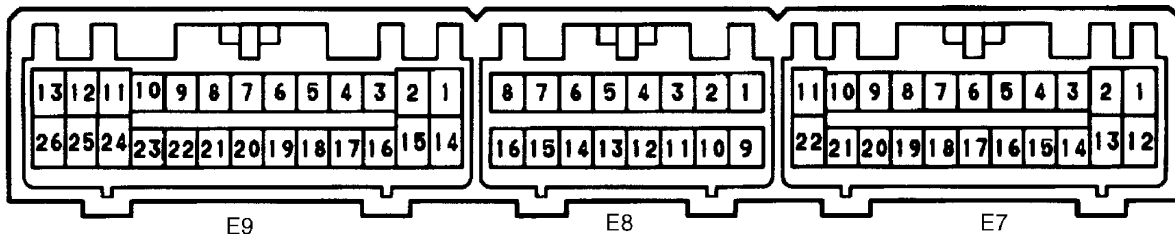
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
*1 HTAF (E9 - 2) - E04 (E9 - 15)	G ↔ BR	Idling	Below 3.0
		IG switch ON	9 ~ 14
LOCK IN (E9 - 19) - E1 (E9 - 24)	W - L ↔ BR	A/C compressor is operating	Pulse generation
LOCK (E7 - 20) - E1 (E9 - 24)	R - W ↔ BR	A/C indicator light lights up	Below 4.0
		A/C indicator light does not lights up	Below 1.0
A/C SW (E7 - 10) - E1 (E9 - 24)	R - B ↔ BR	A/C switch ON	9 ~ 14
		A/C switch OFF	Below 1.0
PRS (E7 - 19) - E1 (E9 - 24)	G ↔ BR	A/C pressure is normally	Below 1.0
THR (E8 - 11) - E2 (E8 - 9)	L - R ↔ BR	IG switch ON, A/C evaporator temp. 0°C (32°F)	2.2 ~ 2.6
		IG switch ON, A/C evaporator temp. 15°C (59°F)	1.4 ~ 1.8
MGC (E7 - 21) - E01 (E9 - 13)	L - Y ↔ BR	A/C magnetic clutch ON	Below 1.0
		A/C magnetic clutch OFF	9 ~ 14
*2 STP (E7 - 9) - E1 (E9 - 24)	G - W ↔ BR	IG switch ON, Brake pedal depressed	7.5 ~ 14
		IG switch ON, Brake pedal released	Below 1.5
ELS (E7 - 13) - E1 (E9 - 24)	B - R ↔ BR	Defogger switch and taillight switch ON	7.5 ~ 14
		Defogger switch and taillight switch OFF	Below 1.5
PSSW (E9 - 4) - E1 (E9 - 24)	B - L ↔ BR	IG switch ON	9 ~ 14
		At idling, turn steering wheel to lock position	Below 3.0
SIL (E7 - 6) - E1 (E9 - 24)	W ↔ BR	During transmission	Pulse generation
TACH (E7 - 7) - E1 (E9 - 24)	B - O ↔ BR	Idling	Pulse generation
KSW (E10 - 4) - E1 (E9 - 24)	L - B ↔ BR	At the time of inserting the key	Below 1.5
		In the condition without the key inserted	Pulse generation
RXCK (E10 - 3) - E1 (E9 - 24)	R - L ↔ BR	At the time of inserting the key	Pulse generation
CODE (E10 - 8) - E1 (E9 - 24)	G - W ↔ BR	At the time of inserting the key	Pulse generation
TXCT (E10 - 9) - E1 (E9 - 24)	L - Y ↔ BR	At the time of inserting the key	Pulse generation
IMLD (E10 - 1) - E1 (E9 - 24)	R - Y ↔ BR	In the condition without the key inserted	Pulse generation
MREL (E10 - 7) - E1 (E9 - 24)	B - W ↔ BR	IG switch ON	9 ~ 14
IGSW (E7 - 1) - E1 (E9 - 24)	B - R ↔ BR	IG switch ON	9 ~ 14

*1 - California emission vehicles.

*2 - A/T models only.

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Fig. 9: Pin Voltage Chart (Camry 2.2L 4-Cyl. With Engine Immobilizer System - 3 Of 3)
Courtesy of Toyota Motor Sales, U.S.A., Inc.



Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
BATT (E7 - 1) - E1 (E9 - 14)	B - Y ↔ BR	Always	9 ~ 14
+ B (E7 - 12) - E1 (E9 - 14)	B - Y ↔ BR	IG switch ON	9 ~ 14
VC (E8 - 1) - E2 (E8 - 9)	Y ↔ BR	IG switch ON	4.5 ~ 5.5
VTA (E8 - 11) - E2 (E8 - 9)	LG ↔ BR	IG switch ON Throttle valve fully closed	0.3 ~ 1.0
		IG switch ON Throttle valve fully open	3.2 ~ 4.9
PIM (E8 - 2) - E2 (E8 - 9)	B - Y ↔ BR	IG switch ON	3.3 ~ 3.9
		Apply vacuum 26.7 kPa (200 mmHg, 7.9 in.Hg)	2.5 ~ 3.1
THA (E8 - 3) - E2 (E8 - 9)	Y - B ↔ BR	Idling, Intake air temp. 20°C (68°F)	0.5 ~ 3.4
THW (E8 - 4) - E2 (E8 - 9)	G - B ↔ BR	Idling, Engine coolant temp. 80°C (176°F)	0.2 ~ 1.0
STA (E7 - 11) - E1 (E9 - 14)	*1 GR ↔ BR	Cranking	6.0 or more
	*2 B - O ↔ BR	Cranking	6.0 or more
#10 (E9 - 12) - E01 (E9 - 13)	L ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#20 (E9 - 11) - E01 (E9 - 13)	R ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#30 (E9 - 25) - E01 (E9 - 13)	Y ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#40 (E9 - 24) - E01 (E9 - 13)	W ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
IGT1 (E9 - 20) - E1 (E9 - 14)	B ↔ BR	Idling	Pulse generation
IGT2 (E9 - 19) - E1 (E9 - 14)	Y - R ↔ BR	Idling	Pulse generation
IGF (E9 - 3) - E1 (E9 - 14)	W - R ↔ BR	IG switch ON, Disconnect ignition coil connector	4.5 ~ 5.5
		Idling	Pulse generation

*1 - Toyota Motor Corporation (TMC) vehicles.

*2 - Toyota Motor Manufacturing Kentucky (TMMK) vehicles.

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Courtesy of Toyota Motor Sales, U.S.A., Inc.

Fig. 10: Pin Voltage Chart (Camry 2.2L 4-Cyl. Without Engine Immobilizer System - 1 Of 3)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
G \oplus (E9 - 5) - NE \ominus (E9 - 17)	B - W \leftrightarrow L	Idling	Pulse generation
NE \oplus (E9 - 4) - NE \ominus (E9 - 17)	B - R \leftrightarrow L	Idling	Pulse generation
FC (E7 - 14) - E01 (E9 - 13)	G - R \leftrightarrow BR	IG switch ON	9 ~ 14
EGR (E9 - 23) - E01(E9 - 13)	P - B \leftrightarrow BR	IG switch ON	0 ~ 3
RSC (E9 - 9) - E01 (E9 - 13)	B - O \leftrightarrow BR	IG switch ON Disconnect E9 of ECM connector	9 ~ 4
RSO (E9 -10) - E01(E9 - 13)	W \leftrightarrow BR	IG switch ON Disconnect E9 of ECM connector	Below 3.0
*1 OX1 (E8 - 6) - E1 (E9 - 14)	W \leftrightarrow BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
OX2 (E8 - 5) - E1 (E9 - 14)	B \leftrightarrow BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
*1 HT1 (E9 - 2) - E1 (E9 - 14)	L - Y \leftrightarrow BR	Idling IG switch ON	Below 3.0 9 ~ 14
HT2 (E9 - 21) - E1 (E9 - 14)	P - B \leftrightarrow BR	Idling IG switch ON	Below 3.0 9 ~ 14
KNK (E8 - 13) - E1 (E9 - 14)	W \leftrightarrow BR	Idling	Pulse generation
*2 NSW (E7 - 22) - E1 (E9 - 14)	B - W \leftrightarrow BR	IG switch ON Other shift position in "P", "N" position IG switch ON Shift position in "P", "N" position	9 ~ 14 0 ~ 3.0
SPD (E7 - 9) - E1 (E9 - 14)	V - W \leftrightarrow BR	IG switch ON Rotate driving wheel slowly	Pulse generation
TE1 (E8 - 15) - E1 (E9 - 14)	L - W \leftrightarrow BR	IG switch ON	9 ~ 14
W (E7 - 5) - E1 (E9 - 14)	G - R \leftrightarrow BR	Idling IG switch ON	9 ~ 14 Below 3.0
EVP (E9 - 22) - E1 (E9 - 14)	V - W \leftrightarrow BR	IG switch ON	9 ~ 14
TPC (E8 - 8) - E1 (E9 - 14)	V \leftrightarrow BR	IG switch ON	9 ~ 14
PTNK (E8 - 7) - E2 (E8 - 9)	P \leftrightarrow BR	IG switch ON, Disconnect vacuum hose from vapor pressure sensor Apply vacuum (less than 66.7 kPa, 500 mmHg, 19.7 in.Hg)	2.9 ~ 3.7 Below 0.5
*3 AF \oplus (E8 - 6) - E1 (E9 - 14)	W \leftrightarrow BR	Always (IG switch ON)	*4 3.3 fixed
*3 AF \ominus (E8 - 14) - E1 (E9 - 14)	O \leftrightarrow BR	Always (IG switch ON)	*4 3.0 fixed

*1 - Except California emission vehicles.

*2 - A/T models only.

*3 - California emission vehicles.

*4 - ECM terminal voltage is fixed regardless of output voltage from the sensor.

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Fig. 11: Pin Voltage Chart (Camry 2.2L 4-Cyl. Without Engine Immobilizer System - 2 Of 3)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
*1 HTAF (E9 - 2) - E04 (E9 - 15)	G ↔ BR	Idling	Below 3.0
		IG switch ON	9 ~ 14
LOCK IN (E9 - 18) - E1 (E9 - 14)	W - L ↔ BR	A/C compressor is operating	Pulse generation
LOCK (E7 - 15) - E1 (E9 - 14)	R - W ↔ BR	A/C indicator light lights up	Below 4.0
		A/C indicator light does not lights up	Below 1.0
A/C SW (E7 - 10) - E1 (E9 - 14)	R - B ↔ BR	A/C switch ON	9 ~ 14
		A/C switch OFF	Below 1.0
PRS (E7 - 13) - E1 (E9 - 14)	G ↔ BR	A/C pressure is normally	Below 1.0
THR (E8 - 10) - E2 (E8 - 9)	L - R ↔ BR	IG switch ON, A/C evaporator temp. 0°C (32°F)	2.2 ~ 2.6
		IG switch ON, A/C evaporator temp. 15°C (59°F)	1.4 ~ 1.8
MGC (E7 - 21) - E01 (E9 - 13)	L - Y ↔ BR	A/C magnetic clutch ON	Below 1.0
		A/C magnetic clutch OFF	9 ~ 14
*2 STP (E7 - 4) - E1 (E9 - 14)	G - W ↔ BR	IG switch ON, Brake pedal depressed	7.5 ~ 14
		IG switch ON, Brake pedal released	Below 1.5
ELS (E7 - 2) - E1 (E9 - 14)	B - R ↔ BR	Defogger switch and taillight switch ON	7.5 ~ 14
		Defogger switch and taillight switch OFF	Below 1.5
PSSW (E8 - 12) - E1 (E9 - 14)	B - L ↔ BR	IG switch ON	9 ~ 14
		At idling, turn steering wheel to lock position	Below 3.0
SIL (E7 - 16) - E1 (E9 - 14)	W ↔ BR	During transmission	Pulse generation

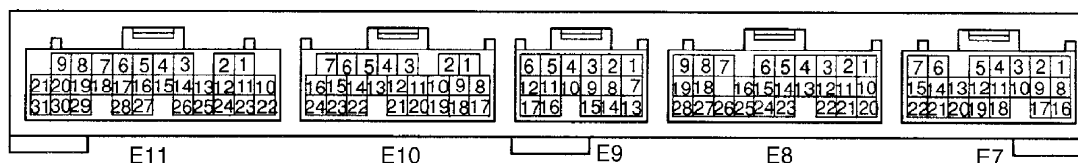
*1 - California emission vehicles.

*2 - A/T models only.

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Fig. 12: Pin Voltage Chart (Camry 2.2L 4-Cyl. Without Engine Immobilizer System - 3 Of 3)

Courtesy of Toyota Motor Sales, U.S.A., Inc.



Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
BATT (E7 - 1) - E1 (E10 - 17)	B-Y ↔ BR	Always	9 ~ 14
+B (E7 - 16) - E1 (E10 - 17)	B-Y ↔ BR	IG switch ON	9 ~ 14
VC (E10 - 2) - E2 (E10 - 18)	Y ↔ BR	IG switch ON	4.5 ~ 5.5
VTA1 (E10 - 23) - E2 (E10 - 18)	L ↔ BR	IG switch ON Throttle valve fully closed	0.3 ~ 1.0
		IG switch ON Throttle valve fully open	3.2 ~ 4.9
VG (E10 - 10) - E2G (E10 - 19)	P ↔ R-B	Idling , A/C switch OFF	1.1 ~ 1.5
THA (E9 - 22) - E2 (E10 - 18)	L-Y ↔ BR	Idling, Intake air temp. 20°C (68°F)	0.5 ~ 3.4
THW (E9 - 14) - E2 (E10 - 18)	G-B ↔ BR	Idling, Engine coolant temp. 80°C (176°F)	0.2 ~ 1.0
STA (E7 - 7) - E1 (E10 - 17)	*1 GR ↔ BR	Cranking	6.0 or more
	*2 B-O ↔ BR	Cranking	6.0 or more
#10 (E10 - 5) - E01 (E11 - 21)	L ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#20 (E10 - 6) - E01 (E11 - 21)	R ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#30 (E11 - 1) - E01 (E11 - 21)	Y ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#40 (E11 - 2) - E01 (E11 - 21)	W ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#50 (E11 - 3) - E01 (E11 - 21)	R-L ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#60 (E11 - 4) - E01 (E11 - 21)	G ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
IGT1 (E11 - 11) - E1 (E10 - 17)	GR ↔ BR	Idling	Pulse generation
IGT2 (E11 - 12) - E1 (E10 - 17)	BR-Y ↔ BR	Idling	Pulse generation

*1 - Toyota Motor Corporation (TMC) vehicles.

*2 - Toyota Motor Manufacturing Kentucky (TMMK) vehicle.

