

FEATURES

- Isolated mounting base 2500V-
- Pressure contact technology with Increased power cycling capability
- Space and weight savings
- Welding

TYPICAL APPLICATIONS

- Inverter
- Inductive heating
- Chopper

TECHNICAL DATA

DEVICE TYPE	V_{RRM} (V)	V_{RSM} (V)
BKW41/12	1200	1300
BKW41/16	1600	1700



Symbol	Parameter	Test condition	Rating	Unit
I_O	Average on-state current	Single-phase full-wave rectifying circuit $T_C: 85^\circ\text{C}$	41	A
$I_{T(RMS)}, I_{F(RMS)}$	Forward RMS current	One-side heat-dissipation, 180°sin half wave, 50Hz, $T_C: 85^\circ\text{C}$	65	A
I_{TSM}, I_{FSM}	Forward surge current	$t=10\text{ms}$, 50Hz, Sin, T_J	700	A
I_t^2	I_t^2 value	$V_R = 0.6V_{RRM}$, T_J	80400	A^2S
P_{GM}	Peak gate power		10	W
$P_{G(AV)}$	Average gate power		3	W
di/dt	On-state current critical rise rate	$I_{GM}=1.5\text{A}$, $t_r \leq 0.5\mu\text{s}$, $T_J=25^\circ\text{C}$	50	$\text{A}/\mu\text{s}$
V_{ISO}	Isolation voltage	AC one minute	2500	V
T_J	Operating junction temperature		-40 to +125	$^\circ\text{C}$
T_{Jm}	Rated junction temperature		125	$^\circ\text{C}$
T_{stg}	Storage temperature		-40 to +125	$^\circ\text{C}$
Md	Mounting torque (copper plate) M6		6	$\text{N}\cdot\text{m}$
	Mounting torque (connection terminal) M5		4	$\text{N}\cdot\text{m}$
W_t	Weight		200	g

Symbol	Parameter	Test condition	Rating	Unit
I_{DRM}	Peak off-state repetitive current	One-side heat-dissipation, $V_D=V_{DRM}$, sine half wave, $T_J=125^\circ\text{C}$	10	mA
I_{RRM}	Peak reverse repetitive current	One-side heat-dissipation, $V_R=V_{RRM}$, sine half wave, $T_J=125^\circ\text{C}$	10	mA
V_{TM} / V_{FM}	Peak forward voltage	$I_{TM} / I_{FM}=112\text{A}$, $T_J=25^\circ\text{C}$	1.6/1.3	V
V_{GT}	Gate trigger voltage	$T_J=25^\circ\text{C}$, $I_T=1\text{A}$, $V_D=12\text{V}$	0.7-1.5	V
I_{GT}	Gate trigger current	$T_J=25^\circ\text{C}$, $I_T=1\text{A}$, $V_D=12\text{V}$	20-100	mA
V_{GD}	Gate non-trigger voltage	$T_J=125^\circ\text{C}$, $V_D=2/3V_{DRM}$	0.2	V
I_{GD}	Gate non-trigger current	$T_J=125^\circ\text{C}$, $V_D=2/3V_{DRM}$	10	mA
dv/dt	On-state voltage critical rise rate	$T_J=125^\circ\text{C}$, $V_D=2/3V_{DRM}$	500	$\text{V}/\mu\text{s}$
I_H	Holding current	$T_J=25^\circ\text{C}$	20-150	mA
I_L	Latching current	$T_J=25^\circ\text{C}$	100-400	mA
$R_{th(j-c)}$	Thermal impedance (junction-case)	One-side heat dissipation, sine half wave	0.40	$^\circ\text{C}/\text{W}$

