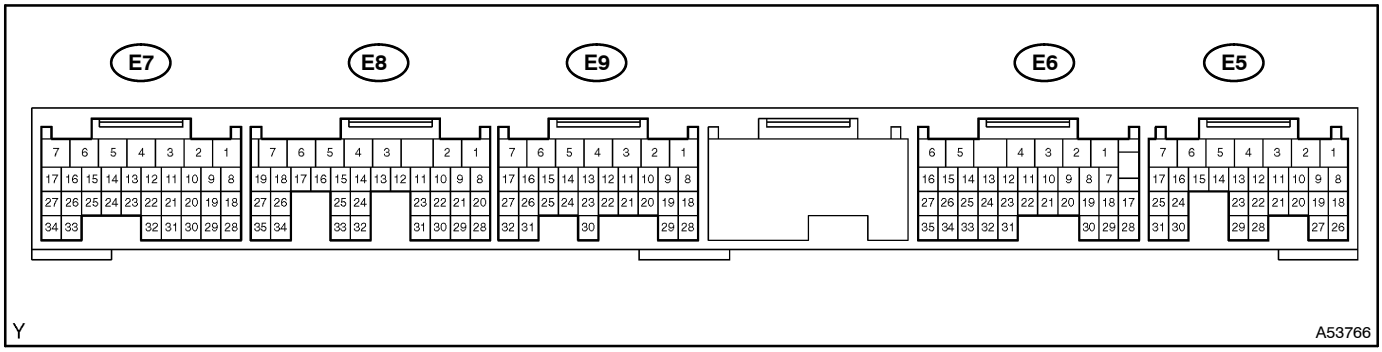
TERMINALS OF ECM

054KK–1



HINT:
Each ECM terminal's standard voltage is shown in the table below.
In the table, first follow the information under "Condition". Next look under "Symbol (Terminal No.)" for the terminals to be inspected. The standard voltage between the terminals is shown under "Specific Condition".
Use the illustration above as a reference for the ECM terminals.

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	STD Voltage
BATT (E5–3) – E1 (E9–1)	BR – BR	Battery (for measuring the battery voltage and for the ECM memory)	Always	9 to 14 V
+BM (E6–6) – E1 (E9–1)	W – BR	Power source of throttle motor		
IGSW (E5–9) – E1 (E9–1)	P – BR	Ignition switch	Ignition switch ON	9 to 14 V
+B (E5–1) – E1 (E9–1)	W – BR	Power source of ECM		
+B2 (E5–2) – E1 (E9–1)	W – BR	Power source of ECM		
OC1+ (E9–15) – OC1– (E9–15)	G–W – G–R	Camshaft timing oil control valve (OCV)	Ignition switch ON	Pulse generation (See page 05–33)
OC2+ (E9–14) – OC2– (E9–13)	L–R – G–B			
MREL (E5–8) – E1 (E9–1)	B – BR	EFI relay	Ignition switch ON	9 to 14 V
VC (E7–18) – E2 (E7–28)	Y – BR	Power source of sensor (a specific voltage)	Ignition switch ON	4.5 to 5.5 V
VG (E7–30) – E2G (E7–29)	R – L–W	Mass air flow sensor	Idling, shift lever position P or N position, A/C switch OFF	0.5 to 3.0 V
THA (E7–20) – E2 (E7–28)	L–B – BR	Intake air temperature sensor	Idling, Intake air temp. 20°C (68°F)	0.5 to 3.4 V
THW (E7–19) – E2 (E7–28)	G–B – BR	Engine coolant temperature sensor	Idling, Engine coolant temp. 80°C (176°F)	0.2 to 1.0 V
VTA1 (E7–21) – E2 (E7–28)	R–W – BR	Throttle position sensor (for the engine control)	Ignition switch ON, Accelerator pedal released	0.3 to 1.0 V
			Ignition switch ON, Accelerator pedal depressed	3.2 to 4.9 V
VTA2 (E7–31) – E2 (E7–28)	B–R – BR	Throttle position sensor (for the sensor malfunction detection)	Ignition switch ON, Accelerator pedal released	2.1 to 3.1 V
			Ignition switch ON, Accelerator pedal depressed	4.5 to 5.5 V
VPA (E5–22) – EPA (E5–28)	B – R	Accelerator pedal position sensor (for the engine control)	Ignition switch ON, Accelerator pedal released	0.5 to 1.1 V
			Ignition switch ON, Accelerator pedal depressed	2.6 to 4.5 V
VPA2 (E5–23) – EPA2 (E5–29)	W – BR	Accelerator pedal position sensor (for the sensor malfunction detection)	Ignition switch ON, Accelerator pedal released	1.2 to 2.0 V
			Ignition switch ON, Accelerator pedal depressed	3.4 to 5.3 V

