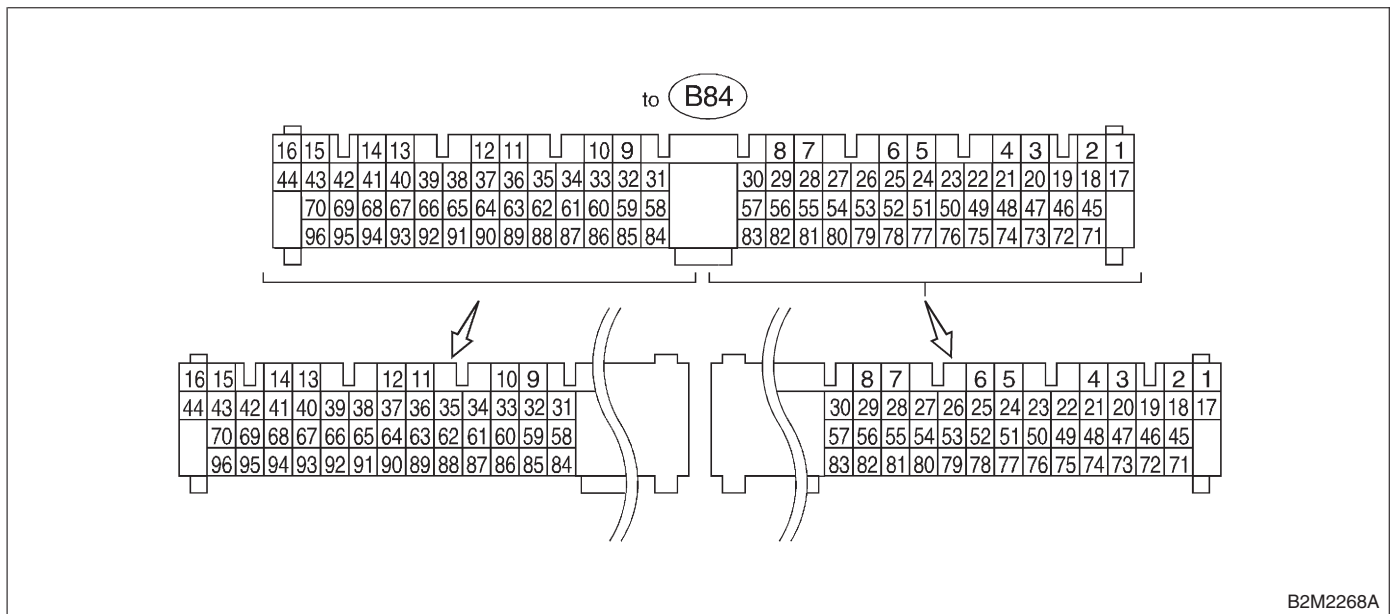


C: ENGINE CONTROL MODULE (ECM) I/O SIGNAL FOR 2500 cc MODEL



B2M2268A

Content		Conne- ctor No.	Terminal No.	Signal (V)		Note
				Ignition SW ON (Engine OFF)	Engine ON (Idling)	
Crankshaft position sensor	Signal (+)	B84	8	0	-7 — +7	Sensor output waveform
	Signal (-)	B84	29	0	0	—
	Shield	B84	54	0	0	—
Camshaft position sensor	Signal (+)	B84	7	0	-7 — +7	Sensor output waveform
	Signal (-)	B84	28	0	0	—
	Shield	B84	54	0	0	—
Mass air flow sen- sor	Signal	B84	5	0 — 0.3	0.8 — 1.2	—
	Power supply	B84	2	5	5	—
	Shield	B84	57	0	0	—
	GND	B84	53	0	0	—
Throttle position sensor	Signal	B84	6	Fully closed: 0.2 — 1.0 Fully opened: 4.2 — 4.7		—
	Power supply	B84	21	5	5	—
	GND (sen- sor)	B84	20	0	0	—
Front oxy- gen sen- sor	Signal	B84	23	0	0 — 0.9	—
	Shield	B84	56	0	0	—
Rear oxy- gen sen- sor	Signal	B84	24	0	0 — 0.9	—
	Shield	B84	56	0	0	—
Front oxygen sensor heater signal		B84	38	0 — 1.0	0 — 1.0	—
Rear oxygen sensor heater signal		B84	37	0 — 1.0	0 — 1.0	—
Engine coolant tempera- ture sen- sor	Signal	B84	22	1.0 — 1.4	1.0 — 1.4	After warm-up the engine.
	GND (sen- sor)	B84	20	0	0	After warm-up the engine.

