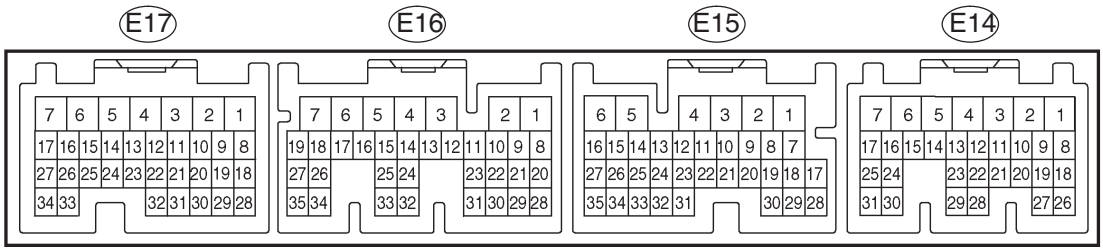
05NFH–01

TERMINALS OF ECU

1. ECM



HINT:

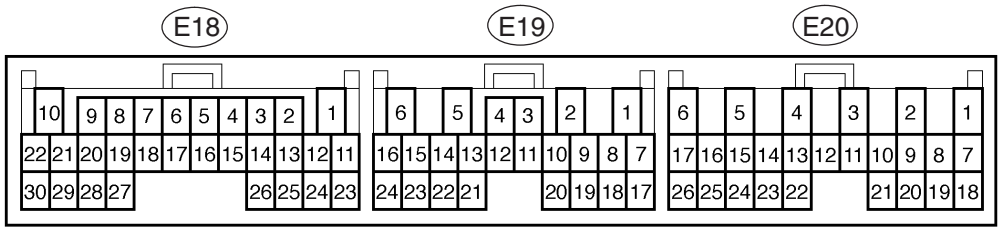
Each ECM terminal's standard voltage is shown in the table below.

In the table, first follow the information under "Condition". Look under "Symbols (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	Specified Condition
NSW (E14–6) – E1 (E16–7)	L–Y – BR	Park neutral switch signal	IG switch ON and shift lever P and N position	Below 2 V
↑	↑	↑	IG switch ON and shift lever except P and N position	10 to 14 V
STP (E15–15) – E1 (E16–7)	G–Y – BR	Stop lamp switch signal	Brake pedal is depressed	7.5 to 14 V
↑	↑	↑	Brake pedal is released	Below 1.5 V
CAN+ (E15–22) – E1 (E16–7)	L – BR	CAN communication line	IG switch ON	Pulse generation (See waveform 8)
CAN– (E15–21) – E1 (E16–7)	R – BR	CAN communication line	IG switch ON	Pulse generation (See waveform 9)
TC (E14–11) – E1 (E16–7)	P–L – BR	Terminal TC of DLC3	IG switch ON	10 to 14 V

2. TCM



HINT:

Each TCM terminal's standard voltage is shown in the table below.

In the table, first follow the information under "Condition". Look under "Symbols (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 TCM terminals.

Symbols (Terminals No.)	Wiring Color	Terminal Description	Condition	Specified Condition
L4 (E19–15) – E1 (E18–1)	G–W – BR	Transfer L position switch signal	IG switch ON and transfer shift lever L position	Below 1 V
↑	↑	↑	IG switch ON and transfer shift lever except L position	10 to 14 V

