

Super Fast Recovery Diode ,200A

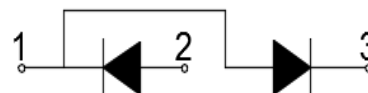
Features

- International standard package with DCB ceramic base plate
- Dual Diode construction
- Low Leakage Current
- Low forward voltage drop
- High surge current capability
- Super Fast Switching



Typical Applications

- Antiparallel diode for high frequency switching devices
- Free wheeling diode in converters and motor control circuits
- Inductive heating and melting
- Uninterruptible power supplies (UPS)
- Ultrasonic cleaners and welders



Maximum Ratings

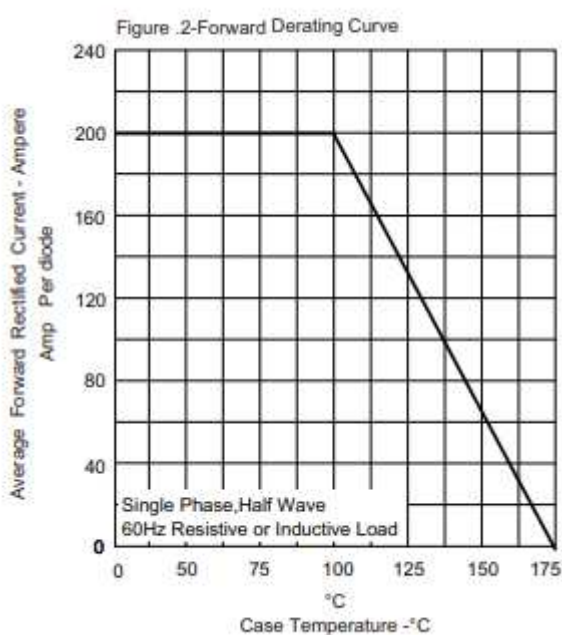
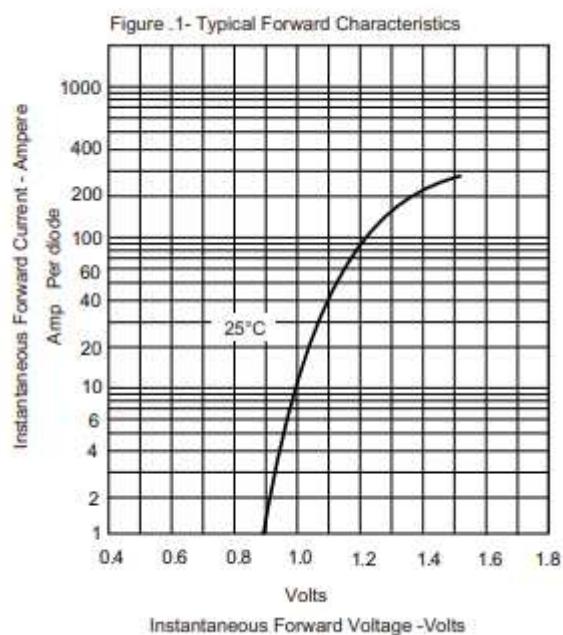
Parameter	Symbol	Test Conditions	Values	Unit
Repetitive peak reverse voltage	V_{RRM}		600	V
RMS reverse voltage	V_{RMS}		420	V
DC blocking voltage	V_{DC}		600	V
Average forward current	$I_{F(AV)}$	TC=85°C	200	A
Non-repetitive forward surge current, half sine-wave	I_{FSM}	TC=25°C	4000	A

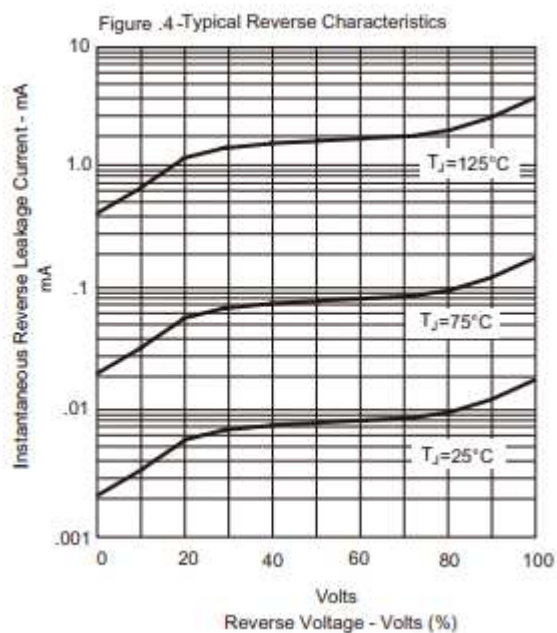
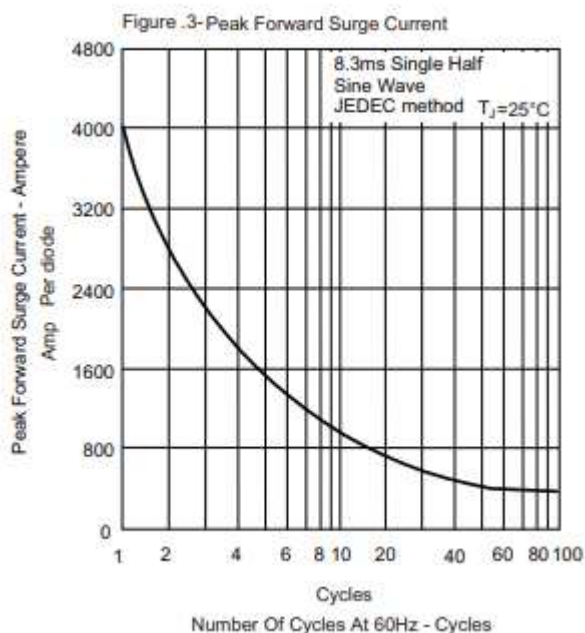
Electrical Specifications

