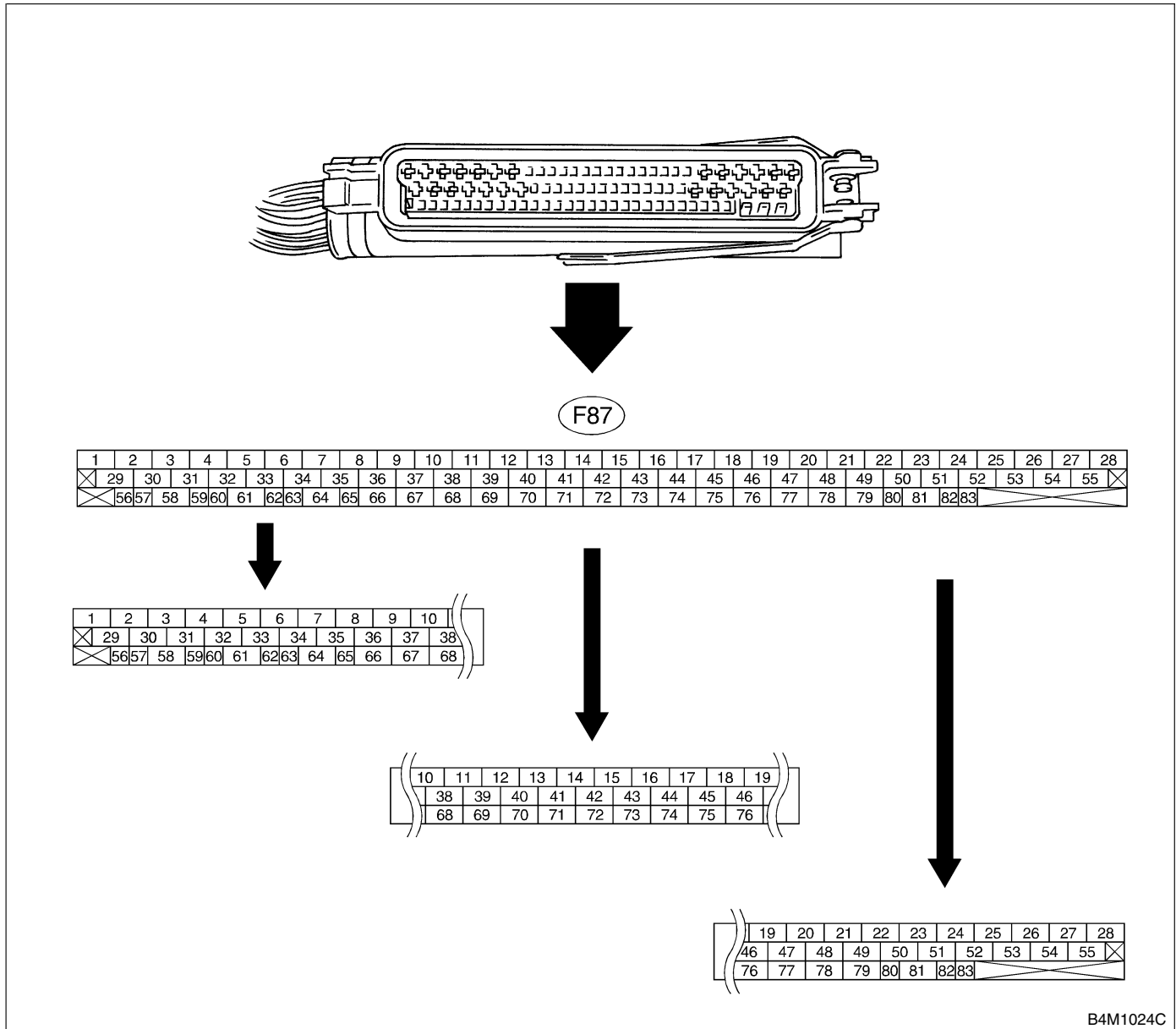


CONTROL MODULE I/O SIGNAL

VDC (Diagnostics)

5. Control Module I/O Signal S005524

A: ELECTRICAL SPECIFICATION S005524A08



NOTE:

- The terminal numbers in the VDC control module connector are as shown in the figure.
- When the connector is removed from the VDCCM, the connector switch closes the circuit between terminal No. 53, No. 54 and No. 55. The ABS and VDC warning light illuminate.