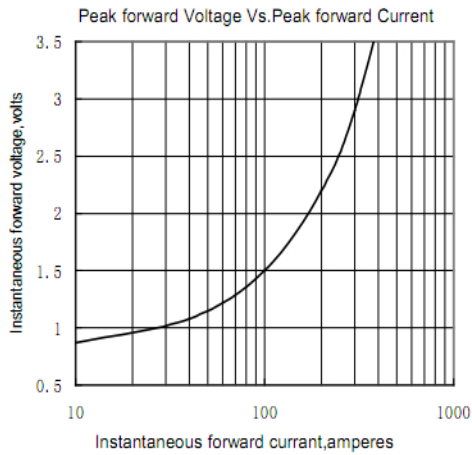


Fig.1

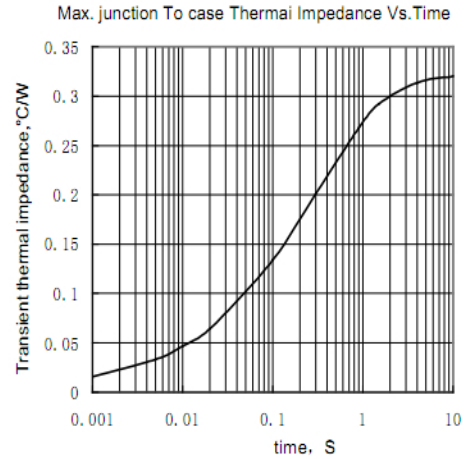


Fig.2

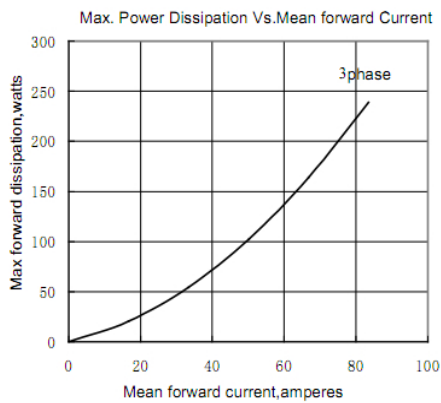


Fig.3

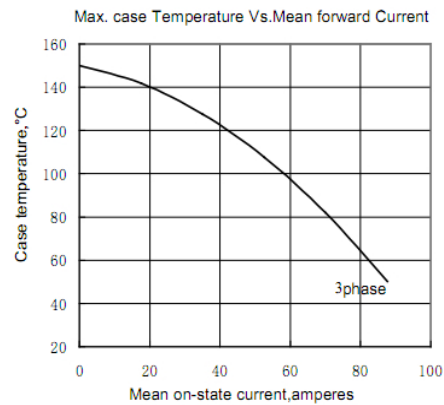


Fig.4

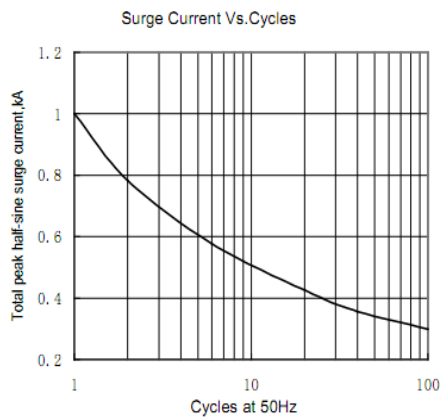


Fig.5

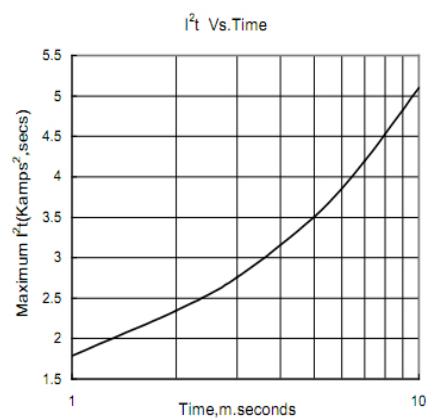
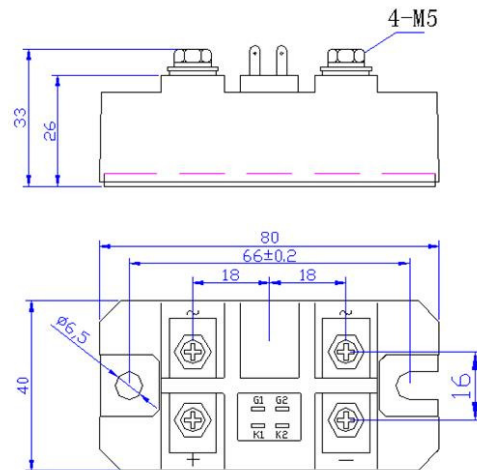
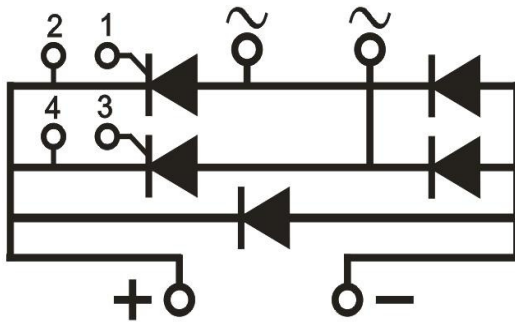


Fig.6

PACKAGE OUTLINE

CIRCUIT DIAGRAM



All dimensions are in mm.

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