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	STD Voltage
VCPA (E5–26) – EPA (E5–28)	G – R	Power source of accelerator pedal position sensor (for VPA)	Ignition switch ON	4.5 to 5.5 V
VCP2 (E5–27) – EPA2 (E5–29)	L – BR	Power source of accelerator pedal position sensor (for VPA2)	Ignition switch ON	4.5 to 5.5 V
HA1A (E8□5) – E04 (E8□7) HA2A (E8–4) – E05 (E8–6)	B□W – W□B R–W – W–B	A/F sensor heater	Idling	Below 3.0 V
			Ignition switch ON	9 to 14 V
A1A+ (E8–22) – E1 (E9–1)	BR – BR	A/F sensor	Ignition switch ON	3.0 to 3.6 V
A2A+ (E8–23) – E1 (E9–1)	P – BR			
A1A– (E8–30) – E1 (E9–1)	Y – BR		Ignition switch ON	2.7 to 3.3 V
A2A– (E8–31) – E1 (E9–1)	L – BR			
HT1B (E8□25) – E1 (E9–1) HT2B (E8–33) – E1 (E9–1)	R□Y – BR W–L – BR	Heated oxygen sensor heater	Idling	Below 3.0 V
			Ignition switch ON	9 to 14 V
OX1B (E8–21) – E2 (E7–28) OX2B (E8–29) – E2 (E7–28)	W – BR B – BR	Heated oxygen sensor	Maintain engine speed at 2,500 rpm for 2 minutes after warming up	Pulse generation
#10 (E7–1) – E01 (E7–7) #20 (E7–2) – E01 (E7–7) #30 (E7□3) – E01 (E7□7) #40 (E7–4) – E01 (E7–7) #50 (E7–5) – E01 (E7–7) #60 (E8–3) – E01 (E7–7)	L – W–B Y – W–B B – W□B W – W–B B–W – W–B G – W–B	Injector	Ignition switch ON	9 to 14 V
			Idling	Pulse generation
KNK1 (E8–1) – E1 (E9–1)	B – BR	Knock sensor	Maintain engine speed at 4,000 rpm after warming up	Pulse generation (See page 05–84)
KNK2 (E8–2) – E1 (E9–1)	R – BR			
KNK1 (E8–1) – EKNK (E8–28)	B – W			
KNK2 (E8–2) – EKN2 (E8–20)	R – G			
VV1+ (E9–27) – NE– (E9–24)	B–W – L	Variable valve timing (VVT) sensor	Idling	Pulse generation (See page 05–90)
VV2+ (E9–26) – NE– (E9–24)	L – L			
NE+ (E9–25) – NE– (E9–24)	R – L	Crankshaft position sensor		
IGT1 (E7–8) – E1 (E9–1) IGT2 (E7–9) – E1 (E9–1) IGT3 (E7–10) – E1 (E9–1) IGT4 (E7–11) – E1 (E9–1) IGT5 (E7–12) – E1 (E9–1) IGT6 (E7–13) – E1 (E9–1)	R–L – BR P – BR Y–B – BR L–Y – BR G–Y – BR L–R – BR	Ignition coil with igniter (ignition signal)	Idling	Pulse generation (See page 05–97)
IGF (E7–24) – E1 (E9–1)	W–R – BR	Ignition coil with igniter (ignition confirmation signal)	Ignition switch ON	4.5 to 5.5 V
			Idling	Pulse generation (See page 05–97)
PRG (E7–34) – E1 (E9–1)	G – BR	VSV for EVAP	Ignition switch ON	9 to 14 V
SPD (E6–17) – E1 (E9–1)	Y – BR	Speed signal from combination meter	Ignition switch ON, Rotate driving wheel slowly	Pulse generation (See page 05–106)
STA (E7–17) – E1 (E9–1)	B – BR	Starter signal	Shift lever position P or N, Ignition switch START	9 to 14 V
STP (E6–19) – E1 (E9–1)	BR – BR	Stop light switch	Brake pedal is depressed	7.5 to 14 V
			Brake pedal is released	Below 1.5 V
ST1□ (E6–12) – E1 (E9–1)	V – BR	Stop light switch (Copposite to stop)	Ignition switch ON, Brake pedal is depressed	Below 1.5 V
			Ignition switch ON, Brake pedal is released	7.5 to 14 V

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	STD Voltage
NSW (E7–16) – E1 (E9–1)	B–R – BR	Park/neutral position switch	Ignition switch ON, Shift position in P, N	0 to 3.0 V
			Ignition switch ON, Other shift position in P, N	9 to 14 V
M+ (E9–3) – ME01 (E9–4) M– (E9–2) – ME01 (E9–4)	B – W–B W – W–B	Throttle motor	Idling	Pulse generation
FC (E5–10) – E1 (E9–1)	Y – BR	Fuel pump control	Ignition switch ON	9 to 14 V
W (E5–11) – E1 (E9–1)	SB – BR	Check engine warning light (CHK ENG)	Ignition switch ON	Below 3.0 V
			Idling	9 to 14 V
TC (E5–20) – E1 (E9–1)	O – BR	Terminal TC of DLC 3	Ignition switch ON	9 to 14 V
SIL (E5–18) – E1 (E9–1)	R – BR	Terminal SIL of DLC3	During charge of gears	Pulse generation
TACH (E5–5) – E1 (E9–1)	B – BR	Engine speed	Idling	Pulse generation
ACM (E9–6) – E1 (E9–1)	Y–G – BR	VSV for ACM	Ignition switch ON	9 to 14 V
ENG+ (E5–24) – ENG– (E5–30)*	V – R	Electric load (from skid control ECU)	Idling	Pulse generation
TRC+ (E5–25) – TRC– (E5–31)	Y – G		Idling	Pulse generation
PSW (E9–10) – E1 (E9–1)	R–W – BR	P/S pressure switch	Ignition switch ON	9 to 14 V

*: With VSC