CONTROL MODULE I/O SIGNAL

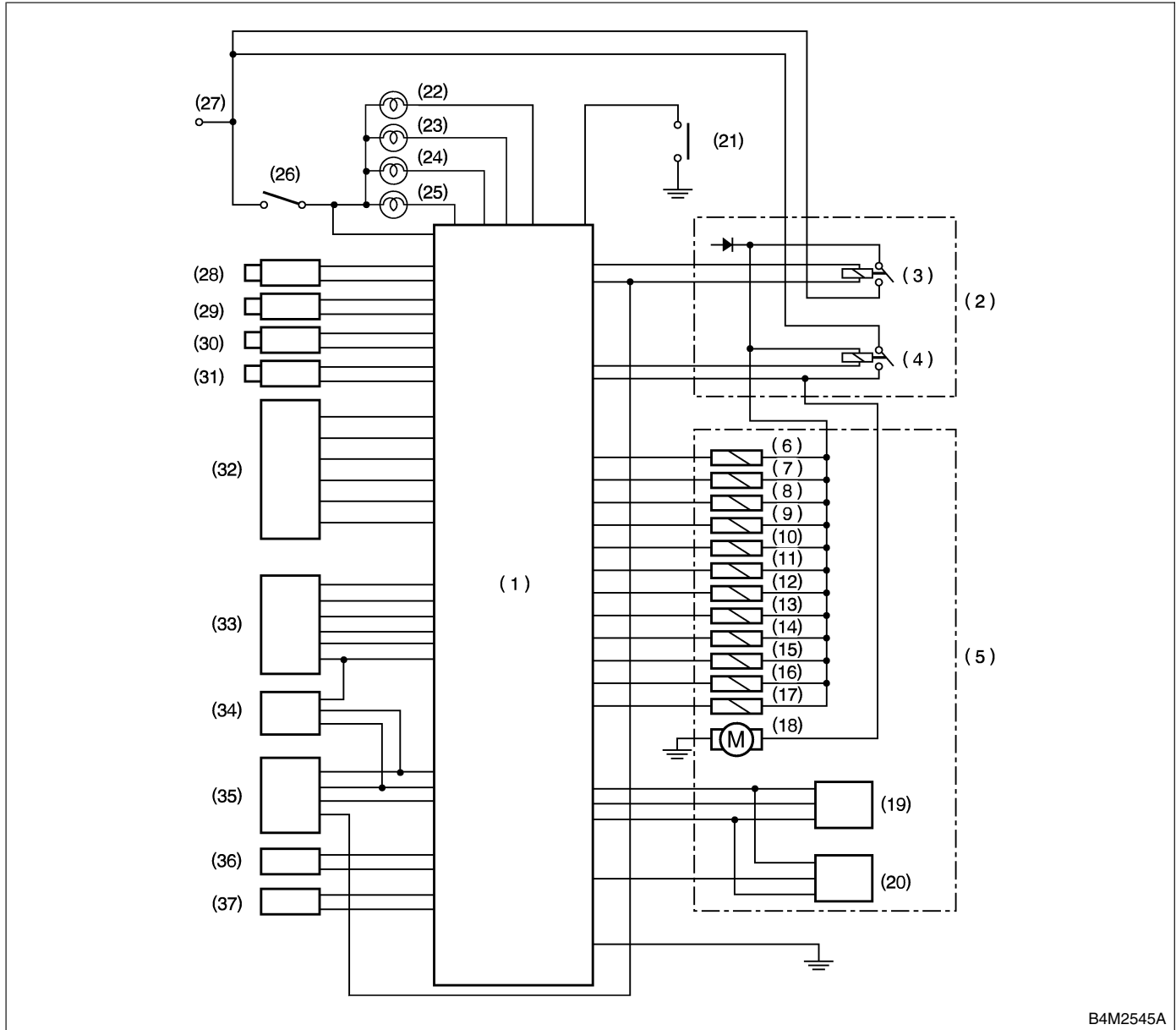
VDC (Diagnostics)

