

**FEATURES**

- IT(AV)100A (each device)
- High Surge Current 2500 A(60Hz)
- Easy Construction
- Non-isolated.Mounting base as common Anode terminal

**TYPICAL APPLICATIONS**

- Welding power Supply
- Various DC power Supply

**TECHNICAL DATA**

DEVICE TYPE	V <sub>DRM</sub> /V <sub>RRM</sub> (V)	V <sub>RSM</sub> (V)
<b>PWB100/30</b>	<b>300</b>	<b>400</b>
<b>PWB100/40</b>	<b>400</b>	<b>500</b>



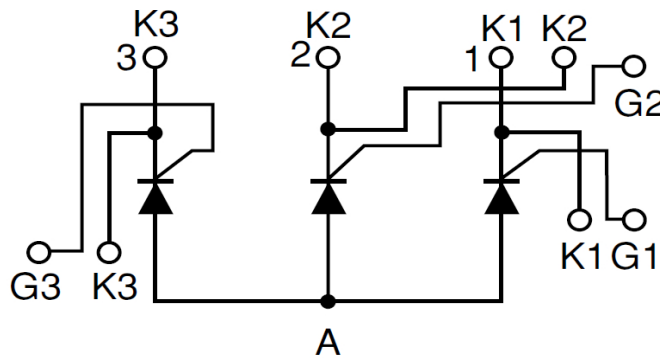
■ **Maximum Ratings**

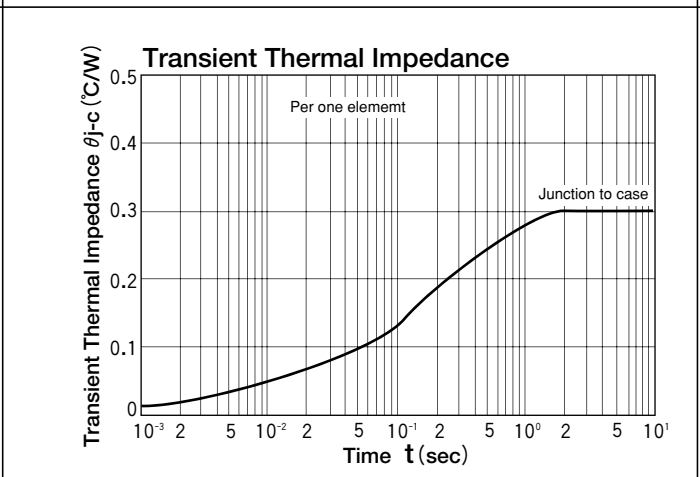
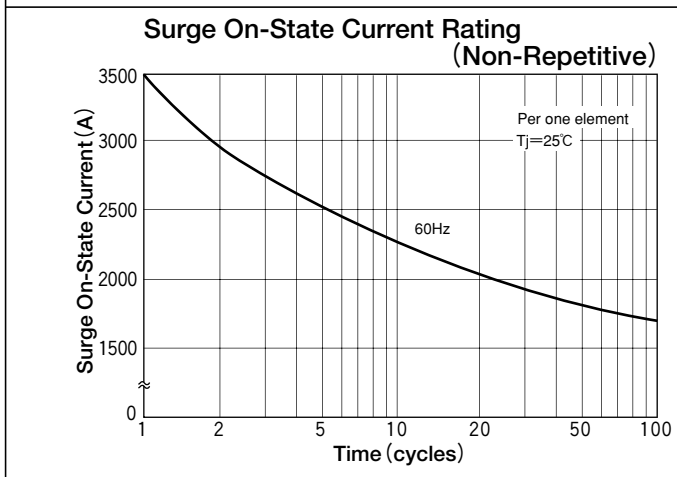
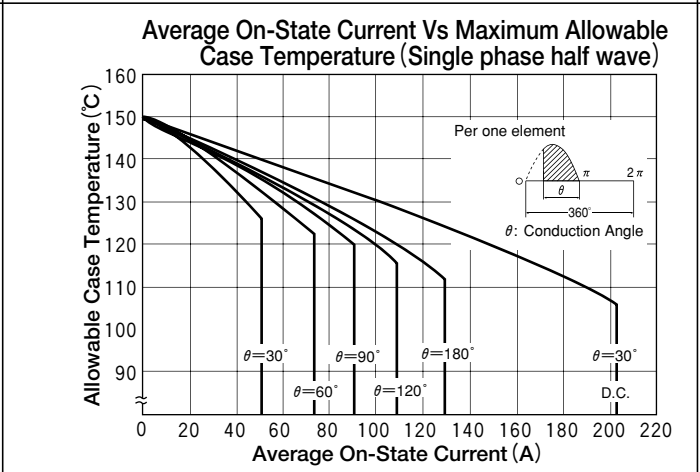
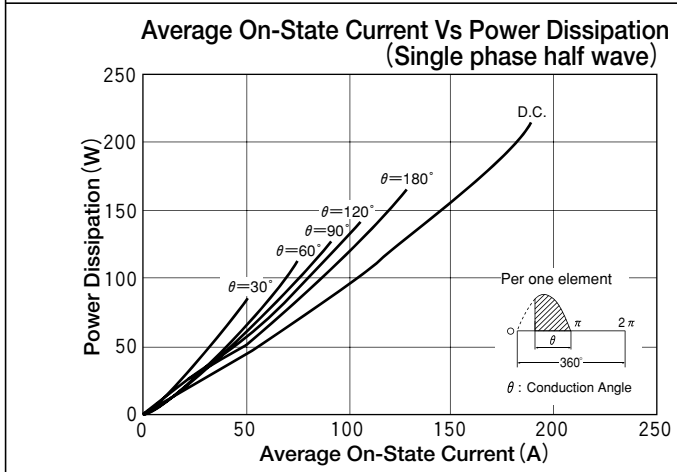
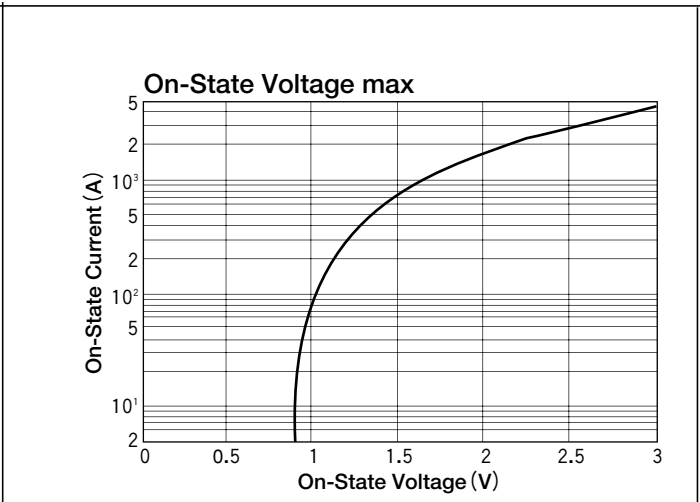
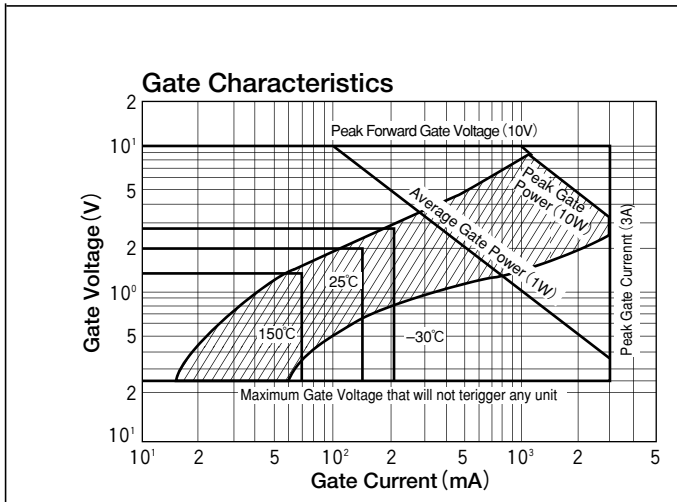
Symbol	Item	Conditions	Ratings	Unit
IT(AV)	Average On-State Current	Single phase, half wave, 180° conduction, Tc : 114°C	100	A