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Fig. 13: Pin Voltage Chart (Camry 3.0L V6 - All Calif. Emission Vehicles & Except. Calif. Emission Vehicles With Engine Immobilizer System &/Or TRAC System - 1 Of 3)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
IGT3 (E11 - 13) - E1 (E10 - 17)	LG-B ↔ BR	Idling	Pulse generation
IGF (E11 - 25) - E1 (E10 - 17)	W-R ↔ BR	IG switch ON	4.5 ~ 5.5
		Idling	Pulse generation
THG (E10 - 13) - E2 (E10 - 18)	G-Y ↔ BR	IG switch ON	4.5 ~ 5.5
G22+ (E11 - 10) - NE- (E10 - 24)	B-W ↔ L	Idling	Pulse generation
NE+ (E10 - 16) - NE- (E10 - 24)	B-R ↔ L	Idling	Pulse generation
ELS (E7 - 19) - E1 (E10 - 17)	G-O ↔ BR	Taillight switch ON	7.5 ~ 14
		Taillight switch OFF	0 ~ 1.5
ELS2 (E7 - 18) - E1 (E10 - 17)	B-Y ↔ BR	Defogger switch ON	7.5 ~ 14
		Defogger switch OFF	0 ~ 1.5
EGR (E11 - 18) - E01 (E11 - 21)	Y-G ↔ BR	IG switch ON	9 ~ 14
ACIS (E11 - 17) - E01 (E11 - 21)	R-Y ↔ BR	IG switch ON	9 ~ 14
FC (E7 - 13) - E01 (E11 - 21)	G-R ↔ BR	IG switch ON	9 ~ 14
		Idling	0 ~ 3.0
EVP (E10 - 7) - E01 (E11 - 21)	LG ↔ BR	IG switch ON	9 ~ 14
RSC (E11 - 15) - E01 (E11 - 21)	Y-B ↔ BR	IG switch ON	9 ~ 14
		Disconnect E11 of ECM connector	
RSO (E11 - 16) - E01 (E11 - 21)	R-W ↔ BR	IG switch ON	9 ~ 14
		Disconnect E11 of ECM connector	
*1 OXR (E10 - 11) - E1 (E10 - 17)	W ↔ BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
*1 OXL (E10 - 12) - E1 (E10 - 17)	B ↔ BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
OXS (E8 - 8) - E1 (E10 - 17)	B ↔ BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
*1 HTL (E10 - 4) - E03 (E11 - 30)	Y-R ↔ BR	Idling	9 ~ 14
		IG switch ON	Below 3.0
*1 HTR (E10 - 3) - E03 (E11 - 30)	L-B ↔ BR	Idling	9 ~ 14
		IG switch ON	Below 3.0
HTS (E8 - 9) - E03 (E11 - 30)	P-B ↔ BR	Idling	9 ~ 14
		IG switch ON	Below 3.0
KNKR (E11 - 27) - E1 (E10 - 17)	W ↔ BR	Idling	Pulse generation
KNKL (E11 - 28) - E1 (E10 - 17)	W ↔ BR	Idling	Pulse generation
NSW (E8 - 20) - E1 (E10 - 17)	B-W ↔ BR	IG switch ON Other shift position in "P", "N" position	9 ~ 14
		IG switch ON Shift position in "P", "N" position	0 ~ 3.0

*1- Except California emission vehicles.

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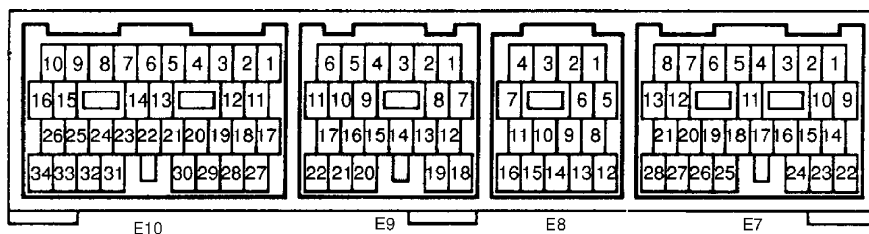
Fig. 14: Pin Voltage Chart (Camry 3.0L V6 - All Calif. Emission Vehicles & Except. Calif. Emission Vehicles With Engine Immobilizer System &/Or TRAC System - 2 Of 3)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
SPD (E8 - 22) - E1 (E10 - 17)	V-W ↔ BR	IG switch ON Rotate driving wheel slowly	Pulse generation
TC (E11 - 6) - E1 (E10 - 17)	L-W ↔ BR	IG switch ON	9 ~ 14
W (E7 - 6) - E01 (E11 - 21)	G-R ↔ BR	IG switch ON	Below 3.0
PS (E10 - 9) - E1 (E10 - 17)	B-L ↔ BR	IG switch ON	9 ~ 14
ACT (E8 - 13) - E1 (E10 - 17)	LG-B ↔ BR	A/C switch OFF	Below 2.0
		A/C switch ON at idling	9 ~ 14
A/C (E8 - 25) - E1 (E10 - 17)	B-Y ↔ BR	A/C switch ON at idling	Below 2.0
		A/C switch OFF	9 ~ 14
CF (E11 - 29) - E1 (E10 - 17)	G-W ↔ BR	Electric cooling fan is operating on high speed	9 ~ 14
		Electric cooling fan is operating on low speed or OFF	0 ~ 2
TACH (E8 - 27) - E1 (E10 - 17)	B-O ↔ BR	Idling	Pulse generation
TPC (E7 - 9) - E01 (E11 - 21)	W-R ↔ BR	IG switch ON Disconnect the vacuum hose from the vapor pressure sensor	9 ~ 14
PTNK (E7 - 17) - E1 (E10 - 17)	L-R ↔ BR	IG switch ON	3.0 ~ 3.6
		IG switch ON	1.3 ~ 2.1
		Apply vacuum 2.0 kPa (15 mmHg, 0.6 in.Hg)	
SIL (E7 - 11) - E1 (E10 - 17)	W ↔ BR	During transmission	Pulse generation
STP (E7 - 15) - E1 (E10 - 17)	G-W ↔ BR	IG switch ON Brake pedal depressed	7.5 ~ 14
		IG switch ON Brake pedal released	Below 1.5
EGLS (E11 - 22) - E1 (E10 - 17)	W-G ↔ BR	IG switch ON Apply vacuum (0 kPa, 0 mmHg, 0 in.Hg) to EGR valve	0.4 ~ 1.6
		IG switch ON Apply vacuum (17.3 kPa, 130 mmHg, 5.12 in.Hg) to EGR valve	3.2 ~ 5.1
AFR+ (E10 - 11) *1 - E1 (E10 - 17)	G or BR ↔ BR	IG switch ON	*2 3.3*
AFR- (E10 - 20) - E1 (E10 - 17) *1	R or B-R ↔ BR	IG switch ON	*2 3.0*
AFL+ (E10 - 12) - E1 (E10 - 17) *1	L or B-W ↔ BR	IG switch ON	*2 3.3*
AFL- (E10 - 21) - E1 (E10 - 17) *1	B-W or L ↔ BR	IG switch ON	*2 3.0*
HAFR (E10 - 3) - E04 (E10 - 1) *1	B-R ↔ BR	Idling	Below 3.0
		IG switch ON	4 ~ 5
HAFL (E10 - 4) - E05 (E10 - 8) *1	B-W ↔ BR	Idling	Below 3.0
		IG switch ON	4 ~ 5
KSW (E9 - 11) - E1 (E10 - 17)	L-B ↔ BR	At the time of inserting the key	Below 1.5
		In the condition without the key inserted	4 ~ 5
RXCK (E9 - 5) - E1 (E10 - 17)	R-L ↔ BR	At the time of inserting the key	Pulse generation
CODE (E9 - 4) - E1 (E10 - 17)	G-W ↔ BR	At the time of inserting the key	Pulse generation
IGSW (E7 - 2) - E1 (E10 - 17)	B-R ↔ BR	IG switch ON	9 ~ 14
TXCT (E9 - 10) - E1 (E10 - 17)	L-Y ↔ BR	At the time of inserting the key	Pulse
IMLD (E9 - 16) - E1 (E10 - 17)	R-Y ↔ BR	In the condition without the key inserted	Pulse
MREL (E7 - 8) - E1 (E10 - 17)	B-W ↔ BR	IG switch ON	9 ~ 14

*1 - California emission vehicles.

*2 - ECM terminal voltage is fixed regardless of output voltage from the sensor.

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Fig. 15: Pin Voltage Chart (Camry 3.0L V6 - All Calif. Emission Vehicles & Except. Calif. Emission Vehicles With Engine Immobilizer System &/Or TRAC System - 3 Of 3)
Courtesy of Toyota Motor Sales, U.S.A., Inc.



Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
BATT (E7 - 14) - E1 (E8 - 16)	B-Y ↔ BR	Always	9 ~ 14
+B (E7 - 23) - E1 (E8 - 16)	B-Y ↔ BR	IG switch ON	9 ~ 14
VC (E9 - 1) - E2 (E9 - 22)	Y ↔ BR	IG switch ON	4.5 ~ 5.5
VTA1 (E9 - 7) - E2 (E9 - 22)	L ↔ BR	IG switch ON Throttle valve fully closed	0.3 ~ 1.0
		IG switch ON Throttle valve fully open	3.2 ~ 4.9
VG (E9 - 8) - E2G (E8 - 7)	P ↔ R-B	Idling , A/C switch OFF	1.1 ~ 1.5
THA (E9 - 21) - E2 (E9 - 22)	L-Y ↔ BR	Idling, Intake air temp. 20°C (68°F)	0.5 ~ 3.4
THW (E9 - 20) - E2 (E9 - 22)	G-B ↔ BR	Idling, Engine coolant temp. 80°C (176°F)	0.2 ~ 1.0
STA (E10 - 13) - E1 (E8 - 16)	*1 GR ↔ BR	Cranking	6.0 or more
	*2 B - O ↔ BR	Cranking	6.0 or more
#10 (E10 - 10) - E01 (E10 - 34)	L ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#20 (E10 - 9) - E01 (E10 - 34)	R ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#30 (E10 - 8) - E01 (E10 - 34)	Y ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#40 (E10 - 7) - E01 (E10 - 34)	W ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#50 (E10 - 6) - E01 (E10 - 34)	R-L ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#60 (E10 - 5) - E01 (E10 - 34)	G ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
IGT1 (E10 - 24) - E1 (E8 - 16)	GR ↔ BR	Idling	Pulse generation

*1 - Toyota Motor Corporation (TMC) vehicles.

*2 - Toyota Motor Manufacturing Kentucky (TMMK) vehicles.

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Fig. 16: Pin Voltage Chart (Camry 3.0L V6 - Except. Calif. Emission Vehicles Without Engine Immobilizer System &/Or TRAC System - 1 Of 3)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

IGT2 (E10 – 16) – E1 (E8 – 16)	BR–Y ↔ BR	Idling	Pulse generation
IGT3 (E10 – 15) – E1 (E8 – 16)	LG–B ↔ BR	Idling	Pulse generation
IGF (E10 – 12) – E1 (E8 – 16)	W–R ↔ BR	IG switch ON	4.5 ~ 5.5
THG (E8 – 14) – E2 (E9 – 22)	G–Y ↔ BR	IG switch ON	4.5 ~ 5.5
G22+ (E9 – 17) – NE– (E9 – 6)	B–W ↔ L	Idling	Pulse generation
NE+ (E9 – 5) – NE– (E9 – 6)	B–R ↔ L	Idling	Pulse generation
ELS (E7 – 3) – E1 (E8 – 16)	G–O ↔ BR	Taillight switch ON	7.5 ~ 14
		Taillight switch OFF	0 ~ 1.5
ELS2 (E7 – 2) – E1 (E8 – 16)	B–Y ↔ BR	Defogger switch ON	7.5 ~ 14
		Defogger switch OFF	0 ~ 1.5
EGR (E8 – 12) – E01 (E10 – 34)	Y–G ↔ BR	IG switch ON	9 ~ 14
ACIS (E8 – 6) – E01 (E10 – 34)	R–Y ↔ BR	IG switch ON	9 ~ 14
FC (E9 – 18) – E1 (E8 – 16)	G–R ↔ BR	IG switch ON	9 ~ 14
		Idling	0 ~ 3.0
EVP1 (E8 – 2) – E01 (E10 – 34)	LG ↔ BR	IG switch ON	9 ~ 14
RSC (E10 – 22) – E01 (E10 – 34)	Y–B ↔ BR	IG switch ON	9 ~ 14
		Disconnect E10 of ECM connector	
RSO (E10 – 23) – E01 (E10 – 34)	R–W ↔ BR	IG switch ON	9 ~ 14
		Disconnect E10 of ECM connector	
OXR (E9 – 13) – E1 (E8 – 16)	W ↔ BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
OXL (E9 – 19) – E1 (E8 – 16)	B ↔ BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
OXS (E7 – 18) – E1 (E8 – 16)	B ↔ BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
HTL (E8 – 10) – E03 (E10 – 28)	Y–R ↔ BR	Idling	9 ~ 14
		IG switch ON	Below 3.0
HTR (E8 – 11) – E03 (E10 – 28)	L–B ↔ BR	Idling	9 ~ 14
		IG switch ON	Below 3.0
HTS (E7 – 17) – E03 (E10 – 28)	P–B ↔ BR	Idling	9 ~ 14
		IG switch ON	Below 3.0
KNKR (E9 – 15) – E1 (E8 – 16)	W ↔ BR	Idling	Pulse generation
KNKL (E9 – 14) – E1 (E8 – 16)	W ↔ BR	Idling	Pulse generation
NSW (E10 – 14) – E1 (E8 – 16)	B–W ↔ BR	IG switch ON Other shift position in "P", "N" position	9 ~ 14
		IG switch ON Shift position in "P", "N" position	0 ~ 3.0

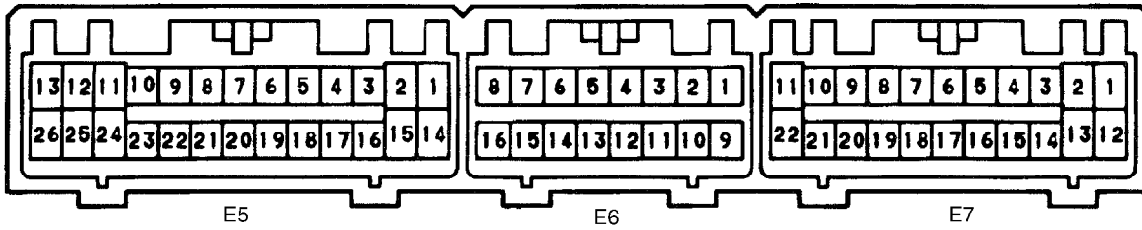
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Fig. 17: Pin Voltage Chart (Camry 3.0L V6 – Except. Calif. Emission Vehicles Without Engine Immobilizer System &/Or TRAC System – 2 Of 3)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
SPD (E7 - 12) - E1 (E8 - 16)	V-W ↔ BR	IG switch ON Rotate driving wheel slowly	Pulse generation
TC (E8 - 5) - E1 (E8 - 16)	L-W ↔ BR	IG switch ON	9 ~ 14
W (E8 - 3) - E1 (E8 - 16)	G-R ↔ BR	IG switch ON	Below 3.0
PS (E10 - 31) - E1 (E8 - 16)	B-L ↔ BR	IG switch ON	9 ~ 14
ACT (E7 - 5) - E1 (E8 - 16)	LG-B ↔ BR	A/C switch OFF	Below 2.0
		A/C switch ON at idling	9 ~ 14
A/C (E7 - 16) - E1 (E8 - 16)	B-Y ↔ BR	A/C switch ON at idling	Below 2.0
		A/C switch OFF	9 ~ 14
CF (E8 - 9) - E1 (E8 - 16)	G-W ↔ BR	Electric cooling fan is operating on high speed	9 ~ 14
		Electric cooling fan is operating on low speed or OFF	0 ~ 2
TACH (E7 - 13) - E1 (E8-16)	B-O ↔ BR	Idling	Pulse generation
TPC (E8 - 8) - E1 (E8 - 16)	W-R ↔ BR	IG switch ON Disconnect the vacuum hose from the vapor pressure sensor	9 ~ 14
PTNK (E8 - 13) - E1 (E8 - 16)	L-R ↔ BR	IG switch ON	3.0 ~ 3.6
		IG switch ON	1.3 ~ 2.1
		Apply vacuum 2.0 kPa (15 mmHg, 0.6 in.Hg)	
SIL (E7 - 8) - E1 (E8 - 16)	W ↔ BR	During transmission	Pulse generation
STP (E7 - 24) - E1 (E8 - 16)	G-W ↔ BR	IG switch ON Brake pedal depressed	7.5 ~ 14
		IG switch ON Brake pedal released	Below 1.5
EGLS (E8 - 15) - E1 (E8 - 16)	W-G ↔ BR	IG switch ON Apply vacuum (0 kPa, 0 mmHg, 0 in.Hg) to EGR valve	0.4 ~ 1.6
		IG switch ON Apply vacuum (17.3 kPa, 130 mmHg, 5.12 in.Hg) to EGR valve	3.2 ~ 5.1

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Fig. 18: Pin Voltage Chart (Camry 3.0L V6 - Except. Calif. Emission Vehicles Without Engine Immobilizer System &/Or TRAC System - 3 Of 3)
Courtesy of Toyota Motor Sales, U.S.A., Inc.



Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
BATT (E7 - 1) - E1 (E5 - 14)	P - Y ↔ BR	Always	9 ~ 14
+ B (E7 - 12) - E1 (E5 - 14)	B - R ↔ BR	IG switch ON	9 ~ 14
VC (E6 - 1) - E2 (E6 - 9)	R ↔ BR	IG switch ON	4.5 ~ 5.5
VTA (E6 - 11) - E2 (E6 - 9)	B - W ↔ BR	IG switch ON Throttle valve fully closed	0.3 ~ 1.0
		IG switch ON Throttle valve fully open	3.2 ~ 4.9
PIM (E6 - 2) - E2 (E6 - 9)	L ↔ BR	IG switch ON	3.3 ~ 3.9
		Apply vacuum 26.7 kPa (200 mmHg, 7.9 in.Hg)	2.5 ~ 3.1
THA (E6 - 3) - E2 (E6 - 9)	L - R ↔ BR	Idling, Intake air temp. 20°C (68° F)	0.5 ~ 3.4
THW (E6 - 4) - E2 (E6 - 9)	G ↔ BR	Idling, Engine coolant temp. 80°C (176° F)	0.2 ~ 1.0
STA (E7 - 11) - E1 (E5 - 14)	B ↔ BR	Cranking	6.0 or more
#10 (E5 - 12) - E01 (E5 - 13)	L ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#20 (E5 - 11) - E01 (E5 - 13)	B - W ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#30 (E5 - 25) - E01 (E5 - 13)	B - R ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#40 (E5 - 24) - E01 (E5 - 13)	B - R ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
IGT (E5 - 20) - E1 (E5 - 14)	W ↔ BR	Idling	Pulse generation
IGF (E5 - 3) - E1 (E5 - 14)	B - Y ↔ BR	IG switch ON, Disconnect ignition coil connector	4.5 ~ 5.5
		Idling	Pulse generation
G (E5 - 5) - NE⊕(E5 - 17)	B ↔ W	Idling	Pulse generation
NE⊕(E5 - 4) - NE⊖(E5 - 17)	O ↔ W	Idling	Pulse generation
FC (E7 - 14) - E1 (E5 - 14)	G - R ↔ BR	IG switch ON	9 ~ 14
EGR (E5 - 23) - E1 (E5 - 14)	L - B ↔ BR	IG switch ON	0 ~ 3

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Fig. 19: Pin Voltage Chart (Celica - 1 Of 2)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
ISCC (E5 - 9) - E1 (E5 - 14)	G - W ↔ BR	IG switch ON Disconnect E9 of ECM connector	9 ~ 4
ISCO (E5 - 10) - E1 (E5 - 14)	B - W ↔ BR	IG switch ON Disconnect E9 of ECM connector	Below 3.0
OX1 (E6 - 6) - E1 (E5 - 14)	W ↔ BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
OX2 (E6 - 5) - E1 (E5 - 14)	W ↔ BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
KNK (E6 - 13) - E1 (E5 - 14)	W ↔ BR	Idling	Pulse generation
*1 NSW (E7 - 22) - E1 (E5 - 14)	B - Y ↔ BR	IG switch ON Other shift position in "P", "N" position	9 ~ 14
		IG switch ON Shift position in "P", "N" position	0 ~ 3.0
SPD (E7 - 9) - E1 (E5 - 14)	O ↔ BR	IG switch ON Rotate driving wheel slowly	Pulse generation
TE1 (E6 - 15) - E1 (E5 - 14)	Y ↔ BR	IG switch ON	9 ~ 14
W (E7 - 5) - E1 (E5 - 14)	R - B ↔ BR	Idling	9 ~ 14
		IG switch N	Below 3.0
*2 EVP (E5 - 22) - E2 (E6 - 9)	LG - B ↔ BR	IG switch ON	9 ~ 14
*2 TPC(E6 - 8) - E1 (E5 - 14)	Y - B ↔ BR	IG switch ON	9 ~ 14
*2 PTNK (E8 - 7) - E1 (E5 - 14)	R - W ↔ BR	IG switch ON, Disconnect vacuum hose from vapor pressure sensor	2.9 ~ 3.7
		Apply vacuum (less than 66.7 kpa, 500 mmHg, 19.7 in.Hg)	Below 0.5
AC1 (E7 - 10) - E1 (E5 - 14)	L - B ↔ BR	Idling, A/C switch ON	Below 2.0
		Idling, A/C switch OFF	4 ~ 6
ACT (E7 - 21) - E1 (E5 - 14)	G - Y ↔ BR	Idling, A/C switch ON	9 ~ 14
		Idling, A/C switch OFF	Below 2.0
*1 OD2 (E7 - 7) - E1 (E5 - 14)	GR - L ↔ BR	IG switch ON, O/D main switch pushed out	9 ~ 14
		IG switch ON, O/D main switch pushed in	0 ~ 3.0
*1 OD1 (E7 - 20) - E1 (E5 - 14)	P - BR	IG switch ON, Cruise control ECU no request O/D cut	9 ~ 14
		G switch ON, Cruise control ECU request O/D cut	0 ~ 3.0
ELS (E7 - 2) - E1 (E5 - 14)	O ↔ BR	Defogger switch and taillight switch ON	7.5 ~ 14
		Defogger switch and taillight switch OFF	Below 1.5
SDL (E7 - 16) - E1 (E5 - 14)	W ↔ BR	During transmission	Pulse generation

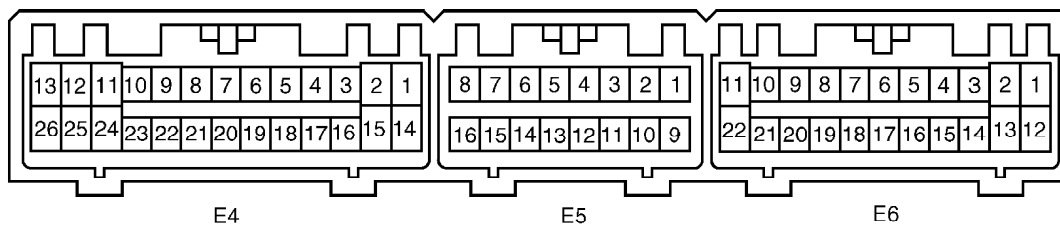
*1 - A/T models only

*2 - California emission vehicles

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Courtesy of Toyota Motor Sales, U.S.A., Inc

Fig. 20: Pin Voltage Chart (Celica - 2 Of 2)
Courtesy of Toyota Motor Sales, U.S.A., Inc.



Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
BATT (E6 - 1) - E1 (E4 - 14)	R-W - BR	Always	9 ~ 14
+ B (E6 - 12) - E1 (E4 - 14)	B - BR	IG switch ON	9 ~ 14
VC (E5 - 1) - E2 (E5 - 9)	Y - BR	IG switch ON	4.5 ~ 5.5
VTA (E5 - 11) - E2 (E5 - 9)	LG - BR	IG switch ON Throttle valve fully closed	0.3 ~ 1.0
		IG switch ON Throttle valve fully open	3.2 ~ 4.9
PIM (E5 - 2) - E2 (E5 - 9)	LG-R - BR	IG switch ON	3.3 ~ 3.9
		Apply vacuum 26.7 kPa (200 mmHg, 7.9 in.Hg)	2.5 ~ 3.1
THA (E5 - 3) - E2 (E5 - 9)	Y-B - BR	Idling, Intake air temp. 20°C (68°F)	0.5 ~ 3.4
THW (E5 - 4) - E2 (E5 - 9)	W - BR	Idling, Engine coolant temp. 80°C (176°F)	0.2 ~ 1.0
#10 (E4 - 12) - E01 (E4 - 13)	Y - BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#20 (E4 - 11) - E01 (E4 - 13)	B-R - BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#30 (E4 - 25) - E01 (E4 - 13)	W - BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#40 (E4 - 24) - E01 (E4 - 13)	B - BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
IGT1 (E4 - 20) - E1 (E4 - 14)	Y-G - BR	Idling	Pulse generation
IGT2 (E4 - 19) - E1 (E4 - 14)	R-L - BR	Idling	Pulse generation
IGF (E4 - 16) - E1 (E4 - 14)	L-Y - BR	IG switch ON	4.5 ~ 5.5
		Idling	Pulse generation
G2(E4 - 5) - NEΘ(E4 - 17)	B - W	Idling	Pulse generation
NE(E4 - 4) - NEΘ(E4 - 17)	B - W	Idling	Pulse generation
FC (E6 - 14) - E01 (E4 - 13)	G-R - BR	IG switch ON	9 ~ 14
		Idling	0 ~ 3

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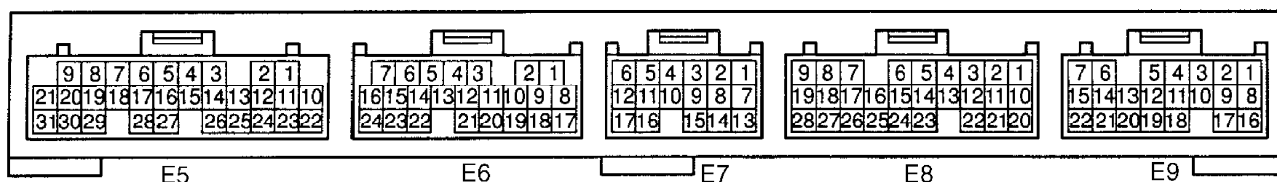
Fig. 21: Pin Voltage Chart (Corolla - 1 Of 2)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
OX1 (E5 - 6) - E1 (E4 - 14)	W - BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
OX2 (E5 - 5) - E1 (E4 - 14)	R - BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
HT1 (E5 - 8) - E03 (E5 - 16)	P - BR	Idling	Below 3.0
		IG switch ON	9 ~ 14
HT2 (E5 - 14) - E03 (E5 - 16)	P - BR	Idling	Below 3.0
		IG switch ON	9 ~ 14
KNK (E5 - 13) - E1 (E4 - 14)	B - BR	Idling	Pulse generation
*1 NSW (E4 - 1) - E1 (E4 - 14)	B-W - BR	IG switch ON Other shift position in "P" or "N" position	9 ~ 14
		IG switch ON Shift position in "P" or "N" position	Below 3.0
SPD (E6 - 9) - E1 (E4 - 14)	V-W - BR	IG switch ON Rotate driving wheel slowly	Pulse generation
TE1 (E5 - 15) - E1 (E4 - 14)	L-W - BR	IG switch ON	9 ~ 14
W (E6 - 5) - E01 (E4 - 13)	R-Y - BR	Idling	9 ~ 14
		IG switch ON	Below 3.0
EVP (E4 - 8) - E1 (E4 - 14)	L-B - BR	IG switch ON	9 ~ 14
TPC (E4 - 7) - E1 (E4 - 14)	R - BR	IG switch ON	9 ~ 14
PTNK (E5 - 7) - E2 (E4 - 9)	L - BR	IG switch ON, Disconnect vacuum hose from vapor pressure sensor	2.9 ~ 3.7
		Apply vacuum (less than 4.0 kPa, 30 mmHg, 1.18 in.Hg)	Below 0.5
AC1 (E6 - 10) - E1 (E4 - 14)	Y-R - BR	A/C switch ON (at idling)	Below 1.5
		A/C switch OFF	7.5 ~ 14
ACT (E6 - 21) - E1 (E4 - 14)	R-L - BR	A/C switch ON	9 ~ 14
		A/C OFF (at idling)	Below 1.5
*1 STP (E6 - 4) - E1 (E4 - 14)	G-W - BR	IG switch ON, Brake pedal depressed	7.5 ~ 14
		IG switch ON, Brake pedal released	Below 1.5
ELS1 (E6 - 2) - E1 (E4 - 14)	B - BR	Light switch ON	9 ~ 14
		Light switch OFF	Below 3.0
ELS2 (E6 - 13) - E1 (E4 - 14)	G - BR	Defogger switch OFF	Below 3.0
		Defogger switch ON	9 ~ 14
*2 OD1 (E5 - 12) - E1 (E4 - 14)	R-W - BR	IG switch ON	9 ~ 14
*2 OD2 (E6 - 22) - E1 (E4 - 14)	LG - BR	IG switch ON	9 ~ 14
TAC (E6 - 8) - E1 (E4 - 14)	B - BR	Idling	Pulse generation
SIL (E6 - 16) - E1 (E4 - 14)	W - BR	During transmission	Pulse generation
STA (E6 - 11) - E1 (E4 - 14)	B-W - BR	IG switch ON	Below 6.0

*1 - A/T models only.

*2 - 4-Speed A/T models only.

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Fig. 22: Pin Voltage Chart (Corolla - 2 Of 2)
Courtesy of Toyota Motor Sales, U.S.A., Inc.



Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
BATT (E9-1) – E1 (E6-17)	B-R ↔ BR	Always	9 ~ 14
+BM (E9-7) – E1 (E6-17)	Y-B ↔ BR		
IGSW (E9-9) – E1 (E6-17)	B-R ↔ BR	IG switch ON	9 ~ 14
+B (E9-16) – E1 (E6-17)	B-Y ↔ BR		
+B1 (E9-8) – E1 (E6-17)	B-Y ↔ BR		
MREL (E9-10) – E1 (E6-17)	B-W ↔ BR	IG switch ON	9 ~ 14
VC (E6-2) – E2 (E6-18)	L-R ↔ BR-W	IG switch ON	4.5 ~ 5.5
VG (E6-10) – EVG (E6-19)	L-Y ↔ G-W	Idling, P or N position, A/C switch OFF	0.5 ~ 3.0
THA (E6-22) – E2 (E6-18)	Y-B ↔ BR-W	Idling, Intake air temp. 20°C (68°F)	0.5 ~ 3.4
THW (E6-14) – E2 (E6-18)	G-B ↔ BR-W	Idling, Engine coolant temp. 80°C (176°F)	0.2 ~ 1.0
VTA (E6-13) – E2 (E6-18)	R-Y ↔ BR-W	IG switch ON Accelerator pedal released	0.4 ~ 1.0
		IG switch ON Accelerator pedal depressed	3.2 ~ 4.8
VTA2 (E6-20) – E2 (E6-18)	Y-B ↔ BR-W	IG switch ON Accelerator pedal released	2.0 ~ 2.9
		IG switch ON Accelerator pedal depressed	4.7 ~ 5.1
VPA (E6-21) – E2 (E6-18)	R ↔ BR-W	IG switch ON Accelerator pedal released	0.3 ~ 0.9
		IG switch ON Accelerator pedal depressed	3.2 ~ 4.8
VPA2 (E6-9) – E2 (E6-18)	R-B ↔ BR-W	IG switch ON Accelerator pedal released	1.8 ~ 2.7
		IG switch ON Accelerator pedal depressed	4.7 ~ 5.1
OXL1 (E6-12) – E1 (E6-17)	B ↔ BR	Maintain engine speed at 2,500 rpm for 2 minutes after warming up	Pulse generation
OXL2 (E8-18) – E1 (E6-17)	B ↔ BR		
OXR1 (E6-11) – E1 (E6-17)	W ↔ BR		
OXR2 (E8-27) – E1 (E6-17)	W ↔ BR		
HTL (E6-4) – E1 (E6-17)	R ↔ BR	Idling	Below 3.0
HTL2 (E8-8) – E1 (E6-17)	L ↔ BR		
HTR (E6-3) – E1 (E6-17)	Y ↔ BR	IG switch ON	9 ~ 14
HTR2 (E8-7) – E1 (E6-17)	R-B ↔ BR		