| Contents | | Terminal No. (+)(-) | Input/Output signal |
|------------------------------------|-----------------------------------|------------------------|---|
| | | | Measured value and measuring condition |
| Ignition switch | | 28—1 | 10 — 15 V when ignition switch is ON. |
| ABS sensor (Wheel speed sensor) | Front left wheel | 49—19 | 0.12 — 1 V (When it is 20 Hz.) |
| | Front right wheel | 14—15 | |
| | Rear left wheel | 16—17 | |
| | Rear right wheel | 18—46 | |
| Yaw rate and lateral G sensor | Output (Lateral G sensor) | 70—64 | 2.2 — 2.8 V when vehicle is in horizontal position. |
| | Power supply | 63—64 | 10 — 15 V when ignition switch is ON. |
| | Output (Yaw rate sensor) | 65—64 | Wave form <Ref. to VDC-15, WAVE FORM, MEASUREMENT, Control Module I/O Signal.> |
| | Reference (Yaw rate sensor) | 66—64 | 2.1 — 2.9 V |
| | Test | 67—64 | 40 ms pulse signal with a cycle of 5 — 1 V <Ref. to VDC-15, WAVE FORM, MEASUREMENT, Control Module I/O Signal.> |
| Ground | | 64 | — |
| CAN communication line (+) | | 81—1 | 2.5 — 1.5 V pulse signal <Ref. to VDC-15, WAVE FORM, MEASUREMENT, Control Module I/O Signal.> |
| CAN communication line (-) | | 83—1 | 3.5 — 2.5 V pulse signal <Ref. to VDC-15, WAVE FORM, MEASUREMENT, Control Module I/O Signal.> |
| Engine module | AET | 21—1 | 1.5 V or less (ABS/TCS/VDC operating); 10 V or more (ABS/TCS/VDC not operating) |
| | AEB | 43—1 | 10 — 15 V (Ignition switch ON and vehicle at standstill) |
| | AEC | 8—1 | 10 — 15 V (Ignition switch ON and vehicle at standstill) |
| | EAS | 75—1 | 3.5 — 1.5 V pulse signal |
| | EAC | 45—1 | 3.5 — 1.5 V pulse signal |
| | Revolution | 9—1 | 10 — 1.5 V pulse signal |
| Relay box | Valve relay power supply | 27—1 | 10 — 15 V when ignition switch is ON. |
| | Valve relay coil | 47—1 | Less than 1.5 V when ignition switch is ON. |
| | Motor relay coil | 22—1 | 1.5 V or less (ABS/TCS/VDC operating); 10 V or more (ABS/TCS/VDC not operating) |
| | Motor monitoring | 10—1 | 10 V or less (ABS/TCS/VDC operating); 1.5 V or more (ABS/TCS/VDC not operating) |
| Hydraulic control unit | Front left inlet solenoid valve | 24—1 | 10 — 15 V when the valve is OFF and less than 1.5 V when the valve is ON. |
| | Front right inlet solenoid valve | 30—1 | |
| | Rear left inlet solenoid valve | 31—1 | |
| | Rear right inlet solenoid valve | 23—1 | |
| | Front left outlet solenoid valve | 51—1 | |
| | Front right outlet solenoid valve | 3—1 | |
| | Rear left outlet solenoid valve | 4—1 | |
| | Rear right outlet solenoid valve | 50—1 | |
| | Primary cut solenoid valve | 25—1 | |
| | Secondary cut solenoid valve | 26—1 | |
| | Primary suction solenoid valve | 29—1 | |
| Secondary suction solenoid valve | 2—1 | | |
| Pressure sensor | Power supply | 78—76 | 4.75 — 5.25 V when ignition switch is ON. |
| | Primary output | 77—76 | 0.48 — 0.72 V (Brake pedal released) |
| | Ground | 76 | — |
| | Secondary output | 36—76 | 0.48 — 0.72 V (Brake pedal released) |
| VDC operation indicator light | | 32—1 | Less than 1.5 V during 1.5 seconds when ignition switch is ON, and 10 — 15 V after 1.5 seconds. |
| VDC OFF indicator light | | 52—1 | 1.5 V or less (Ignition switch ON and VDC OFF indicator light ON); 10 — 15 V (Ignition switch ON and VDC OFF indicator light OFF) |
| VDC warning light | | 53—1 | Less than 1.5 V during 1.5 seconds when ignition switch is ON, and 10 — 15 V after 1.5 seconds. |
| ABS warning light | | 54—1 | Less than 1.5 V during 1.5 seconds when ignition switch is ON, and 10 — 15 V after 1.5 seconds. |
| Diagnosis connector | Terminal No. 8 | 13 | — |
| | Terminal No. 5 | 74 | — |
| Select monitor | Data is received. | 11—1 | Less than 1.5 V when no data is received. |
| | Data is sent. | 38—1 | 4.75 — 5.25 V when no data is sent. |
| VDC OFF switch | | 40—1 | 10 — 15 V when ignition switch is ON. 0 V (While pushing the switch) |
| Ground | | 1 | — |
| Ground | | 55 | — |

CONTROL MODULE I/O SIGNAL

VDC (Diagnostics)