Parameter	Symbol	Test Conditions	Values	Unit
DC forward voltage	V_F	$I_F=200A$ $T_J=25^\circ C$	1.4	V
Maximum DC reverse current	I_R	$V_R=Rated V_{RRM}$ $T_J=25^\circ C$	50	uA
		$V_R=Rated V_{RRM}$ $T_J=125^\circ C$	1.5	mA
Maximum Reverse Recovery Time	trr	$V_{DD}=100V$, $I_F=45A$, $dif/dt=300A/us$; $T_J=25^\circ C$	180	ns
Reverse recovery charge(Area Under the curve Defined by IRRM And trr)	Q_{rr}		--	nc
Diode Peak Reverse Recovery Current	I_{RRM}		15	A

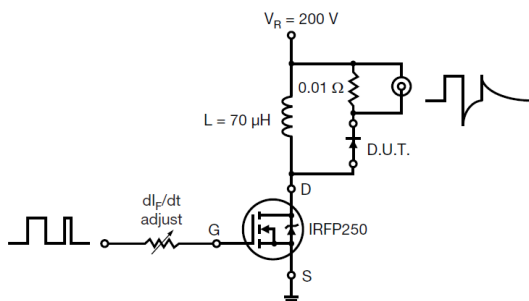
Thermal - Mechanical Specifications

Parameter	Symbol	Test Conditions	Values	Unit
Thermal resistance junction to case	R_{thjc}		0.25	$^{\circ}\text{C/W}$
Junction and storage temperature range	T_J, T_{stg}		-40 to 150	$^{\circ}\text{C}$
Mounting Torque	Mt	To terminals(M6)	$5 \pm 15\%$	Nm
	Ms	To heatsink(M6)	$5 \pm 15\%$	
Module(Approximately)	Weight		160	g
Maximum RMS insulation voltage (for insulated type)	Visol	Ac.50Hz; R.M.S; 1min	2500	V
		Ac.50Hz; R.M.S; 1sec	3500	

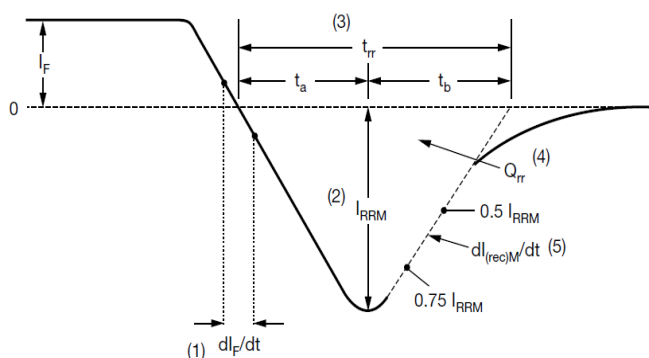
Performance Curves




Reverse Recovery Parameter Test Circuit



Reverse Recovery Waveform and Definitions



(1) dI_F/dt - rate of change of current through zero crossing

(2) I_{RRM} - peak reverse recovery current

(3) t_{rr} - reverse recovery time measured from zero crossing point of negative going I_F to point where a line passing through $0.75 I_{RRM}$ and $0.50 I_{RRM}$ extrapolated to zero current.

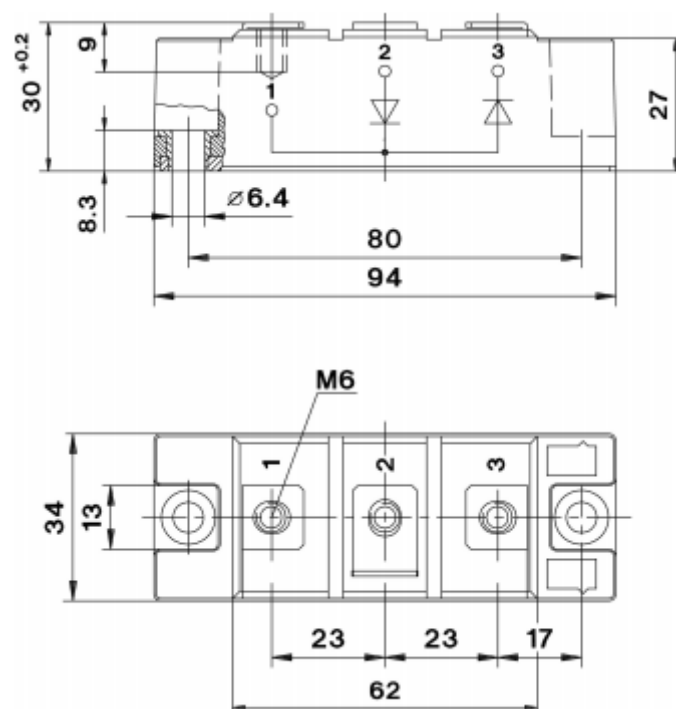
(4) Q_{rr} - area under curve defined by t_{rr} and I_{RRM}

$$Q_{rr} = \frac{t_{rr} \times I_{RRM}}{2}$$

(5) $dI_{(rec)M}/dt$ - peak rate of change of current during t_b portion of t_{rr}

Package Outline Information

T2B Package



Dimensions in mm