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Fig. 23: Pin Voltage Chart (Land Cruiser & LX470 - 1 Of 3)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
#1 (E6-5) – E01 (E5-21)	Y ↔ W-B	IG switch ON	9 ~ 14
#2 (E6-6) – E01 (E5-21)	B ↔ W-B		
#3 (E5-1) – E01 (E5-21)	L ↔ W-B	Idling	Pulse generation
#4 (E5-2) – E01 (E5-21)	R ↔ W-B		
#5 (E5-3) – E01 (E5-21)	G ↔ W-B		
#6 (E5-4) – E01 (E5-21)	R-L ↔ W-B		
#7 (E5-5) – E01 (E5-21)	W ↔ W-B		
#8 (E5-6) – E01 (E5-21)	B-W ↔ W-B		
KNKL (E5-18) – E1 (E6-17)	B ↔ BR	Maintain engine speed at 4,000 rpm after warming up	Pulse generation
KNKR (E5-17) – E1 (E6-17)	W ↔ BR		
G2 (E5-10) – NE- (E5-22)	R ↔ G	Idling	Pulse generation
NE+ (E5-23) – NE- (E5-22)	L ↔ G		
PRG (E6-7) – E1 (E6-17)	L-B ↔ BR	IG switch ON	9 ~ 14
TPC (E8-10) – E1 (E6-17)	L ↔ BR	IG switch ON	9 ~ 14
PTNK (E8-22) – E2 (E6-18)	L-B ↔ BR-W	Ignition switch ON	2.9 ~ 3.7
		Apply vacuum 3.5 kPa (26 mmHg, 1.0 in. Hg)	Below 0.5
SPD (E8-15) – E1 (E6-17)	V ↔ BR	IG switch ON Rotate driving wheel slowly	Pulse generation
CL+ (E5-29) – CL- (E5-24)	G ↔ L	Idling	Pulse generation
M+ (E5-8) – E1 (E6-17)	R ↔ BR	Idling	Pulse generation
M- (E5-7) – E1 (E6-17)	W ↔ BR		
DI (E9-4) – E1 (E6-17)	G-R ↔ BR	IG switch ON	9 ~ 14
FPC (E9-5) – E1 (E6-17)	G-W ↔ BR	IG switch ON	0 ~ 3.0
IGT1 (E5-11) – E1 (E6-17)	B ↔ BR	Idling	Pulse generation
IGT2 (E5-12) – E1 (E6-17)	R ↔ BR		
IGT3 (E5-13) – E1 (E6-17)	L ↔ BR		
IGT4 (E5-14) – E1 (E6-17)	G ↔ BR		
IGT5 (E5-15) – E1 (E6-17)	Y ↔ BR		
IGT6 (E5-16) – E1 (E6-17)	B-Y ↔ BR		
IGT7 (E5-25) – E1 (E6-17)	B-L ↔ BR		
IGT8 (E5-26) – E1 (E6-17)	L-B ↔ BR		
IGF1 (E5-27) – E1 (E6-17)	B-W ↔ BR	IG switch ON	4.5 ~ 5.5
IGF2 (E5-28) – E1 (E6-17)	B-R ↔ BR	Idling	Pulse generation
STP (E8-6) – E1 (E6-17)	G-W ↔ BR	Brake pedal is depressed	7.5 ~ 14
		Brake pedal is released	Below 1.5
STA (E8-17) – E1 (E6-17)	B-R ↔ BR	Shift lever position P or N position, ignition switch START	6.0 or more
NSW (E8-20) – E1 (E6-17)	B-W ↔ BR	IG switch ON	9 ~ 14
		Other shift position in "P", "N" position	
		IG switch ON	0 ~ 3.0
W (E9-6) – E1 (E6-17)	W ↔ BR	Shift position in "P", "N" position	
		Idling	9 ~ 14
ACT (E8-13) – E1 (E6-17)	L-B ↔ BR	IG switch ON	Below 3.0
		A/C switch OFF	Below 3.0
		A/C switch ON at idling	9 ~ 14
A/C (E8-25) – E1 (E6-17)	W-G ↔ BR	A/C switch ON at idling	Below 1.5
		A/C switch OFF	7.5 ~ 14

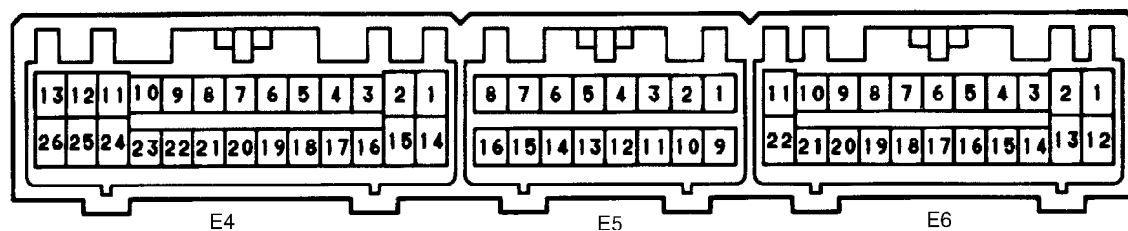
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Fig. 24: Pin Voltage Chart (Land Cruiser & LX470 - 2 Of 3)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
ST1- (E9-19) - E1 (E6-17)	R-G ↔ BR	IG switch ON, Brake pedal is depressed	Below 1.5
		IG switch ON, Brake pedal is released	7.5 ~ 14
SIL (E9-11) - E1 (E6-17)	V-W ↔ BR	During transmission	Pulse generation
ELS (E8-12) - E1 (E6-17)	G-W ↔ BR	Taillight switch ON, Defogger switch ON	7.5 ~ 14
		Taillight switch OFF, Defogger switch OFF	0 ~ 1.5
TACH (E8-16) - E1 (E6-17)	B ↔ BR	Idling	Pulse generation
KSW (E9-20) - E1 (E6-17)	R-B ↔ BR	At the time of inserting the key	Below 1.5
		In the condition without the key inserted	4 ~ 5
RXCK (E9-13) - E1 (E6-17)	V-G ↔ BR	At the time of inserting the key	Pulse generation
CODE (E9-12) - E1 (E6-17)	L-B ↔ BR	At the time of inserting the key	Pulse generation
TXCT (E9-14) - E1 (E6-17)	R-Y ↔ BR	At the time of inserting the key	Pulse

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Fig. 25: Pin Voltage Chart (Land Cruiser & LX470 - 3 Of 3)
 Courtesy of Toyota Motor Sales, U.S.A., Inc.



Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
BATT (E6 - 1) - E1 (E4 - 14)	R - W ↔ BR	Always	9 ~ 14
+ B (E6 - 12) - E1 (E4 - 14)	B - W ↔ BR	IG switch ON	9 ~ 14
VC (E5 - 1) - E2 (E5 - 9)	Y ↔ BR	IG switch ON	4.5 ~ 5.5
VTA (E5 - 11) - E2 (E5 - 9)	L-R ↔ BR	IG switch ON Throttle valve fully closed	0.3 ~ 1.0
		IG switch ON Throttle valve fully open	3.2 ~ 4.9
PIM (E5 - 2) - E2 (E5 - 9)	LG-B ↔ BR	IG switch ON	3.3 ~ 3.9
		Apply vacuum 26.7 kPa (200 mmHg, 7.9 in.Hg)	2.5 ~ 3.1
THA (E5 - 3) - E2 (E5 - 9)	Y - B ↔ BR	Idling, Intake air temp. 20°C (68°F)	0.5 ~ 3.4
THW (E5 - 4) - E2 (E5 - 9)	W ↔ BR	Idling, Engine coolant temp. 80°C (176°F)	0.2 ~ 1.0
STA (E6 - 11) - E1 (E4 - 14)	B ↔ BR	Cranking	6.0 or more
#10 (E4 - 12) - E01 (E4 - 13)	B-R ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#20 (E4 - 11) - E01 (E4 - 13)	B ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#30 (E4 - 25) - E01 (E4 - 13)	B-Y ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#40 (E4 - 24) - E01 (E4 - 13)	B-L ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
IGT (E4 - 20) - E1 (E4 - 14)	B ↔ BR	Idling	Pulse generation
IGT2 (E4 - 21) - E1 (E4 - 14)	B ↔ BR	Idling	Pulse generation
IGF1 (E4 - 3) - E1 (E4 - 14)	L-Y ↔ BR	IG switch ON, Disconnect ignition coil connector	4.5 ~ 5.5
		Idling	Pulse generation
G1 (E4 - 5) - NE⊖ (E4 - 18)	B ↔ W	Idling	Pulse generation
NE⊕(E4 - 4) - NE⊖ (E4 - 18)	R ↔ W	Idling	Pulse generation
FC (E6 - 14) - E01 (E4 - 13)	G - R ↔ BR	IG switch ON	9 ~ 14

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Fig. 26: Pin Voltage Chart (RAV4 - 1 Of 2)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

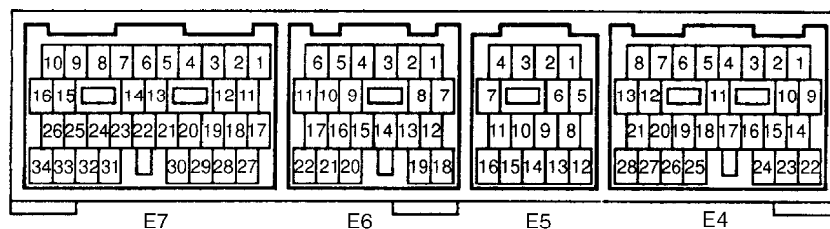
Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
EGR (E4 - 23) - E01(E4 - 13)	B-W ↔ BR	IG switch ON	0 ~ 3
ISCC (E4 - 9) - E01 (E4 - 13)	B - Y ↔ BR	IG switch ON Disconnect "A" of ECM connector	9 ~ 14
ISCO (E4 - 10) - E01(E4 - 13)	B-L ↔ BR	IG switch ON Disconnect "A" of ECM connector	9 ~ 14
*1 OX (E5 - 6) - E1 (E4 - 14)	W ↔ BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
OX2 (E5 - 5) - E1 (E4 - 14)	R ↔ BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
*1 HTR (E4 - 2) - E1 (E4 - 14)	R ↔ BR	Idling	Below 3.0
		IG switch ON	9 ~ 14
HTR2 (E4 - 19) - E1 (E4 - 14)	R - W ↔ BR	Idling	Below 3.0
		IG switch ON	9 ~ 14
KNK1 (E5 - 10) - E1 (E4 - 14)	B ↔ BR	Idling	Pulse generation
SPD (E6 - 9) - E1 (E4 - 14)	V - W ↔ BR	IG switch ON Rotate driving wheel slowly	Pulse generation
TE1 (E8 - 15) - E1 (E9 - 14)	L - W ↔ BR	IG switch ON	9 ~ 14
W (E6 - 5) - E1 (E4 - 14)	G - R ↔ BR	Idling	9 ~ 14
		IG switch ON	Below 3.0
AC (E6 - 10) - E1 (E4 - 14)	Y - G ↔ BR	Idling, A/C switch ON	9 ~ 14
		Idling, A/C switch OFF	Below 2.0
ACT (E6 - 21) - E1 (E4 - 14)	R - Y ↔ BR	Idling, A/C switch ON	9 ~ 14
EVP (E4 - 22) - E1 (E4 - 14)	P ↔ BR	IG switch ON	9 ~ 14
TPC (E5 - 8) - E1 (E4 - 14)	R-W ↔ BR	IG switch ON	9 ~ 14
PTNK (E5 - 7) - E2 (E5 - 9)	L-Y ↔ BR	IG switch ON, Disconnect vacuum hose from vapor pressure sensor	2.9 ~ 3.7
		Apply vacuum (less than 66.7 kPa, 500 mmHg, 19.7 in.Hg)	Below 0.5
*2 AF⊕ (E5 - 6) - E1 (E4 - 14)	W ↔ BR	Always (IG switch ON)	*3 3.3 fixed*3
*2 AF⊖ (E5 - 14) - E1 (E4 - 14)	B ↔ BR	Always (IG switch ON)	*3 3.0 fixed*3
*2 HTAF (E4 - 2) - E04 (E4 - 11)	R ↔ BR	Idling	Below 3.0
		IG switch ON	9 ~ 14
ELS (E6 - 17) - E1 (E4 - 14)	B ↔ BR	Defogger switch and taillight switch ON	7.5 ~ 14
		Defogger switch and taillight switch OFF	Below 1.5
SIL (E7 - 16) - E1 (E9 - 14)	↔ BR	During transmission	Pulse generation

*1 - Except California emission vehicles.

*2 - California emission vehicles.

*3 - ECM terminal voltage is fixed regardless of output voltage from the sensor.

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Fig. 27: Pin Voltage Chart (RAV4 - 2 Of 2)
Courtesy of Toyota Motor Sales, U.S.A., Inc.



Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
BATT (E4 - 14) - E1 (E5 - 16)	B-Y ↔ BR	Always	9 ~ 14
+B (E4 - 23) - E1 (E5 - 16)	B-R ↔ BR	IG switch ON	9 ~ 14
VC (E6 - 1) - E2 (E6 - 22)	Y ↔ BR	IG switch ON	4.5 ~ 5.5
VTA1 (E6 - 7) - E2 (E6 - 22)	L ↔ BR	IG switch ON Throttle valve fully closed	0.3 ~ 1.0
		IG switch ON Throttle valve fully open	2.7 ~ 5.2
VG (E6 - 8) - E2G (E5 - 7)	P ↔ R-B	Idling, A/C switch OFF	1.1 ~ 1.5
THA (E6 - 21) - E2 (E6 - 22)	L-Y ↔ BR	Idling, Intake air temp. 20°C (68°F)	0.5 ~ 3.4
THW (E6 - 20) - E2 (E6 - 22)	G-B ↔ BR	Idling, Engine coolant temp. 80°C (176°F)	0.2 ~ 1.0
STA (E7 - 13) - E1 (E5 - 16)	GR ↔ BR	Cranking	6.0 or more
#10 (E7 - 10) - E01 (E7 - 34)	L ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#20 (E7 - 9) - E01 (E7 - 34)	R ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#30 (E7 - 8) - E01 (E7 - 34)	Y ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#40 (E7 - 7) - E01 (E7 - 34)	W ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#50 (E7 - 6) - E01 (E7 - 34)	R-L ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#60 (E7 - 5) - E01 (E7 - 34)	G ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
IGT1 (E7 - 24) - E1 (E5 - 16)	GR ↔ BR	Idling	Pulse generation
IGT2 (E7 - 16) - E1 (E5 - 16)	BR-Y ↔ BR	Idling	Pulse generation
IGT3 (E7 - 15) - E1 (E5 - 16)	LG-B ↔ BR	Idling	Pulse generation

