

FEATURES

- IT(AV)130A (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 _{DRM} /V _{RRM} (V)	V _{RSM} (V)
PWB130/30	300	400
PWB130/40	400	500



■ **Maximum Ratings**

Symbol	Item	Conditions	Ratings	Unit
IT(AV)	Average On-State Current	Single phase, half wave, 180° conduction, Tc : 112°C	130	A
IT(RMS)	R.M.S. On-State Current	Single phase, half wave, 180° conduction, Tc : 112°C	204	A
ITSM	Surge On-State Current	1/2cycle, 50Hz/60Hz, peak value, non-repetitive	3200/3500	A
I ² t	I ² t		51000	A ² S
P _{GM}	Peak Gate Power Dissipation		10	W
P _{G(AV)}	Average Gate Power Dissipation		1	W
I _{FGM}	Peak Gate Current		3	A
V _{FGM}	Peak Gate Voltage (Forward)		10	V
V _{RGM}	Peak Gate Voltage (Reverse)		5	V
di/dt	Critical Rate of On-State Current	I _G =200mA, T _j =25°C, V _D =1/2V _{DRM} , dI _G /dt=1A/μs	200	A/μs
T _j	Operating Junction Temperature		-30 to +150	°C
T _{stg}	Storage Temperature		-30 to +125	°C
Mounting torque	Mounting (M6)	Recommended 2.5-3.9 (25-40)	4.7 (48)	N·m (kgf·cm)
	Terminal (M5)	Recommended 1.5-2.5 (15-25)	2.7 (28)	
	Mass		170	g

Electrical Characteristics

Symbol	Item	Conditions	Ratings			Unit
			Mix.	Typ.	Min.	
I_{DRM}	Repetitive Peak Off-State Current, max.	at V_{DRM} , single phase, half wave, $T_j=150^\circ\text{C}$			30	mA
I_{RRM}	Repetitive Peak Reverse Current, max.	at V_{DRM} , single phase, half wave, $T_j=150^\circ\text{C}$			30	mA
V_{TM}	Peak On-State Voltage, max.	On-State Current 410A, $T_j=150^\circ\text{C}$ Inst. measurement			1.2	V
I_{GT}	Gate Trigger Current, max.	$T_j=25^\circ\text{C}$, $I_T=1\text{A}$, $V_D=6\text{V}$			150	mA/V
V_{GT}	Gate Trigger Voltage, max.	$T_j=25^\circ\text{C}$, $I_T=1\text{A}$, $V_D=6\text{V}$			2	mA/V
V_{GD}	Non-Trigger Gate, Voltage. min.	$T_j=150^\circ\text{C}$, $V_D=\frac{1}{2}V_{DRM}$	0.25			V
tgt	Turn On Time, max.	$I_T=100\text{A}$, $I_G=200\text{mA}$, $T_j=25^\circ\text{C}$, $V_D=\frac{1}{2}V_{DRM}$, $di_G/dt=1\text{A}/\mu\text{s}$			10	μs
dv/dt	Critical Rate of Rise of Off-State Voltage, min.	$T_j=150^\circ\text{C}$, $V_D=\frac{2}{3}V_{DRM}$, 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 ($\frac{1}{3}$ Module)			0.2	$^\circ\text{C}/\text{W}$

CIRCUIT DIAGRAM





