

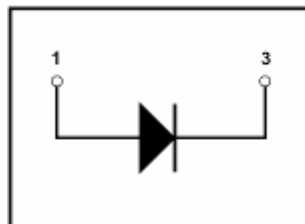
PRODUCT FEATURES

- Ultrafast Reverse Recovery Time
- Soft Reverse Recovery Characteristics
- Low Reverse Recovery Loss
- Low Forward Voltage
- High Surge Current Capability
- Low Inductance Package



APPLICATIONS

- Inversion Welder
- Uninterruptible Power Supply (UPS)
- Plating Power Supply
- Ultrasonic Cleaner and Welder
- Converter & Chopper
- Power Factor Correction (PFC) Circuit



ABSOLUTE MAXIMUM RATINGS

 $T_C = 25^\circ\text{C}$ unless otherwise specified

Symbol	Parameter	Test Conditions	Max.	Unit
V_{RRM}	Repetitive Reverse Voltage		600	V
$I_{F(AV)}$	Average Forward Current	$T_C = 85^\circ\text{C}$ Rectangular, $d=0.5$	600	A
$I_{F(RMS)}$	RMS Forward Current	$T_C = 85^\circ\text{C}$ Rectangular, $d=0.5$	840	A
I_{FSM}	Non-Repetitive Surge Forward Current	$T_J = 45^\circ\text{C}$, $t=10\text{ms}$, 50Hz, Sine	7200	A
		$T_J = 45^\circ\text{C}$, $t=8.3\text{ms}$, 60Hz, Sine	7900	A
I^2t	I^2t (For Fusing)	$T_J = 45^\circ\text{C}$, $t=10\text{ms}$, 50Hz, Sine	259200	A^2s
		$T_J = 45^\circ\text{C}$, $t=8.3\text{ms}$, 60Hz, Sine	312050	A^2s
P_D	Power Dissipation		1560	W
T_J	Junction Temperature		-40 to +150	$^\circ\text{C}$
T_{STG}	Storage Temperature Range		-40 to +125	$^\circ\text{C}$

ELECTRICAL AND THERMAL CHARACTERISTICS

 $T_C = 25^\circ\text{C}$ unless otherwise specified

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{RM}	Reverse Leakage Current	$V_R = 600\text{V}$	--	--	10	mA
		$V_R = 600\text{V}$, $T_J = 125^\circ\text{C}$	--	--	200	mA
V_F	Forward Voltage	$I_F = 600\text{A}$	--	--	1.45	V
		$I_F = 600\text{A}$, $T_J = 125^\circ\text{C}$	--	--	1.30	V
t_{rr}	Reverse Recovery Time	$I_F = 600\text{A}$ $V_R = 300\text{V}$ $di_F/dt = -200\text{A}/\mu\text{s}$	$T_J = 25^\circ\text{C}$	--	130	ns
I_{RRM}	Max. Reverse Recovery Current			--	13	A
t_{rr}	Reverse Recovery Time		$T_J = 100^\circ\text{C}$	--	210	ns
I_{RRM}	Max. Reverse Recovery Current			--	22	A
$R_{\theta JC}$	Thermal Resistance	Junction-to-Case	--	--	0.08	$^\circ\text{C}/\text{W}$

Package outline on backside

MECHANICAL CHARACTERISTICS

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Torque	Module-to-Sink	Recommended (M6)	3		5	N·m
Torque	Module Electrodes	Recommended (M6)	3		5	N·m

FSB Package Outline (Dimensions in mm)