IT(RMS)	R.M.S. On-State Current	Single phase, half wave, 180° conduction, Tc : 114°C	157	A
ITSM	Surge On-State Current	1/2cycle, 50Hz/60Hz, peak value, non-repetitive	3200/3500	A
I <sup>2</sup> t	I <sup>2</sup> t		51000	A <sup>2</sup> S
P <sub>GM</sub>	Peak Gate Power Dissipation		10	W
P <sub>G(AV)</sub>	Average Gate Power Dissipation		1	W
I <sub>FGM</sub>	Peak Gate Current		3	A
V <sub>FGM</sub>	Peak Gate Voltage (Forward)		10	V
V <sub>RGM</sub>	Peak Gate Voltage (Reverse)		5	V
di/dt	Critical Rate of Rise of On-State Current	I <sub>G</sub> =200mA, T <sub>J</sub> =25°C, V <sub>D</sub> =1/2V <sub>DRM</sub> , diG/dt=1A/μs	200	A/μs
T <sub>J</sub>	Operating Junction Temperature		-30 to +150	°C
T <sub>stg</sub>	Storage Temperature		-30 to +125	°C
Torque	Mounting (M6)	Recommended Value 2.5-3.9 (25-40)	4.7 (48)	N·m (kgf·cm)
	Terminal (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	
	Mass		170	g