B: SCHEMATIC S005524A21



B4M2545A

- | | | |
|---------------------------------------|---------------------------------------|------------------------------------|
| (1) VDC control module | (14) Primary suction solenoid valve | (26) Ignition relay |
| (2) Relay box | (15) Primary cut solenoid valve | (27) BATTERY |
| (3) Valve relay | (16) Secondary suction solenoid valve | (28) Front left ABS sensor |
| (4) Motor relay | (17) Secondary cut solenoid valve | (29) Front right ABS sensor |
| (5) Hydraulic control unit | (18) Motor | (30) Rear left ABS sensor |
| (6) Front left inlet solenoid valve | (19) Primary pressure sensor | (31) Rear right ABS sensor |
| (7) Front left outlet solenoid valve | (20) Secondary pressure sensor | (32) Yaw rate and lateral G sensor |
| (8) Front right inlet solenoid valve | (21) VDC OFF switch | (33) Engine control module |
| (9) Front right outlet solenoid valve | (22) ABS warning light | (34) Transmission control module |
| (10) Rear left inlet solenoid valve | (23) VDC warning light | (35) Steering angle sensor |
| (11) Rear left outlet solenoid valve | (24) VDC operating indicator light | (36) Diagnosis connector |
| (12) Rear right inlet solenoid valve | (25) VDC OFF indicator light | (37) Data link connector |
| (13) Rear right outlet solenoid valve | | |

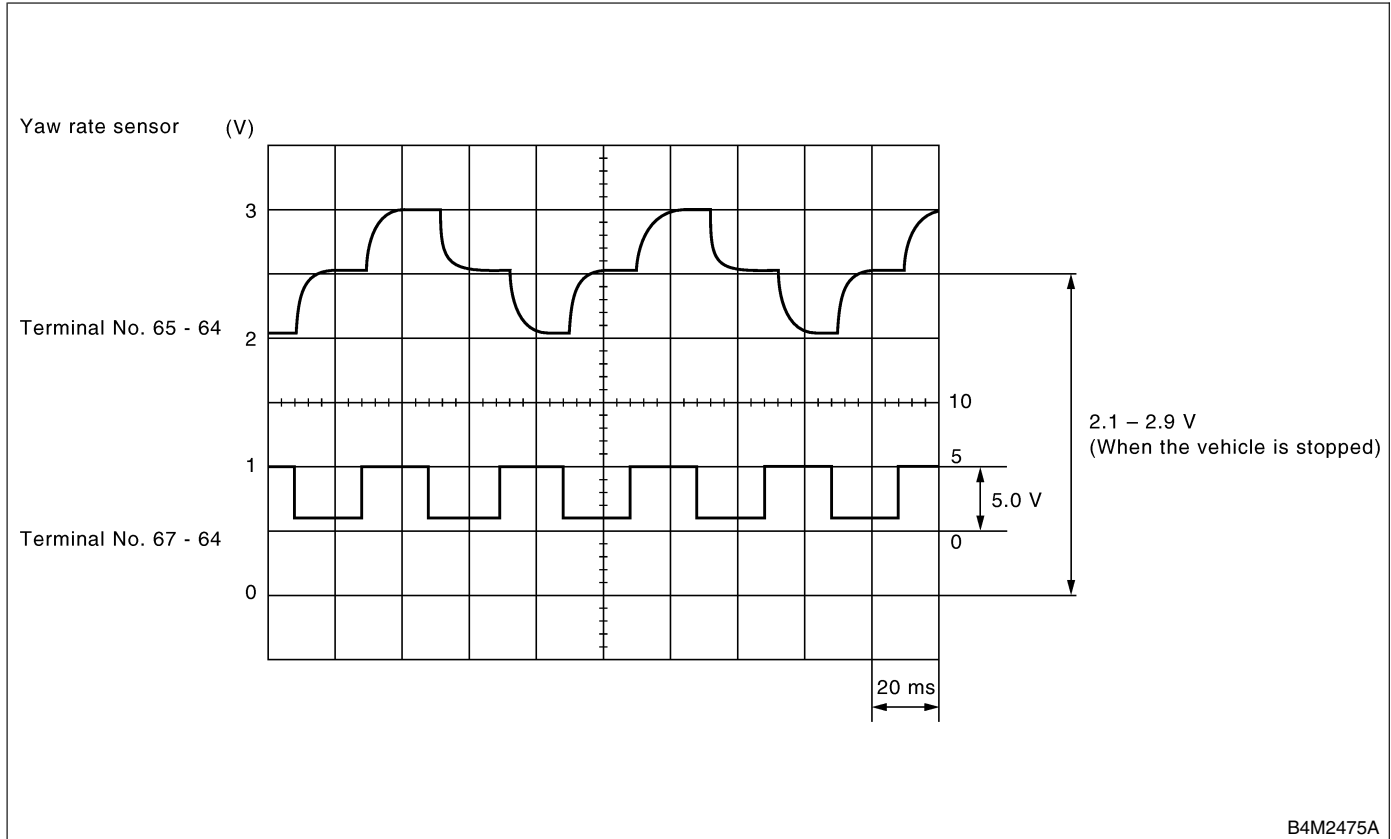
C: MEASUREMENT S00524A14

Measure input/output signal voltage.