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Fig. 28: Pin Voltage Chart (Sienna - 1 Of 3)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
IGF (E7 - 12) - E1 (E5 - 16)	W-R ↔ BR	IG switch ON	4.5 ~ 5.5
G22+ (E6 - 17) - NE- (E5 - 6)	B-W ↔ L	Idling	Pulse generation
NE+ (E6 - 5) - NE- (E6 - 6)	B-R ↔ L	Idling	Pulse generation
ELS (E4 - 3) - E1 (E5 - 16)	G ↔ BR	Taillight switch ON	7.5 ~ 14
		Taillight switch OFF	0 ~ 1.5
ELS2 (E4 - 2) - E1 (E5 - 16)	V ↔ BR	Defogger switch ON	7.5 ~ 14
		Defogger switch OFF	0 ~ 1.5
ACIS (E5 - 6) - E01 (E7 - 34)	RY ↔ BR	IG switch ON	9 ~ 14
FC (E6 - 18) - E1 (E5 - 16)	G-R ↔ BR	IG switch ON	9 ~ 14
		Idling	0 ~ 3.0
EVP1 (E5 - 2) - E01 (E7 - 34)	LG ↔ BR	IG switch ON	9 ~ 14
RSC (E7 - 22) - E01 (E7 - 34)	Y-B ↔ BR	IG switch ON Disconnect E10 of ECM connector	9 ~ 14
RSO (E7 - 23) - E01 (E7 - 34)	R-W ↔ BR	IG switch ON Disconnect E10 of ECM connector	9 ~ 14
OXR1 (E6 - 13) - E1 (E5 - 16)	W ↔ BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
OXL1 (E6 - 19) - E1 (E5 - 16)	B ↔ BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
OXS (E4 - 18) - E1 (E5 - 16)	W ↔ BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
HTL (E5 - 10) - E03 (E7 - 28)	Y-R ↔ BR	Idling	9 ~ 14
		IG switch ON	Below 3.0
HTR (E5 - 11) - E03 (E7 - 28)	L-B ↔ BR	Idling	9 ~ 14
		IG switch ON	Below 3.0
HTS (E4 - 17) - E03 (E7 - 28)	P-B ↔ BR	Idling	9 ~ 14
		IG switch ON	Below 3.0
KNKR (E6 - 15) - E1 (E5 - 16)	W ↔ BR	Idling	Pulse generation
KNKL (E6 - 14) - E1 (E5 - 16)	W ↔ BR	Idling	Pulse generation
NSW (E7 - 14) - E1 (E5 - 16)	B-W ↔ BR	IG switch ON	9 ~ 14
		Other shift position in "P", "N" position	
		IG switch ON Shift position in "P", "N" position	0 ~ 3.0
SPD (E4 - 12) - E1 (E5 - 16)	V-Y ↔ BR	IG switch ON Rotate driving wheel slowly	Pulse generation
TC (E5 - 5) - E1 (E5 - 16)	L-W ↔ BR	IG switch ON	9 ~ 14
W (E5 - 3) - E1 (E5 - 16)	G-R ↔ BR	IG switch ON	Below 3.0
PS (E7 - 31) - E1 (E5 - 16)	B-L ↔ BR	IG switch ON	9 ~ 14
ACT (E4 - 5) - E1 (E5 - 16)	LG-B ↔ BR	A/C switch OFF	Below 2.0
		A/C switch ON at idling	9 ~ 14

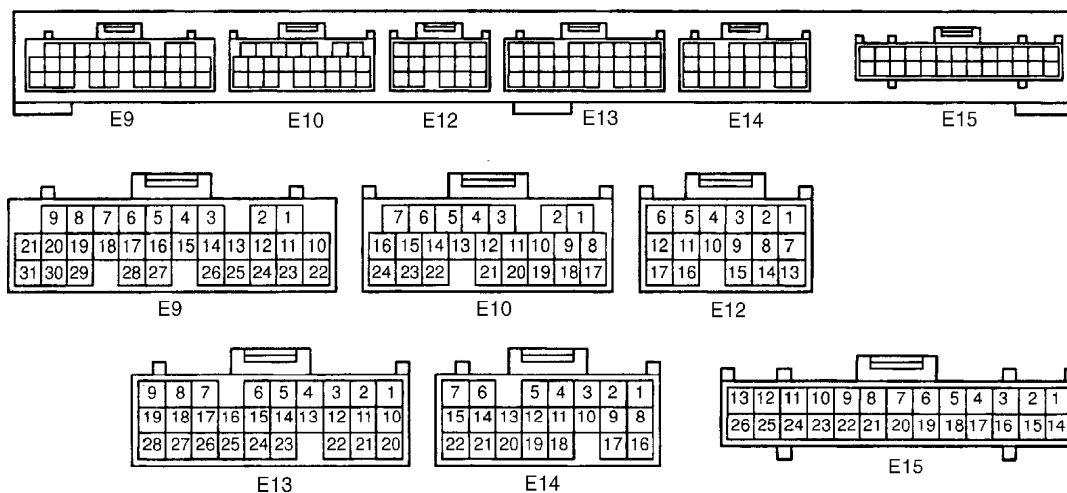
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Fig. 29: Pin Voltage Chart (Sienna - 2 Of 3)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
A/C (E4 – 16) – E1 (E5 – 16)	B–Y ↔ BR	A/C switch ON at idling	Below 2.0
		A/C switch OFF	9 ~ 14
CF (E5 – 9) – E1 (E5 – 16)	G–W ↔ BR	Electric cooling fan is operating on high speed	9 ~ 14
		Electric cooling fan is operating on low speed or OFF	0 ~ 2
TACH (E4 – 13) – E1 (E5–16)	O ↔ BR	Idling	Pulse generation
TPC (E5 – 8) – E1 (E5 – 16)	W–R ↔ BR	IG switch ON Disconnect the vacuum hose from the vapor pressure sensor	9 ~ 14
PTNK (E5 – 13) – E1 (E5 – 16)	L–R ↔ BR	IG switch ON	3.0 ~ 3.6
		IG switch ON	1.3 ~ 2.1
		Apply vacuum 2.0 kPa (15 mmHg, 0.6 in.Hg)	
SIL (E4 – 8) – E1 (E5 – 16)	R ↔ BR	During transmission	Pulse generation
STP (E4 – 24) – E1 (E5 – 16)	G–W ↔ BR	IG switch ON Brake pedal depressed	7.5 ~ 14
		IG switch ON Brake pedal released	Below 1.5

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Fig. 30: Pin Voltage Chart (Sienna – 3 Of 3)
Courtesy of Toyota Motor Sales, U.S.A., Inc.



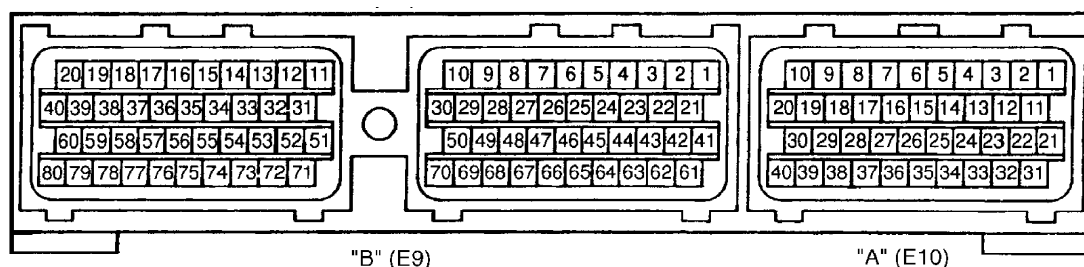
Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
BATT (E14-1) - E1 (E10-17)	B-W ↔ BR	Always	9 ~ 14
+BM (E14-7) - E1 (E10-17)	L-R ↔ BR		
IGSW (E14-9) - E1 (E10-17)	B-O ↔ BR		
+B (E14-16) - E1 (E10-17)	B-R ↔ BR	IG switch ON	9 ~ 14
+B2 (E14-8) - E1 (E10-17)	B-R ↔ BR		
VC (E10-2) - E2 (E10-18)	L-R ↔ W-B	IG switch ON	4.5 ~ 5.5
VTA (E10-23) - E2 (E10-18)	Y ↔ W-B	IG switch ON Throttle valve fully closed	0.4 ~ 1.0
		IG switch ON Throttle valve fully open	3.2 ~ 4.8
VTA2 (E10-24) - E2 (E10-18)	R-B ↔ W-B	IG switch ON Throttle valve fully closed	2.0 ~ 2.9
		IG switch ON Throttle valve fully open	4.7 ~ 5.1
VPA (E10-15) - E2 (E10-18)	G ↔ W-B	IG switch ON Throttle valve fully closed	0.3 ~ 0.9
		IG switch ON Throttle valve fully open	3.2 ~ 4.8
VPA2 (E10-16) - E2 (E10-18)	W ↔ W-B	IG switch ON Throttle valve fully closed	1.8 ~ 2.7
		IG switch ON Throttle valve fully open	4.7 ~ 5.1
VG (E10-10) - EVG (E10-19)	Y-R ↔ BR	Idling, P or N position, A/C switch OFF	1.1 ~ 1.5
THA (E10-22) - E2 (E10-18)	G-W ↔ W-B	Idling, Intake air temp. 20°C (68°F)	0.5 ~ 3.4
THW (E10-14) - E2 (E10-18)	L ↔ W-B	Idling, Engine coolant temp. 80°C (176°F)	0.2 ~ 1.0
STA (E13-2) - E1 (E10-17)	B ↔ BR	Shift lever position P or N position, ignition switch START	9 ~ 14
#10 (E10-5) - E01 (E9-21)	R-L ↔ W-B	IG switch ON	9 ~ 14
#20 (E10-6) - E01 (E9-21)	L-R ↔ W-B		
#30 (E9-1) - E01 (E9-21)	L ↔ W-B	Idling	Pulse generation
#40 (E9-2) - E01 (E9-21)	R-W ↔ W-B		
#50 (E9-3) - E01 (E9-21)	R ↔ W-B		
#60 (E9-4) - E01 (E9-21)	R-B ↔ W-B		

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Fig. 31: Pin Voltage Chart (Supra Non-Turbo - 1 Of 2)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
IGT (E9-11) – E1 (E10-17) IGT2 (E9-12) – E1 (E10-17) IGT3 (E9-13) – E1 (E10-17)	R-W ↔ BR LG ↔ BR G-R ↔ BR	Idling	Pulse generation
IGF (E9-25) – E1 (E10-17)	R-Y ↔ BR	IG switch ON	4.5 ~ 5.5
		Idling	Pulse generation
G2 (E9-10) – NE- (E9-22)	L ↔ W	Idling	Pulse generation
NE (E9-23) – NE- (E9-22)	B ↔ W		
M-REL (E14-10) – E1 (E10-17)	B-Y ↔ BR	IG switch ON	9 ~ 14
FPC (E14-3) – E1 (E10-17)	V-W ↔ BR	IG switch ON	Below 1.5
		Idling	Pulse generation
DI (E14-2) – E1 (E10-17)	G ↔ BR	Idling	7.0 or more
STP (E13-6) – E1 (E10-17)	G-W ↔ BR	Brake pedal is depressed	7.5 ~ 14
		Brake pedal is released	Below 1.5
PRG (E10-7) – E01 (E9-21)	Y ↔ W-B	IG switch ON	9 ~ 14
TPC (E15-13) – E01 (E9-21)	R-B ↔ W-B	IG switch ON	9 ~ 14
PTNK (E13-18) – E2 (E10-18)	Y-B ↔ W-B	Ignition switch ON	2.9 ~ 3.7
		Apply vacuum 4.0 kPa (30 mmHg, 1.2 in. Hg)	Below 0.5
OXL1 (E10-12) – E2 (E10-18) OXL2 (E13-8) – E2 (E10-18) OXR1 (E10-11) – E2 (E10-18) OXR2 (E15-24) – E2 (E10-18)	W ↔ W-B W ↔ W-B R-L ↔ W-B W ↔ W-B	Maintain engine speed at 2,500 rpm for 2 minutes after warming up	Pulse generation
HTL (E10-4) – E01 (E9-21) HTL2 (E15-26) – E01 (E9-21) HTR (E10-3) – E01 (E9-21) HTR2 (E15-25) – E01 (E9-21)	G ↔ W-B L-W ↔ W-B B-Y ↔ W-B G-Y ↔ W-B	Idling	Below 3.0
KNK1 (E9-28) – E1 (E10-17) KNK2 (E9-27) – E1 (E10-17)	W ↔ BR	IG switch ON	9 ~ 14
		Maintain engine speed at 4,000 rpm after warming up	Pulse generation
TC (E13-5) – E1 (E10-17)	R ↔ BR	IG switch ON	9 ~ 14
W (E14-6) – E01 (E9-21)	L-B ↔ W-B	Idling	9 ~ 14
		IG switch ON	Below 3.0
ACMG (E13-13) – E01 (E9-21)	W-G ↔ W-B	A/C switch ON (At Idling)	Below 3.0
		A/C switch OFF	9 ~ 14
OCV+ (E9-18) – OCV- (E9-17)	W-R ↔ Y-B	IG switch ON	Pulse generation
ACIS (E9-5) – E01 (E9-21)	G-Y ↔ W-B	IG switch ON	9 ~ 14
		Engine speed between 2,500 and 4,000 rpm	Below 3.0
CL+ (E9-20) – CL- (E9-19)	L ↔ Y	Idling	Pulse generation
M+ (E9-8) – ME01 (E9-9) M- (E9-7) – ME01 (E9-9)	W ↔ BR B ↔ BR	Idling	Pulse generation
ST1- (E13-11) – E1 (E10-17)	R-L ↔ BR	IG switch ON, Brake pedal is depressed	Below 1.5
		IG switch ON, Brake pedal is released	7.5 ~ 14
SIL (E14-11) – E1 (E10-17)	B ↔ BR	IG switch ON	9 ~ 14
SP2+ (E12-5) – SP2- (E12-11)	L-Y ↔ R-Y	Vehicle is driving	Pulse generation

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Fig. 32: Pin Voltage Chart (Supra Non-Turbo - 2 Of 2)
Courtesy of Toyota Motor Sales, U.S.A., Inc.



Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
BATT (A33) – E1 (B69)	B–Y ↔ BR	Always	9 ~ 14
IGSW (A1) – E1 (B69)	B–O ↔ BR	IG switch ON	9 ~ 14
+B (A31) – E1 (B69)	B–R ↔ BR		
VC (B41) – E2 (B65)	L–R ↔ W–B	IG switch ON	4.5 ~ 5.5
IDL1 (B64) – E2 (B65)	R ↔ W–B	IG switch ON and apply vacuum to the throttle opener Main throttle valve fully closed	–0.1 ~ 3.0
		IG switch ON Main throttle valve fully opened	9 ~ 14
IDL2 (B63) – E2 (B65)	GR–R ↔ W–B	IG switch ON Sub throttle valve fully closed	–0.1 ~ 3.0
		IG switch ON Sub throttle valve fully opened	9 ~ 14
VTA1 (B43) – E2 (B65)	Y ↔ W–B	IG switch ON Main or sub throttle valve fully closed	0.3 ~ 0.8
VTA2 (B42) – E2 (B65)	Y–L ↔ W–B	IG switch ON Main or sub throttle valve fully opened	3.2 ~ 4.9
VG (B66) – E2G (B28)	Y–R ↔ BR	Idling, P or N position, A/C switch OFF	0.7 ~ 1.7
THA (B45) – E2 (B65)	P–L ↔ W–B	Idling, Intake air temperature 0°C (32°F) to 80°C (176°F)	0.5 ~ 3.4
THW (B44) – E2 (B65)	L–Y ↔ W–B	Idling, Engine coolant temperature 60°C (140°F) to 120°C (248°F)	0.2 ~ 1.0
THG (B46) – E2 (B65)	BR–Y ↔ W–B	Idling after warming up	1.0 ~ 4.0
STA (B77) – E1 (B69)	B ↔ BR	Cranking	6.0 or more
#10 (B20) – E01 (B80)	R–L ↔ BR	IG switch ON	9 ~ 14
#20 (B19) – E01 (B80)	R–Y ↔ BR		
#30 (B18) – E01 (B80)	R–G ↔ BR	Idling	Pulse generation
#40 (B17) – E01 (B80)	R–W ↔ BR		
#50 (B16) – E01 (B80)	R ↔ BR		
#60 (B15) – E01 (B80)	R–B ↔ BR		
IGT1 (B57) – E1 (B69)	R–W ↔ BR	IG switch ON	–0.1 ~ 0.5
IGT2 (B56) – E1 (B69)	W–R ↔ BR		
IGT3 (B55) – E1 (B69)	LG ↔ BR	Idling	Pulse generation
IGT4 (B54) – E1 (B69)	B–R ↔ BR		
IGT5 (B53) – E1 (B69)	L ↔ BR		
IGT6 (B52) – E1 (B69)	R ↔ BR		