■ Electrical Characteristics

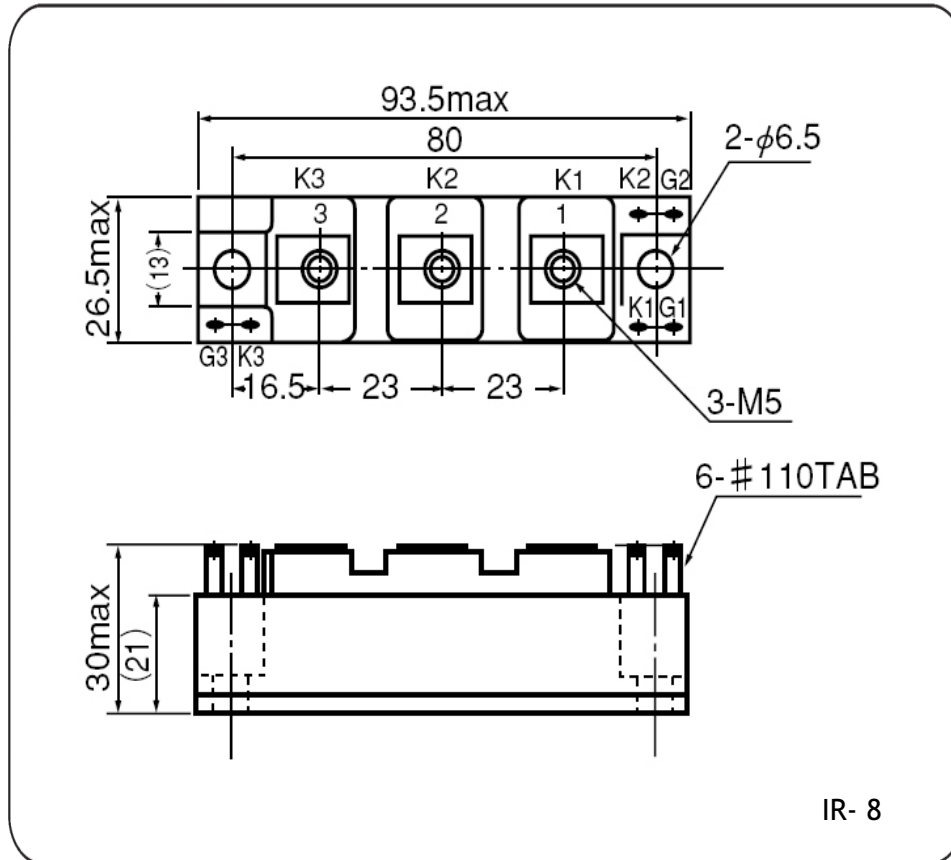
Symbol	Item	Conditions	Ratings	Unit
$I_{DRM}$	Repetitive Peak Off-State Current, max.	at $V_{DRM}$ , single phase, half wave, $T_j=150^\circ\text{C}$	15	mA
$I_{RRM}$	Repetitive Peak Reverse Current, max.	at $V_{DRM}$ , single phase, half wave, $T_j=150^\circ\text{C}$	15	mA
$V_{TM}$	Peak On-State Voltage, max.	On-State Current 310A, $T_j=25^\circ\text{C}$ Inst. measurement	1.20	V
$I_{GT}/V_{GT}$	Gate Trigger Current/Voltage, max.	$T_j=25^\circ\text{C}$ , $I_T=1\text{A}$ , $V_D=6\text{V}$	150/2	mA/V
$V_{GD}$	Non-Trigger Gate, Voltage. min.	$T_j=150^\circ\text{C}$ , $V_D=1/2 V_{DRM}$	0.25	V
tgt	Turn On Time, max.	$I_T=100\text{A}$ , $I_G=200\text{mA}$ , $T_j=25^\circ\text{C}$ , $V_D=1/2 V_{DRM}$ , $di_G/dt=1\text{A}/\mu\text{s}$	10	$\mu\text{s}$
$dv/dt$	Critical Rate of Rise of Off-State Voltage, min.	$T_j=150^\circ\text{C}$ , $V_D=2/3 V_{DRM}$ , Exponential wave.	50	$\text{V}/\mu\text{s}$
$I_H$	Holding Current, typ.	$T_j=25^\circ\text{C}$	70	mA
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case ( $1/3$ Module)	0.3	$^\circ\text{C}/\text{W}$

**CIRCUIT DIAGRAM**





PACKAGE OUTLINE



All dimensions are in mm.

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