Content	Connector No.	Terminal No.	Signal (V)		Note	
			Ignition SW ON (Engine OFF)	Engine ON (Idling)		
Vehicle speed signal	B84	83	0 or 5	0 or 5	"5" and "0" are repeatedly displayed when vehicle is driven.	
Starter switch	B84	86	0	0	Cranking: 8 — 14	
A/C switch	B84	60	ON: 10 — 13 OFF: 0	ON: 13 — 14 OFF: 0	—	
Ignition switch	B84	85	10 — 13	13 — 14	—	
Neutral position switch (MT)	B84	82	ON: 5.0±0.5 OFF: 0		On MT vehicle; switch is ON when gear is in neutral position.	
Neutral position switch (AT)	B84	82	ON: 0 OFF: 5.0±0.5		On AT vehicle; switch is ON when shift is in "N" or "P" position.	
Test mode connector	B84	84	5	5	When connected: 0	
Knock sensor	Signal	B84	3	2.8	—	
	Shield	B84	56	0	—	
AT/MT identification	B84	81	AT: 5 MT: 0	AT: 5 MT: 0	When measuring voltage between ECM and chassis ground.	
Back-up power supply	B84	39	10 — 13	13 — 14	Ignition switch "OFF": 10 — 13	
Control unit power supply	B84	1	10 — 13	13 — 14	—	
	B84	2	10 — 13	13 — 14	—	
Sensor power supply	B84	21	5	5	—	
Ignition control	#1, #2	B84	41	0	1 — 3.4	Waveform
	#3, #4	B84	40	0	1 — 3.4	Waveform
Fuel injector	#1	B84	96	10 — 13	1 — 14	Waveform
	#2	B84	70	10 — 13	1 — 14	Waveform
	#3	B84	44	10 — 13	1 — 14	Waveform
	#4	B84	16	10 — 13	1 — 14	Waveform
Idle air control solenoid valve	OPEN end	B84	14	—	1 — 13	Waveform
	CLOSE end	B84	13	—	13 — 1	Waveform
Fuel pump relay control	B84	32	ON: 0.5, or less OFF: 10 — 13	0.5, or less	—	
A/C relay control	B84	31	ON: 0.5, or less OFF: 10 — 13	ON: 0.5, or less OFF: 13 — 14	—	
Radiator fan relay 1 control	B84	74	ON: 0.5, or less OFF: 10 — 13	ON: 0.5, or less OFF: 13 — 14	—	
Radiator fan relay 2 control	B84	73	ON: 0.5, or less OFF: 10 — 13	ON: 0.5, or less OFF: 13 — 14	With A/C vehicles only	
Self-shutoff control	B84	63	10 — 13	13 — 14	—	
Malfunction indicator lamp	B84	58	—	—	Light "ON": 1, or less Light "OFF": 10 — 14	
Engine speed output	B84	64	—	0 — 13, or more	Waveform	
Torque control 1 signal	B84	79	5	5	—	
Torque control 2 signal	B84	78	5	5	—	
Torque control cut signal	B84	61	8	8	—	
Mass air flow signal for AT	B84	47	0 — 0.3	0.8 — 1.2	—	
Purge control solenoid valve	B84	72	ON: 1, or less OFF: 10 — 13	ON: 1, or less OFF: 13 — 14	—	

Content		Connec- tor No.	Terminal No.	Signal (V)		Note
				Ignition SW ON (Engine OFF)	Engine ON (Idling)	
Atmo- spheric pressure sensor	Signal	B84	26	3.9 — 4.1	2.0 — 2.3	—
	Power supply	B84	21	5	5	
	GND (sen- sor)	B84	20	0	0	
Pressure sources switching solenoid valve		B84 B84	15	ON: 1, or less OFF: 10 — 13	ON: 1, or less OFF: 13 — 14	—
EGR solenoid valve		B84	71			
Fuel temperature sen- sor		B84	25	2.5 — 3.8	2.5 — 3.8	Ambient temperature: 25°C (75°F)
Fuel level sensor		B84	27	0.12 — 4.75	0.12 — 4.75	—
Fuel tank pressure sensor	Signal	B84	4	2.3 — 2.7	2.3 — 2.7	The value obtained after the fuel filler cap was removed once and recapped.
	Power supply	B84	21	5	5	
	GND (sen- sor)	B84	20	0	0	
Fuel tank pressure control solenoid valve		B84 B84	10	ON: 1, or less OFF: 10 — 13	ON: 1, or less OFF: 13 — 14	—
Drain valve		B84	35	ON: 1, or less OFF: 10 — 13	ON: 1, or less OFF: 13 — 14	—
AT diagnosis input sig- nal		B84	80	Less than 1 ↔ More than 4	Less than 1 ↔ More than 4	Waveform
GND (sensors)		B84	20	0	0	—
GND (injectors)		B84	69	0	0	—
		B84	95	0	0	—
GND (ignition system)		B84	94	0	0	—
GND (power supply)		B84	19	0	0	—
		B84	46	0	0	—
GND (control systems)		B84	17	0	0	—
		B84	18	0	0	—
GND (oxygen sensor heater)		B84	42	0	0	—

D: ENGINE CONDITION DATA

Content	Model	Specified data
Mass air flow	2200 cc except California spec. vehicles	1.7 — 3.3 (g/sec): Idling
		7.1 — 14.2 (g/sec): 2,500 rpm racing
	2500 cc	2.2 — 4.2 (g/sec): Idling
		8.6 — 14.2 (g/sec): 2,500 rpm racing
Engine load	2200 cc California spec. vehicles	1.6 — 2.9 (%): Idling
		6.4 — 12.8 (%): 2,500 rpm racing
	2200 cc except California spec. vehicles	1.6 — 2.9 (%): Idling
		6.4 — 12.8 (%): 2,500 rpm racing
	2500 cc	1.9 — 3.5 (%): Idling
		7.2 — 12.1 (%): 2,500 rpm racing

Measuring condition:

- After warm-up the engine.
- Gear position is in “N” or “P” position.
- A/C is turned OFF.
- All accessory switches are turned OFF.