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Fig. 33: Pin Voltage Chart (Supra Turbo – 1 Of 3)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

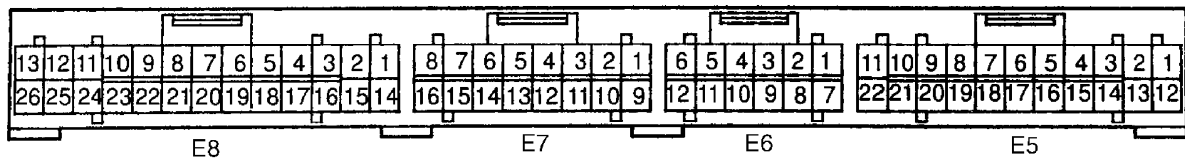
Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
IGF (B58) – E1 (B69)	R–Y ↔ BR	IG switch ON	4.5 ~ 5.5
		Idling	Pulse generation
G1 (B26) – G– (B6) G2 (B25) – NE– (B7) NE (B27) – NE– (B7)	W ↔ O B–W ↔ BR B–R ↔ BR	Idling	Pulse generation
M–REL (A24) – E1 (B69)	GR ↔ BR	IG switch ON	9 ~ 14
FPC (A22) – E1 (B69)	V–W ↔ BR	IG switch ON	Below 0.5
		Idling	Pulse generation (4.5 ~ 5.0)
DI (A21) – E1 (B69)	G ↔ BR	Idling	7.0 or more
PRG (B74) – E01 (B80)	V ↔ BR	IG switch ON	9 ~ 14
EGR (B75) – E01 (B80)	P ↔ BR	Idling	Below 2.0
		Engine speed at 3,500 rpm	9 ~ 14
ISC1 (B35) – E01 (B80) ISC2 (B34) – E01 (B80) ISC3 (B33) – E01 (B80) ISC4 (B32) – E01 (B80)	V–Y ↔ BR G–W ↔ BR G–O ↔ BR R–G ↔ BR	Idling, When A/C switch ON or OFF	Pulse generation
OX1 (B48) – E1 (B69) OX2 (B47) – E1 (B69)	W ↔ BR R–L ↔ BR	Maintain engine speed at 2,500 rpm for 3 min. after warming up	Pulse generation
HT1 (B71) – E01 (B80) HT2 (B72) – E01 (B80)	B–L ↔ BR BR–W ↔ BR	Idling after warming up	Below 3.0
KNK1 (B50) – E1 (B69) KNK2 (B49) – E1 (B69)	W ↔ BR W ↔ BR	IG switch ON	9 ~ 14
		Other shift position in "P" or "N" position	0 ~ 3.0
NSW (B76) – E1 (B69)	B–W ↔ BR	IG switch ON Shift position in "P" or "N" position	Pulse generation
SPD (A2) – E1 (B69)	P ↔ BR	IG switch ON Rotate driving wheel slowly	Pulse generation
TE1 (A20) – E1 (B69)	L ↔ BR	IG switch ON	9 ~ 14
W (A6) – E01 (B80)	L–B ↔ BR	Idling	9 ~ 14
		IG switch ON	0 ~ 3.0
OD1 (A12) – E1 (B69)	BR–B ↔ BR	IG switch ON	9 ~ 14
A/C (A34) – E1 (B69)	L–R ↔ BR	A/C switch ON (At idling)	0 ~ 1.5
		A/C switch OFF	7.5 ~ 14
STP (A4) – E1 (B69)	G–W ↔ BR	IG switch ON Brake pedal depressed	7.5 ~ 14
		IG switch ON Brake pedal released	Below 1.5
ACMG (A23) – E01 (B80)	W–G ↔ BR	A/C switch ON (At idling)	0 ~ 3.0
		A/C switch OFF	9 ~ 14
FPU (B73) – E01 (B80)	W–L ↔ BR	IG switch ON	9 ~ 14
		Restarting at high engine coolant temperature	Below 2.0
ELS (A15) – E1 (B69)	R–Y ↔ BR	Defogger switch and taillight switch ON	7.5 ~ 14
		Defogger switch and taillight switch OFF	–0.1 ~ 1.5
SDL (A8) – E1 (B69)	G ↔ BR	During transmission	Pulse generation

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Fig. 34: Pin Voltage Chart (Supra Turbo – 2 Of 3)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
VSV1 (B40) – E1 (B69)	G–B ↔ BR	Immediately after racing	Below 3.0
		Idling	9 ~ 14
VSV2 (B39) – E1 (B69)	G–Y ↔ BR	For 2 sec. after IG switch ON to OFF	Below 3.0
		Idling	9 ~ 14
VSV3 (B38) – E1 (B69)	G–R ↔ BR	Idling	9 ~ 14
PMC (B60) – E1 (B69)	L–W ↔ BR	Idling and other shift position "P" or "N" position (for A/T). Idling (for M/T)	Below 3.0
		Idling and shift position "P" or "N" position (for A/T)	9 ~ 14
PM1 (B62) – E2 (B65)	B–Y ↔ W–B	IG switch ON	2.3 ~ 3.0
		IG switch ON and apply vacuum 26.7 kPa (200 mmHg, 7.9 in.Hg)	1.0 ~ 1.5
EFI+ (A27) – E2 (B65) EFI– (A26) – E2 (B65)	B ↔ W–B W ↔ W–B	IG switch ON	Pulse generation
ETC+ (A14) – E2 (B65) ETC– (A13) – E2 (B65)	Y ↔ W–B BR ↔ W–B	IG switch ON	Pulse generation

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Fig. 35: Pin Voltage Chart (Supra Turbo – 3 Of 3)
Courtesy of Toyota Motor Sales, U.S.A., Inc.



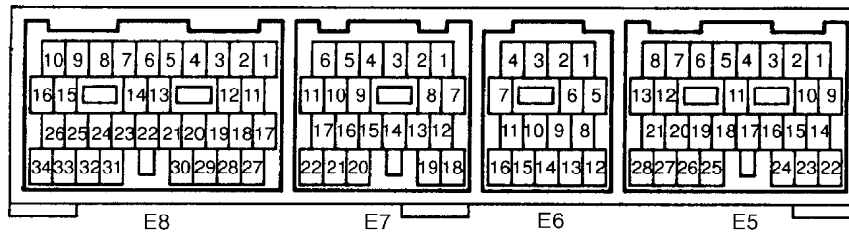
Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
BATT (E5-2) – E1 (E8-24)	B–Y ↔ BR	Always	9 ~ 14
+ B (E5-12) – E1 (E8-24)	W–R ↔ BR	IG switch ON	9 ~ 14
VCC (E7-1) – E2 (E7-9)	G–Y ↔ BR–B	IG switch ON	4.5 ~ 5.5
VTA (E7-10) – E2 (E7-9)	Y ↔ BR–B	IG switch ON Throttle valve fully closed	0.3 ~ 0.8
		IG switch ON Throttle valve fully open	3.2 ~ 4.9
VG (E7-2) – E3 (E6-7)	GR–R ↔ BR–W	Idling, A/C switch OFF, Shift position in "N" or "P" position	1.1 ~ 1.5
THA (E7-3) – E2 (E7-9)	Y–G ↔ BR–B	Idling, Intake air temp. 20°C (68° F)	0.5 ~ 3.4
THW (E7-4) – E2 (E7-9)	G–R ↔ BR–B	Idling, Engine coolant temp. 80°C (176° F)	0.2 ~ 1.0
STA (E5-11) – E1 (E8-24)	B–W ↔ BR	Cranking	6.0 or more
#10 (E8-12) – E01 (E8-13)	W–R ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#20 (E8-11) – E01 (E8-13)	W ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#30 (E8-10) – E01 (E8-13)	R ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#40 (E8-9) – E01 (E8-13)	R–L ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
IGT1 (E8-23) – E1 (E8-24)	B–L ↔ BR	Idling	Pulse generation
IGT2 (E8-22) – E1 (E8-24)	BR–Y ↔ BR		
IGF (E8-17) – E1 (E8-24)	B–Y ↔ BR	IG switch ON	4.5 ~ 5.5
		Idling	Pulse generation
G (E6-11) – G– (E6-5)	Y ↔ L	Idling	Pulse generation
NE (E6-12) – NE– (E6-6)	R ↔ G		
FC (E8-14) – E1 (E8-24)	G–Y ↔ BR	IG switch ON	9 ~ 14
EGR (E7-15) – E1 (E8-24)	P–B ↔ BR	IG switch ON	9 ~ 14
EVP (E8-3) – E1 (E8-24)	W–G ↔ BR	IG switch ON	9 ~ 14
THG (E7-11) – E2 (E7-9)	P ↔ BR–B	IG switch ON	4.5 ~ 5.5

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 Fig. 36: Pin Voltage Chart (Tacoma 2.4L 4-Cyl. & 2.7L 4-Cyl. – 1 Of 2)
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
RSC (E8-6) – E1 (E8-24)	B ↔ BR	IG switch ON	0 ~ 3.0
RSO (E8-7) – E1 (E8-24)	B-R ↔ BR	Disconnect E8 of ECM connector	
OX1 (E7-5) – E1 (E8-24)	W ↔ BR	Maintain engine speed at 2,500 rpm for 3 min. after warming up	Pulse generation
OX2 (E7-13) – E1 (E8-24)	B ↔ BR		
HT1 (E8-2) – E03 (E8-25)	R-B ↔ BR	Idling	Below 3.0
		IG switch ON	9 ~ 14
HT2 (E8-1) – E03 (E8-25)	R-W ↔ BR	Idling	Below 3.0
		IG switch ON	9 ~ 14
KNK (E7-12) – E1 (E8-24)	B ↔ BR	Idling	Pulse generation
*1 NSW (E5-22) – E1 (E8-24)	B-R ↔ BR	IG switch ON Other shift position in "P", "N" position	9 ~ 14
		IG switch ON Shift position in "P", "N" position	0 ~ 3.0
SP1 (E5-8) – E1 (E8-24)	G-O ↔ BR	IG switch ON Rotate driving wheel slowly	Pulse generation
TE1 (E7-7) – E1 (E8-24)	V-W ↔ BR	IG switch ON	9 ~ 14
W (E5-4) – E1 (E8-24)	V-R ↔ BR	Idling	9 ~ 14
		IG switch ON	Below 3.0
ACT (E5-6) – E1 (E8-24)	L-B ↔ BR	A/C switch OFF	Below 1.5
		A/C switch ON at idling	7.5 ~ 14
AC1 (E5-7) – E1 (E8-24)	L-Y ↔ BR	A/C switch ON at idling	Below 2.0
		A/C switch OFF	9 ~ 14
TPC (E7-8) – E1 (E8-24)	GR-G ↔ BR	IG switch ON	9 ~ 14
PTNK (E6-10) – E2 (E7-9)	R-Y ↔ BR-B	IG switch ON	2.9 ~ 3.7
		Apply vacuum (4.0 kPa, 30 mmHg, 1.18 in.Hg)	Below 0.5
BK (E5-21) – E1 (E8-24)	G-W ↔ BR	IG switch ON, Brake pedal is depressed	7.5 ~ 14
		IG switch ON, Brake pedal is released	Below 1.5

*1 - A/T models only.

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Fig. 37: Pin Voltage Chart (Tacoma 2.4L 4-Cyl. & 2.7L 4-Cyl. - 2 Of 2)
Courtesy of Toyota Motor Sales, U.S.A., Inc.



Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
BATT (E5-14) – E1 (E6-16)	B-Y ↔ BR	Always	9 ~ 14
+ B (E5-23) – E1 (E6-16)	W-R ↔ BR	IG switch ON	9 ~ 14
VC (E7-1) – E2 (E7-22)	G-B ↔ BR-B	IG switch ON	4.5 ~ 5.5
VTA (E7-7) – E2 (E7-22)	Y ↔ BR-B	IG switch ON Throttle valve fully closed	0.3 ~ 1.0
		IG switch ON Throttle valve fully open	2.7 ~ 5.2
VG (E7-8) – E3 (E6-7)	GR-R ↔ BR-W	Idling, A/C switch OFF, Shift position in P or N position	1.1 ~ 1.5
THA (E7-21) – E2 (E7-22)	Y-G ↔ BR-B	Idling, Intake air temperature 20°C (68°F)	0.5 ~ 3.4
THW (E7-20) – E2 (E7-22)	G-R ↔ BR-B	Idling, Engine coolant temperature 80°C (176°F)	0.2 ~ 1.0
STA (E8-13) – E1 (E6-16)	B-W ↔ BR	Cranking	6.0 or more
#10 (E8-10) – E01 (E8-34)	W-R ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#20 (E8-9) – E01 (E8-34)	W ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#30 (E8-8) – E01 (E8-34)	W-G ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#40 (E8-7) – E01 (E8-34)	L-R ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#50 (E8-6) – E01 (E8-34)	W-L ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#60 (E8-5) – E01 (E8-34)	L ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
IGT1 (E8-24) – E1 (E6-16)	B-L ↔ BR	Idling	Pulse generation
IGT2 (E8-16) – E1 (E6-16)	BR-Y ↔ BR		
IGT3 (E8-15) – E1 (E6-16)	B-W ↔ BR		
IGF (E8-12) – E1 (E6-16)	B-Y ↔ BR	IG switch ON	4.5 ~ 5.5
		Idling	Pulse generation

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Fig. 38: Pin Voltage Chart (Tacoma 3.4L V6 - 1 Of 2)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
G+ (E7-17) – NE– (E7-6)	Y ↔ L	Idling	Pulse generation
NE+ (E7-5) – NE– (E7-6)	R ↔ L		
FC (E7-18) – E1 (E6-16)	G–Y ↔ BR	IG switch ON	9 ~ 14
		Idling	0 ~ 3.0
EVP (E6-2) – E1 (E6-16)	W–G ↔ BR	IG switch ON	9 ~ 14
RSC (E8-22) – E1 (E6-16)	B–R ↔ BR	IG switch ON	9 ~ 14
RSO (E8-23) – E1 (E6-16)	BR–R ↔ BR	Disconnect E9 of ECM connector	
OX1 (E7-13) – E1 (E6-16)	W ↔ BR	Maintain engine speed at 2,500 rpm for 3 min. after warming up	Pulse generation
OX2 (E7-19) – E1 (E6-16)	B ↔ BR		
HT1 (E6-11) – E03 (E8-28)	P–G ↔ BR	Idling	Below 3.0
		IG switch ON	9 ~ 14
HT2 (E6-10) – E03 (E8-28)	R–W*1 ↔ BR	Idling	Below 3.0
	R–G*2 ↔ BR	IG switch ON	9 ~ 14
KNK1 (E7-15) – E1 (E6-16)	B ↔ BR	Idling	Pulse generation
KNK2 (E7-14) – E1 (E6-16)	GR ↔ BR		
*1 NSW (E8-14) – E1 (E6-16)	B–R ↔ BR	IG switch ON Other shift position in "P" or "N" position	9 ~ 14
		IG switch ON Shift position in "P" or "N" position	0 ~ 3.0
SP1 (E5-12) – E1 (E6-16)	G–O ↔ BR	IG switch ON Rotate driving wheel slowly	Pulse generation
TE1 (E6-5) – E1 (E6-16)	R ↔ BR	IG switch ON	9 ~ 14
W (E6-3) – E1 (E6-16)	V–R ↔ BR	Idling	9 ~ 14
		IG switch ON	Below 3.0
*3 EGR (E6-12) – E1 (E6-16)	R–W ↔ BR	IG switch ON	9 ~ 14
*3 THG (E6-14) – E2 (E7-22)	P–G ↔ BR–B	IG switch ON	4.5 ~ 5.5
PSW (E8-31) – E1 (E6-16)	Y ↔ BR	IG switch ON	9 ~ 14
ACT (E5-5) – E1 (E6-16)	L–B ↔ BR	A/C switch OFF	Below 2.0
		A/C switch ON at idling	5.0 or more
AC1 (E5-16) – E1 (E6-16)	L–Y ↔ BR	A/C switch ON at idling	Below 2.0
		A/C switch OFF	9 ~ 14
TPC (E6-8) – E1 (E6-16)	GR–G ↔ BR	IG switch ON	9 ~ 14
		Disconnect the vacuum hose from the vapor pressure sensor	
PTNK (E6-13) – E2 (E7-22)	R–Y ↔ BR–B	IG switch ON	3.0 ~ 3.6
		IG switch ON Apply vacuum 4.0 kPa (30 mmHg, 1.18 in.Hg) to vapor pressure sensor	Below 0.5
SDL (E5-8) – E1 (E6-16)	W ↔ BR	During transmission	Pulse generation
BK (E5-24) – E1 (E6-16)	G–W ↔ BR	IG switch ON, Brake pedal is depressed	7.5 ~ 14
		IG switch ON, Brake pedal is released	Below 1.5

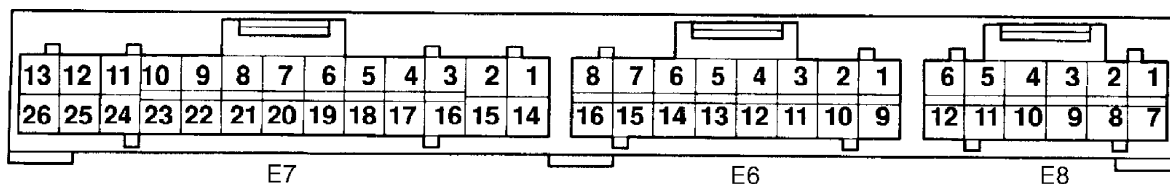
*1 - A/T models.