NOTE:

Measure with the VDCCM connector cover removed. <Ref. to VDC-17, VDCCM Connector Cover.>

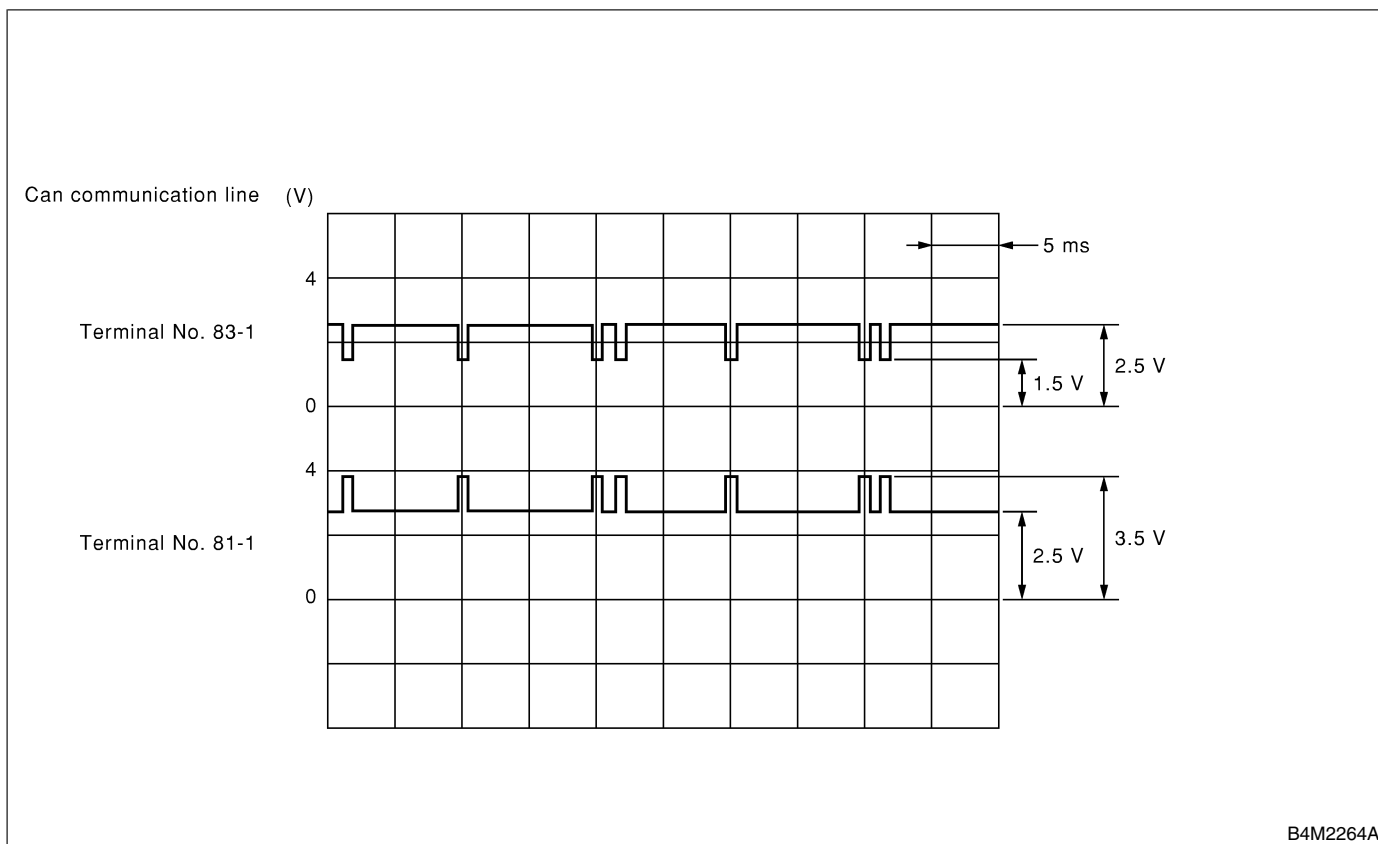
1. WAVE FORM S00524A1401



B4M2475A

CONTROL MODULE I/O SIGNAL

VDC (Diagnostics)



B4M2264A