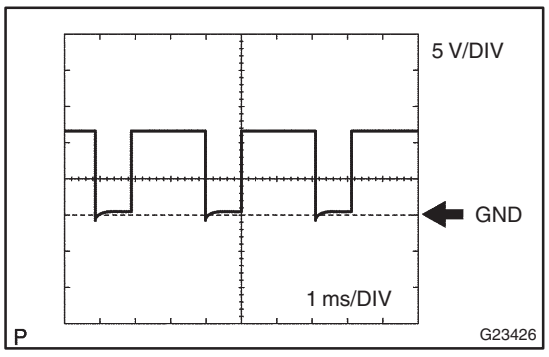
TFN (E19–16) – E1 (E18–1)	G – BR	Transfer N position switch signal	IG switch ON and transfer shift lever N position	Below 1 V
↑	↑	↑	IG switch ON and transfer shift lever except N position	10 to 14 V
L (E19–10) – E1 (E18–1)	G–R – BR	L shift position switch signal	IG switch ON and shift lever L position	10 to 14 V
↑	↑	↑	IG switch ON and shift lever except L position	Below 1 V
2 (E19–11) – E1 (E18–1)	G–R – BR	2 shift position switch signal	IG switch ON and shift lever 2 and L position	10 to 14 V
↑	↑	↑	IG switch ON and shift lever except 2 and L position	Below 1 V
R (E19–9) – E1 (E18–1)	R–B – BR	R shift position switch signal	IG switch ON and shift lever R position	10 to 14 V
↑	↑	↑	IG switch ON and shift lever except R position	Below 1 V
D (E19–8) – E1 (E18–1)	G – BR	D shift position switch signal	IG switch ON and shift lever D and 4 position	10 to 14 V
↑	↑	↑	IG switch ON and shift lever except D and 4 position	Below 1 V
3 (E19–12) – E1 (E18–1)	G–O – BR	3 shift position switch signal	IG switch ON and shift lever 3 position	10 to 14 V
↑	↑	↑	IG switch ON and shift lever except 3 position	Below 1 V
4 (E19–13) – E1 (E18–1)	P–L – BR	4 shift position switch signal	IG switch ON and shift lever 4 position	10 to 14 V
↑	↑	↑	IG switch ON and shift lever except 4 position	Below 1 V
STP (E20–14) – E1 (E18–1)	G–Y – BR	Stop lamp switch signal	Brake pedal is depressed	7.5 to 14 V
↑	↑	↑	Brake pedal is released	Below 1.5 V
SLU+ (E18–22) – SLU– (E18–21)	G–R – Y–R	SLU solenoid signal	5th (lock–up) gear	Pulse generation (See waveform 2)
S2 (E18–17) – E1 (E18–1)	W–L – BR	S2 solenoid signal	2nd or 3rd gear	10 to 14 V
↑	↑	↑	1st, 4th or 5th gear	Below 1 V
S1 (E18–18) – E1 (E18–1)	GR – BR	S1 solenoid signal	1st or 2nd gear	10 to 14 V
↑	↑	↑	3rd, 4th or 5th gear	Below 1 V
SLT+ (E18–20) – SLT– (E18–19)	LG–B – L–R	SLT solenoid signal	Engine idle speed	Pulse generation (See waveform 1)
SR (E18–16) – E1 (E18–1)	P – BR	SR solenoid signal	5th gear	10 to 14 V
↑	↑	↑	1st gear	Below 1 V
SL2+ (E18–7) – SL2– (E18–6)	LG – BR	SL2 solenoid signal	Engine idle speed	Pulse generation (See waveform 3)
SL1+ (E18–9) – SL1– (E18–8)	V – R–G	SL1 solenoid signal	Engine idle speed	Pulse generation (See waveform 4)
THO1 (E18–25) – E2 (E18–23)	B–R – BR	No.1 ATF temperature sensor signal	No.1 ATF temperature: 115°C (239 °F) or more	Below 1.5 V
THO2 (E18–24) – E2 (E18–23)	L–Y – BR	No.2 ATF temperature sensor signal	No.2 ATF temperature: 115°C (239 °F) or more	Below 1.5 V
SP2+ (E18–30) – SP2– (E18–29)	R*1 – G*1 Y*2 – L*2	Speed sensor (SP2) signal	Vehicle speed 20 km/h (12 mph)	Pulse generation (See waveform 6)

