

<IGBT Module>

J1 Series Application Note

Evaluation Kit: Water Jacket, DC-Link Capacitor, Gate Driver Board

Contents

1. Introduction.....	2
1.1. IGBT module Line-up for Evaluation kit	2
1.2. Features.....	2
2. Water Jacket.....	3
2.1. Specifications	3
2.2. Applications	3
2.3. Package Outline	4
2.4. Usage Tips.....	5
(1) Mounting method	5
(2) Setting of cooling water inlet/outlet.....	5
2.5. Parts	6
3. DC-Link Capacitor	7
3.1. Specifications	7
3.2. Applications	7
3.3. Package Outline	8
4. Driver Board	9
4.1. Specifications	9
4.2. Applications	9
4.3. Features	10
4.4. Accessories	11
4.5. Block Diagram	11
4.6. Driver board Outline	12
4.7. Mounting	12
4.8. I/O Terminal (CN1)	14
(1) I/O Terminal (CN1) Pins Layout.....	14
(2) I/O terminals CN1 maximum ratings.....	15
(3) Electrical characteristics of I/O terminal CN1 (Ta=25°C)	15
(4) Harness Construction Notes	15
4.9. Functions	16
(1) Gate drive signal input.....	16
(2) Fo output part.....	17
(3) Switch Mode Power Supply (SMPS).....	17
(4) Gate drive and protection circuit part	18
(5) Gate Drive Buffer.....	19
(6) Short-circuit (SC) protection	20
(7) Over-current (OC) protection	22
(8) Over temperature (OT) protection.....	23
(9) Over-voltage (OV) protection.....	25
(10) Test Points.....	26
(11) Temperature sensor and P-N voltage digital output.....	27
(12) Temperature sensor and P-N voltage analog output.....	28