*2 - M/T models.

*3 - All 2WD models and 4WD models with regular cab.

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Fig. 39: Pin Voltage Chart (Tacoma 3.4L V6 - 2 Of 2)
Courtesy of Toyota Motor Sales, U.S.A., Inc.



Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
BATT (E8-2) – E1 (E7-26)	W-R ↔ BR	Always	9 ~ 14
+B (E8-7) – E1 (E7-26)	B-R ↔ BR	IG switch ON	9 ~ 14
VC (E6-11) – E2 (E6-9)	LG-R ↔ BR	IG switch ON	4.5 ~ 5.5
VTA (E6-10) – E2 (E6-9)	Y-G ↔ BR	IG switch ON Throttle valve fully closed	0.3 ~ 1.0
		IG switch ON Throttle valve fully open	3.2 ~ 4.9
PIM (E6-2) – E2 (E6-9)	P ↔ BR	IG switch ON	3.3 ~ 3.9
		Apply vacuum 26.7 kPa (200 mmHg, 7.9 in.Hg)	2.5 ~ 3.1
THA (E6-3) – E2 (E6-9)	L-B ↔ BR	Idling, Intake air temp. 20°C (68°F)	0.5 ~ 3.4
THW (E6-4) – E2 (E6-9)	B-R ↔ BR	Idling, Engine coolant temp. 80°C (176°F)	0.2 ~ 1.0
STA (E7-2) – E1 (E7-26)	B-W ↔ BR	Cranking	6.0 or more
#10 (E7-12) – E01 (E7-13)	G ↔ BR	IG switch ON Idling	9 ~ 14 Pulse generation
#20 (E7-25) – E01 (E7-13)	Y ↔ BR		
#30 (E7-11) – E01 (E7-13)	R ↔ BR		
#40 (E7-24) – E01 (E7-13)	L ↔ BR		
IGT1 (E7-1) – E1 (E7-26)	GR ↔ BR	Idling	Pulse generation
IGT2 (E7-14) – E1 (E7-26)	L-Y ↔ BR		
IGF (E7-7) – E1 (E7-26)	R-L ↔ BR	IG switch ON, Disconnect igniter connector	4.5 ~ 5.5
		Idling	Pulse generation
G2 (E7-18) – NE- (E7-17)	R ↔ G	Idling	Pulse generation
NE (E7-4) – NE- (E7-17)	B ↔ G		
FC (E8-4) – E1 (E7-26)	G-B ↔ BR	IG switch ON	9 ~ 14
EVP1(E6-7) – E1(E7-26)	L-W ↔ BR	IG switch ON	9 ~ 14
RSD (E7-10) – E1 (E7-26)	L-R ↔ BR	IG switch ON Disconnect "E7" of ECM connector	9 ~ 14
OX1 (E6-6) – E1 (E7-26)	B ↔ BR	Maintain engine speed at 2,500 rpm for 2 mins. after warming up	Pulse generation
OX2 (E6-5) – E1 (E7-26)	W ↔ BR		
HT2 (E7-21) – E03 (E6-16)	W-R ↔ BR	Idling	Below 3.0
		IG switch ON	9 ~ 14
KNK1 (E6-14) – E1 (E7-26)	B ↔ BR	Idling	Pulse generation

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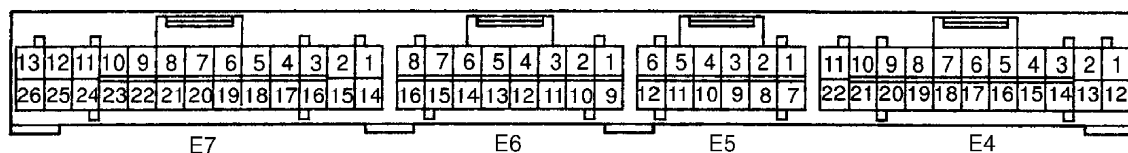
Fig. 40: Pin Voltage Chart (Tercel - 1 Of 2)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
*1 NSW (E7-15) – E1 (E7-26)	B ↔ BR	IG switch ON Other shift position in "P" or "N" position	9 ~ 14
		IG switch ON Shift position in "P" or "N" position	0 ~ 3.0
SPD (E8-11) – E1 (E7-26)	Y ↔ BR	IG switch ON Rotate driving wheel slowly	Pulse generation
TE1 (E6-15) – E1 (E7-26)	G ↔ BR	IG switch ON	9 ~ 14
W (E8-8) – E1 (E7-26)	GR-L ↔ BR	Idling	9 ~ 14
		IG switch ON	Below 3.0
AC (E8-10) – E1 (E7-26)	LG-B ↔ BR	Idling, A/C switch ON	Below 2.0
		Idling, A/C switch OFF	9 ~ 14
ACT (E8-6) – E1 (E7-26)	L ↔ BR	Idling, A/C switch ON	9 ~ 14
		Idling, A/C switch OFF	Below 2.0
TPC (E6-8) – E1 (E7-26)	G-Y ↔ BR	IG switch ON	9 ~ 14
PTNK (E6-12) – E2 (E6-9)	Y-B ↔ BR	IG switch ON	2.9 ~ 3.7
		Apply vacuum (less than 66.7 kPa, 500 mmHg, 19.7 in.Hg)	Below 0.5
SIL (E6-13) – E1 (E7-26)	W ↔ BR	During transmission	Pulse generation

*1- A/T models only.

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Fig. 41: Pin Voltage Chart (Tercel - 2 Of 2)
Courtesy of Toyota Motor Sales, U.S.A., Inc.



Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
BATT (E4-2) – E1 (E7-24)	B-G ↔ BR	Always	9 ~ 14
+B (E4-12) – E1 (E7-24)	W-R ↔ BR	IG switch ON	9 ~ 14
VCC (E6-1) – E2 (E6-9)	G-Y ↔ BR-B	IG switch ON	4.5 ~ 5.5
VTA (E6-10) – E2 (E6-9)	Y ↔ BR-B	IG switch ON Throttle valve fully closed	0.3 ~ 1.0
		IG switch ON Throttle valve fully open	3.2 ~ 4.9
VG (E6-2) – E3 (E5-7)	Y-R ↔ BR	Idling, A/C switch OFF, Shift position in "N" or "P" position	1.1 ~ 1.5
THA (E6-3) – E2 (E6-9)	Y-G ↔ BR-B	Idling, Intake air temp. 20°C (68° F)	0.5 ~ 3.4
THW (E6-4) – E2 (E6-9)	G-Y or G-W ↔ BR-B	Idling, Engine coolant temp. 80°C (176° F)	0.2 ~ 1.0
STA (E4-11) – E1 (E7-24)	B-W ↔ BR	Cranking	6.0 or more
#10 (E7-12) – E01 (E7-13)	W-R ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#20 (E7-11) – E01 (E7-13)	W ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#30 (E7-10) – E01 (E7-13)	B ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#40 (E7-9) – E01 (E7-13)	P-B ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
IGT1 (E7-23) – E1 (E7-24)	B-L ↔ BR	Idling	Pulse generation
IGT2 (E7-22) – E1 (E7-24)	B-O ↔ BR	Idling	Pulse generation
IGF (E7-17) – E1 (E7-24)	B-Y ↔ BR	IG switch ON	4.5 ~ 5.5
		Idling	Pulse generation
G (E5-11) – G- (E5-5)	R ↔ G	Idling	Pulse generation
NE (E5-12) – NE- (E5-6)	W ↔ B	Idling	Pulse generation
FC (E7-14) – E1 (E7-24)	G-Y ↔ BR	IG switch ON	9 ~ 14
EGR (E6-15) – E1 (E7-24)	P ↔ BR	IG switch ON	9 ~ 14

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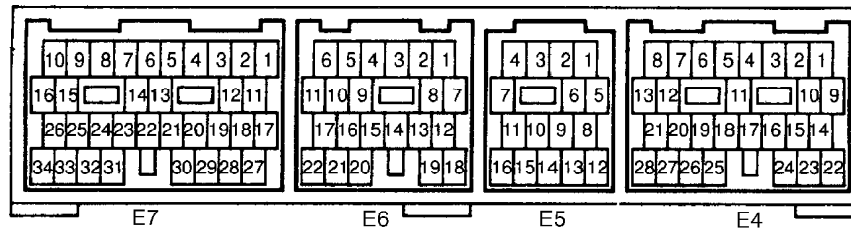
Fig. 42: Pin Voltage Chart (T100 2.7L 4-Cyl. - 1 Of 2)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
EVP (E7-3) – E1 (E7-24)	W-G ↔ BR	IG switch ON	9 ~ 14
THG (E6-11) – E2 (E6-9)	G-W ↔ BR-B	IG switch ON	4.5 ~ 5.5
RSC (E7-6) – E1 (E7-24)	V-Y ↔ BR	IG switch ON Disconnect E6 of ECM connector	9 ~ 14
RSO (E7-7) – E1 (E7-24)	V-R ↔ BR	IG switch ON Disconnect E6 of ECM connector	9 ~ 14
OX1 (E6-5) – E1 (E7-24)	B ↔ BR	Maintain engine speed at 2,500 rpm for 3 min. after warming up	Pulse generation
OX2 (E6-13) – E1 (E7-24)	W ↔ BR	Maintain engine speed at 2,500 rpm for 3 min. after warming up	Pulse generation
HT1 (E7-2) – E03 (E7-25)	P-G ↔ BR	Idling	Below 3.0
		IG switch ON	9 ~ 14
HT2 (E7-1) – E03 (E7-25)	R-G ↔ BR	Idling	Below 3.0
		IG switch ON	9 ~ 14
KNK (E6-12) – E1 (E7-24)	B ↔ BR	Engine at racing (4,000 rpm)	Pulse generation
*1 NSW (E4-22) – E1 (E7-24)	B-Y ↔ BR	IG switch ON Other shift position in "P", "N" position	9 ~ 14
		IG switch ON Shift position in "P", "N" position	0 ~ 3.0
SP1 (E4-8) – E1 (E7-24)	G ↔ BR	IG switch ON Rotate driving wheel slowly	Pulse generation
TE1 (E6-7) – E1 (E7-24)	V-W ↔ BR	IG switch ON	9 ~ 14
W (E4-4) – E1 (E7-24)	V ↔ BR	Idling	9 ~ 14
		IG switch ON	Below 3.0
ACT (E4-6) – E1 (E7-24)	L-B ↔ BR	A/C switch OFF	Below 2.0
		A/C switch ON at idling	9 ~ 14
AC1 (E4-7) – E1 (E7-24)	B-R ↔ BR	A/C switch ON at idling	Below 1.5
		A/C switch OFF	7.5 ~ 14
TPC (E6-8) – E1 (E7-24)	LG-R ↔ BR	IG switch ON	9 ~ 14
PTNK (E5-10) – E2 (E6-9)	R-L ↔ BR-B	IG switch ON	2.9 ~ 3.7
		Apply vacuum (4.0 kPa, 30 mmHg, 1.18 in.Hg)	Below 0.5
BK (E4-21) – E1 (E7-24)	G-W ↔ BR	IG switch ON, Brake pedal is depressed	7.5 ~ 14
		IG switch ON, Brake pedal is released	Below 1.5

*1 - A/T models only.

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Fig. 43: Pin Voltage Chart (T100 2.7L 4-Cyl. - 2 Of 2)
Courtesy of Toyota Motor Sales, U.S.A., Inc.



Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
BATT (E4-14) – E1 (E5-16)	B–G ↔ BR	Always	9 ~ 14
+B (E4-23) – E1 (E5-16)	W–R ↔ BR	IG switch ON	9 ~ 14
VC (E6-1) – E2 (E6-22)	G–B ↔ BR–B	IG switch ON	4.5 ~ 5.5
VTA (E6-7) – E2 (E6-22)	Y–B ↔ BR–B	IG switch ON Throttle valve fully closed	0.3 ~ 1.0
		IG switch ON Throttle valve fully open	2.7 ~ 5.2
VG (E6-8) – E3 (E5-7)	GR–R ↔ BR–W	Idling , A/C switch OFF, Shift position in P or N position	1.1 ~ 1.5
THA (E6-21) – E2 (E6-22)	Y–G ↔ BR–B	Idling, Intake air temp. 20°C (68°F)	0.5 ~ 3.4
THW (E6-20) – E2 (E6-22)	G–R ↔ BR–B	Idling, Engine coolant temp. 80°C (176°F)	0.2 ~ 1.0
STA (E7-13) – E1 (E5-16)	B–W ↔ BR	Cranking	6.0 or more
#10 (E7-10) – E01 (E7-34)	W–R ↔ BR	IG switch ON	9 ~ 14
#20 (E7-9) – E01 (E7-34)	Y ↔ BR		
#30 (E7-8) – E01 (E7-34)	W–G ↔ BR	Idling	Pulse generation
#40 (E7-7) – E01 (E7-34)	Y–R ↔ BR		
#50 (E7-6) – E01 (E7-34)	W–L ↔ BR		
#60 (E7-5) – E01 (E7-34)	Y–G ↔ BR		
IGT1 (E7-24) – E1 (E5-16)	B–L ↔ BR	Idling	Pulse generation
IGT2 (E7-16) – E1 (E5-16)	BR–B ↔ BR		
IGT3 (E7-15) – E1 (E5-16)	R–W ↔ BR		
IGF (E7-12) – E1 (E5-16)	B–Y ↔ BR	IG switch ON	4.5 ~ 5.5
		Idling	Pulse generation
G+ (E6-17) – NE– (E6-6)	P ↔ L	Idling	Pulse generation
NE+ (E6-5) – NE– (E6-6)	G ↔ L		
FC (E6-18) – E1 (E5-6)	G–Y ↔ BR	IG switch ON	9 ~ 14
		Idling	0 ~ 3.0
EVP (E5-2) – E1 (E5-16)	W–G ↔ BR	IG switch ON	9 ~ 14
RSC (E7-22) – E1 (E5-16)	B–R ↔ BR	IG switch ON	9 ~ 14
		Disconnect E7 of ECM connector	
RSO (E7-23) – E1 (E5-16)	BR–R ↔ BR	IG switch ON	9 ~ 14
		Disconnect E7 of ECM connector	
OX1 (E6-13) – E1 (E5-16)	W ↔ BR	Maintain engine speed at 2,500 rpm for 3 min. after warming up	Pulse generation
OX2 (E6-19) – E1 (E5-16)	R ↔ BR		
HT1 (E5-11) – E03 (E7-28)	P–G ↔ BR	Idling	Below 3.0
HT2 (E5-10) – E03 (E7-28)	R–G ↔ BR	IG switch ON	9 ~ 14

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Fig. 44: Pin Voltage Chart (T100 3.4L V6 – 1 Of 2)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

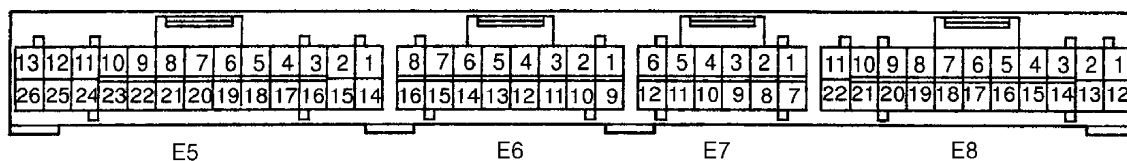
Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
KNK1 (E6-15) – E1 (E5-16) KNK2 (E6-14) – E1 (E5-16)	B ↔ BR GR ↔ BR	Engine racing at 4,000 rpm	Pulse generation
*1 NSW*1 (E7-14) – E1 (E5-16)	B-O ↔ BR	IG switch ON Other shift position in "P", "N" position	9 ~ 14
		IG switch ON Shift position in "P", "N" position	0 ~ 3.0
SP1 (E4-12) – E1 (E5-16)	G ↔ BR	IG switch ON Rotate driving wheel slowly	Pulse generation
TE1 (E5-5) – E1 (E5-16)	V-W ↔ BR	IG switch ON	9 ~ 14
W (E5-3) – E1 (E5-16)	V ↔ BR	Idling	9 ~ 14
		IG switch ON	Below 3.0
*2 EGR (E5-12) – E1 (E5-16)	R-W ↔ BR	IG switch ON	9 ~ 14
*2 THG (E5-14) – E2 (E6-22)	P ↔ BR-B	IG switch ON	4.5 ~ 5.5
PSW (E7-31) – E1 (E5-16)	P-L ↔ BR	IG switch ON	9 ~ 14
ACT (E4-5) – E1 (E5-16)	L-B ↔ BR	A/C switch OFF	Below 2.0
		A/C switch ON at idling	5 or more
AC1 (E4-16) – E1 (E5-16)	B-R ↔ BR	A/C switch ON at idling	Below 2.0
		A/C switch OFF	9 ~ 14
TPC (E5-8) – E1 (E5-16)	LG-R ↔ BR	IG switch ON Disconnect vacuum hose from vapor pressure sensor	9 ~ 14
PTNK (E5-13) – E2 (E6-22)	R-L ↔ BR-B	IG switch ON	3.0 ~ 3.6
		IG switch ON Apply vacuum 4.0 kPa (30 mmHg, 1.18 in.Hg) to vapor pressure sensor	Below 0.5
SIL (E4-8) – E1 (E5-16)	W ↔ BR	During transmission	Pulse generation
*1 BK (E4-24) – E1 (E5-16)	G-W ↔ BR-B	IG switch ON, Brake pedal is depressed	7.5 ~ 14
		IG switch ON, Brake pedal is released	Below 1.5

*1 - A/T models only.

*2 - 2WD models 1/2 ton only.

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Fig. 45: Pin Voltage Chart (T100 3.4L V6 - 2 Of 2)
Courtesy of Toyota Motor Sales, U.S.A., Inc.



Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
BATT (E8 - 2) - E1 (E5 - 24)	L - R ↔ BR	Always	9 ~ 14
+ B (E8 - 12) - E1 (E5 - 24)	W - L ↔ BR	IG switch ON	9 ~ 14
VCC (E6 - 1) - E2 (E6 - 9)	G - Y ↔ BR - B	IG switch ON	4.5 ~ 5.5
VTA (E6 - 10) - E2 (E6 - 9)	Y ↔ BR - B	IG switch ON Throttle valve fully closed	0.3 ~ 1.0
		IG switch ON Throttle valve fully open	3.2 ~ 4.9
VG (E6 - 2) - E3 (E7 - 7)	B - R ↔ R - W	Idling , A/C switch OFF, Shift position in "N" or "P" position	1.1 ~ 1.5
THA (E6 - 3) - E2 (E6 - 9)	Y - G ↔ BR - B	Idling, Intake air temp. 20°C (68° F)	0.5 ~ 3.4
THW (E6 - 4) - E2 (E6 - 9)	G - R ↔ BR - B	Idling, Engine coolant temp. 80°C (176° F)	0.2 ~ 1.0
STA (E8 - 11) - E1 (E5 - 24)	B - W ↔ BR	Cranking	6.0 or more
#10 (E5 - 12) - E01 (E5 - 13)	R ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#20 (E5 - 11) - E01 (E5 - 13)	W ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#30 (E5 - 10) - E01 (E5 - 13)	G ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#40 (E5 - 9) - E01 (E5 - 13)	R - L ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
IGT1 (E5 - 23) - E1 (E5 - 24)	B - L ↔ BR	Idling	Pulse generation
IGT2 (E5 - 22) - E1 (E5 - 24)	Y - B ↔ BR	Idling	Pulse generation
IGF (E5 - 17) - E1 (E5 - 24)	B - Y ↔ BR	IG switch ON	4.5 ~ 5.5
		Idling	Pulse generation
G (E7 - 11) - G ⊖ (E7 - 5)	P ↔ V	Idling	Pulse generation
NE (E7 - 12) - NE ⊖ (E7 - 6)	R ↔ G	Idling	Pulse generation
FC (E5 - 14) - E1 (E5 - 24)	G - Y ↔ BR	IG switch ON	9 ~ 14
EGR (E6 - 15) - E1 (E5 - 24)	P - L ↔ BR	IG switch ON	9 ~ 14

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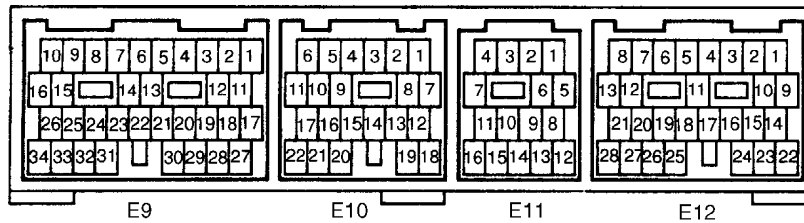
Fig. 46: Pin Voltage Chart (4Runner 2.7L 4-Cyl. - 1 Of 2)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
EVP (E5 - 3) - E1 (E5 - 24)	B - W ↔ BR	IG switch ON	9 ~ 14
THG (E6 - 11) - E2 (E6 - 9)	P ↔ BR - B	IG switch ON	4.5 ~ 5.5
RSC (E5 - 6) - E1 (E5 - 24)	P - L ↔ BR	IG switch ON Disconnect E6 of ECM connector	0 ~ 3
RSO (E5 - 7) - E1 (E5 - 24)	B - R ↔ BR	IG switch ON Disconnect E6 of ECM connector	
OX1 (E6 - 5) - E1 (E5 - 24)	W ↔ BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
OX2 (E6 - 13) - E1 (E5 - 24)	R ↔ BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
HT1 (E5 - 2) - E03 (E5 - 25)	P ↔ BR	Idling	Below 3.0
		IG switch ON	9 ~ 14
HT2 (E5 - 1) - E03 (E5 - 25)	R - W ↔ BR	Idling	Below 3.0
		IG switch ON	9 ~ 14
KNK (E6 - 12) - E1 (E5 - 24)	GR ↔ BR	Idling	Pulse generation
*1 NSW (E8 - 22) - E1 (E5 - 24)	B ↔ BR	IG switch ON Other shift position in "P", "N" position	9 ~ 14
		IG switch ON Shift position in "P", "N" position	0 ~ 3.0
SP1 (E8 - 8) - E1 (E5 - 24)	G - O ↔ BR	IG switch ON Rotate driving wheel slowly	Pulse generation
TE1 (E6 - 7) - E1 (E5 - 24)	LG - B' ↔ BR	IG switch ON	9 ~ 14
W (E8 - 4) - E1 (E5 - 24)	V ↔ BR	Idling	9 ~ 14
		IG switch ON	Below 3.0
ACT (E8 - 6) - E1 (E5 - 24)	L - B ↔ BR	A/C switch OFF	Below 2.0
		A/C switch ON at idling	9 ~ 14
AC1 (E8 - 7) - E1 (E5 - 24)	L - Y ↔ BR	A/C switch ON at idling	Below 1.5
		A/C switch OFF	7.5 ~ 14
TPC (E6 - 8) - E1 (E5 - 24)	R - B ↔ BR	IG switch ON	9 ~ 14
PTNK (E7 - 10) - E2 (E6 - 9)	LG - B ↔ BR - B	IG switch ON	2.9 ~ 3.7
		Apply vacuum (4.0 kpa, 30 mmHg, 1.18 in.Hg)	Below 0.5
BK (E8 - 21) - E1 (E5 - 24)	G - W ↔ BR	IG switch ON, Brake pedal is depressed	7.5 ~ 14
		IG switch ON, Brake pedal is released	Below 1.5

*1- A/T models only.

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Fig. 47: Pin Voltage Chart (4Runner 2.7L 4-Cyl. - 2 Of 2)
Courtesy of Toyota Motor Sales, U.S.A., Inc.



Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
BATT (E12 - 14) - E1 (E11 - 16)	L - R ↔ BR	Always	9 ~ 14
+ B (E12 - 23) - E1 (E11 - 16)	W - L ↔ BR	IG switch ON	9 ~ 14
VC (E10 - 1) - E2 (E10 - 22)	G - B ↔ BR - B	IG switch ON	4.5 ~ 5.5
VTA (E10 - 7) - E2 (E10 - 22)	B - Y ↔ BR - B	IG switch ON Throttle valve fully closed	0.3 ~ 1.0
		IG switch ON Throttle valve fully open	2.7 ~ 5.2
VG (E10 - 8) - E3 (E11 - 7)	R - W ↔ B - W	Idling , A/C switch OFF	1.1 ~ 1.5
THA (E10 - 21) - E2 (E10 - 22)	Y - G ↔ BR - B	Idling, Intake air temp. 20°C (68°F)	0.5 ~ 3.4
THW (E10 - 20) - E2 (E10 - 22)	G - R ↔ BR - B	Idling, Engine coolant temp. 80°C (176°F)	0.2 ~ 1.0
STA (E9 - 13) - E1 (E11 - 16)	B - W ↔ BR	Cranking	6.0 or more
#10 (E9 - 10) - E01 (E9 - 34)	R ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#20 (E9 - 9) - E01 (E9 - 34)	W ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#30 (E9 - 8) - E01 (E9 - 34)	G ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#40 (E9 - 7) - E01 (E9 - 34)	R - B ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#50 (E9 - 6) - E01 (E9 - 34)	L ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
#60 (E9 - 5) - E01 (E9 - 34)	Y ↔ BR	IG switch ON	9 ~ 14
		Idling	Pulse generation
IGT1 (E9 - 24) - E1 (E11 - 16)	B - L ↔ BR	Idling	Pulse generation
IGT2 (E9 - 16) - E1 (E11 - 16)	BR - Y ↔ BR	Idling	Pulse generation

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Fig. 48: Pin Voltage Chart (4Runner 3.4L V6 - 1 Of 2)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
IGT3 (E9 - 15) - E1 (E11 - 16)	B - W ↔ BR	Idling	Pulse generation
IGF (E9 - 12) - E1 (E11 - 16)	B - Y ↔ BR	IG switch ON	4.5 ~ 5.5
		Idling	Pulse generation
G+ (E10 - 17) - NE- (E10 - 6)	L - P	Idling	Pulse generation
NE+ (E10 - 5) - NE- (E10 - 6)	V - P	Idling	Pulse generation
FC (E10 - 18) - E1 (E11 - 16)	G - Y ↔ BR	IG switch ON	9 ~ 14
		Idling	0 ~ 3.0
EVP (E11 - 2) - E1 (E11 - 16)	W - G ↔ BR	IG switch ON	9 ~ 14
RSC (E9 - 22) - E1 (E11 - 16)	B - R ↔ BR	IG switch ON Disconnect E9 of ECM connector	9 ~ 14
RSO (E9 - 23) - E1 (E11 - 16)	BR - R ↔ BR	IG switch ON Disconnect E9 of ECM connector	9 ~ 14
OX1 (E10 - 13) - E1 (E11 - 16)	W ↔ BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
OX2 (E10 - 19) - E1 (E11 - 16)	R ↔ BR	Maintain engine speed at 2,500 rpm for 2 min. after warming up	Pulse generation
HT1 (E11 - 11) - E03 (E9 - 28)	P - L ↔ BR	Idling	Below 3.0
		IG switch ON	9 ~ 14
HT2 (E11 - 10) - E03 (E9 - 28)	R - W ↔ BR	Idling	Below 3.0
		IG switch ON	9 ~ 14
KNK1 (E10 - 15) - E1 (E11 - 16)	B ↔ BR	Idling	Pulse generation
KNK2 (E10 - 14) - E1 (E11 - 16)	GR ↔ BR	Idling	Pulse generation
*1 NSW (E9 - 14) - E1 (E11 - 16)	B ↔ BR	IG switch ON Other shift position in "P", "N" position	9 ~ 14
		IG switch ON Shift position in "P", "N" position	0 ~ 3.0
SP1 (E12 - 12) - E1 (E11 - 16)	G - O ↔ BR	IG switch ON Rotate driving wheel slowly	Pulse generation
TE1 (E11 - 5) - E1 (E11 - 16)	V - W ↔ BR	IG switch ON	9 ~ 14
W (E11 - 3) - E1 (E11 - 16)	V ↔ BR	Idling	9 ~ 14
		IG switch ON	Below 3.0
PSSW (E9 - 31) - E1 (E11 - 16)	P ↔ BR	IG switch ON	9 ~ 14
ACT (E12 - 5) - E1 (E11 - 16)	L - B ↔ BR	A/C switch OFF	9 ~ 14
		A/C switch ON at idling	5 or more
AC1 (E12 - 16) - E1 (E11 - 16)	L - Y ↔ BR	A/C switch ON at idling	Below 2.0
		A/C switch OFF	9 ~ 14
TPC (E11 - 8) - E1 (E11 - 16)	P - B ↔ BR	IG switch ON	9 ~ 14
		Disconnect the vacuum hose from the vapor pressure sensor	
PTNK (E11 - 13) - E1 (E11 - 16)	Y - B ↔ BR - B	IG switch ON	3.0 ~ 3.6
SIL (E12 - 8) - E1 (E11 - 16)	W ↔ BR - B	During transmission	Pulse generation
STP (E12 - 24) - E1 (E11 - 16)	G - W ↔ BR - B	IG switch ON, Brake pedal is depressed	7.5 ~ 14
		IG switch ON, Brake pedal is released	Below 1.5

*1- A/T models only.

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Fig. 49: Pin Voltage Chart (4Runner 3.4L V6 - 2 Of 2)
Courtesy of Toyota Motor Sales, U.S.A., Inc.