NT+ (E18–3) – NT– (E18–2)	L*1 – Y*1 G*2 – R*2	Speed sensor (NT) signal	Engine idle speed	Pulse generation (See waveform 5)
NSW (E18–12) – E1 (E18–1)	L–Y – BR	Park neutral switch signal	IG switch ON and shift lever P and N position	Below 2 V
↑	↑	↑	IG switch ON and shift lever except P and N position	10 to 14 V
STA (E18–11) – E1 (E18–1)	B–Y – BR	Starter signal	Cranking (shift lever position P or N position, ignition switch START)	6 V or more
↑	↑	↑	IG switch ON and shift lever except P and N position	10 to 14 V
SNWI (E20–13) – E1 (E18–1)	GR–L – BR	2nd STRT switch signal	IG switch ON	10 to 14 V
↑	↑	↑	IG switch ON and Press continuously 2nd STRT switch	Below 1 V
SP1 (E20–25) – E1 (E18–1)	R–B – BR	Speed signal from combination meter	Vehicle speed 20 km/h (12 mph)	Pulse generation (See waveform 7)
OILW (E20–8) – E1 (E18–1)	P – BR	ATF oil temperature warning light signal	ATF oil temperature warning lamp ON	Below 1.5 V
↑	↑	↑	ATF oil temperature warning lamp OFF	9 to 14 V
SNWO (E20–9) – E1 (E18–1)	GR–R – BR	2nd STRT Indicator Lamp signal	2nd STRT Indicator lamp ON	Below 1.5 V
↑	↑	↑	2nd STRT Indicator lamp OFF	9 to 14 V
BATT (E20–5) – E1 (E18–1)	R – BR	Battery (for measuring battery voltage and for TCM memory)	Always	9 to 14 V
IG2 (E20–6) – E1 (E18–1)	B–O – BR	Ignition switch	Ignition switch ON	9 to 14 V
CAN+ (E20–21) – E1 (E18–1)	L – BR	CAN communication line	IG switch ON	Pulse generation (See waveform 8)
CAN– (E20–20) – E1 (E18–1)	R – BR	CAN communication line	IG switch ON	Pulse generation (See waveform 9)

HINT:

*1: LHD

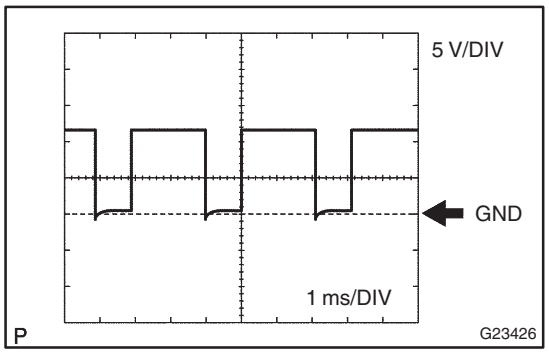
*2: RHD



Waveform 1

Reference:

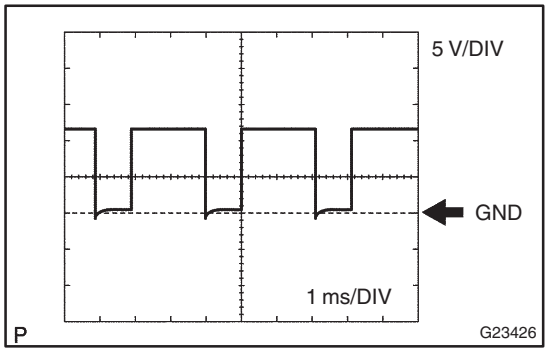
Terminal	SLT+ – SLT–
Tool setting	5V/DIV, 1ms/DIV
Vehicle condition	Engine idle speed



Waveform 2

Reference:

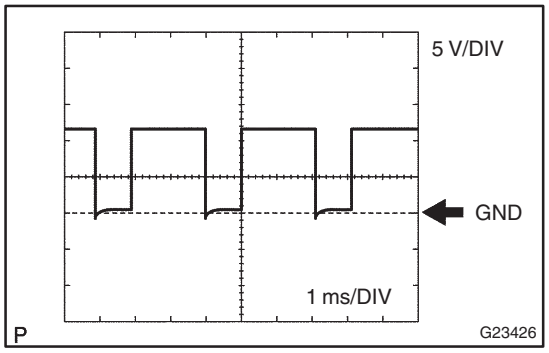
Terminal	SLU+ – SLU–
Tool setting	5V/DIV, 1ms/DIV
Vehicle condition	5th (lock–up) or 6th (lock–up) gear



Waveform 3

Reference:

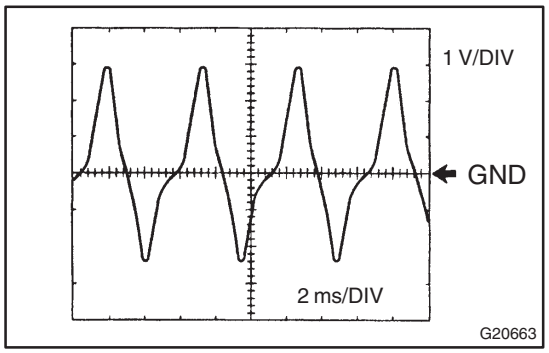
Terminal	SL2+ – SL2–
Tool setting	5V/DIV, 1ms/DIV
Vehicle condition	Engine idle speed



Waveform 4

Reference:

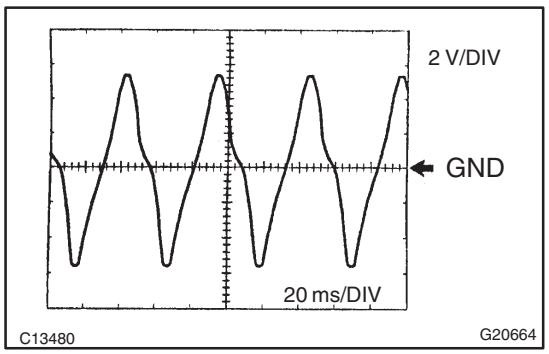
Terminal	SL1+ – SL1–
Tool setting	5V/DIV, 1ms/DIV
Vehicle condition	Engine idle speed



Waveform 5

Reference:

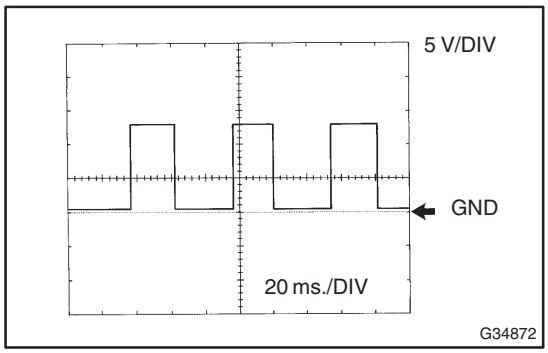
Terminal	NT+ – NT–
Tool setting	1V/DIV, 2ms/DIV
Vehicle condition	Engine idle speed (P or N position)



Waveform 6

Reference:

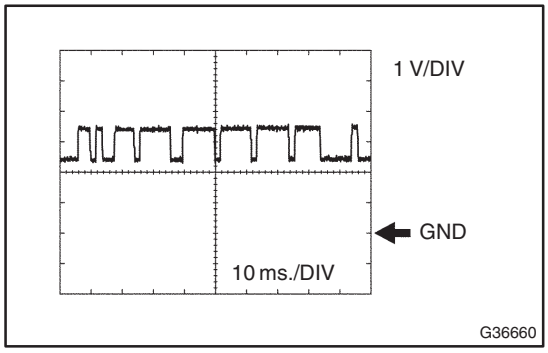
Terminal	SP2+ – SP2–
Tool setting	2V/DIV, 20ms/DIV
Vehicle condition	Vehicle speed 20 km/h (12 mph)



Waveform 7

Reference:

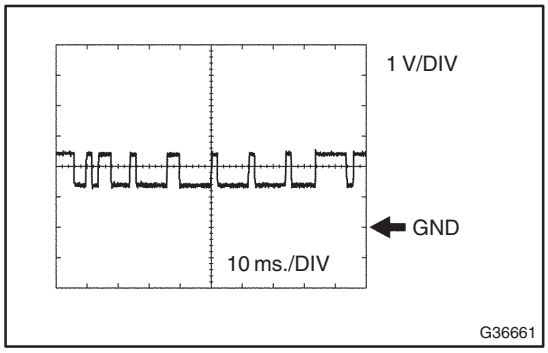
Terminal	SP1 – E1
Tool setting	5V/DIV, 20ms/DIV
Vehicle condition	Vehicle speed 20 km/h (12 mph)



Waveform 8

Reference:

Terminal	CAN+ – E1
Tool setting	1V/DIV, 10ms/DIV
Vehicle condition	Engine is stopped, ignition ON



Waveform 9

Reference:

Terminal	CAN– – E1
Tool setting	1V/DIV, 10ms/DIV
Vehicle condition	Engine is stopped, ignition ON