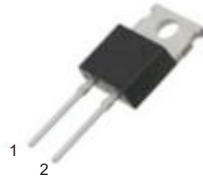


SUPERFAST RECTIFIER DATA SHEET
FEATURES

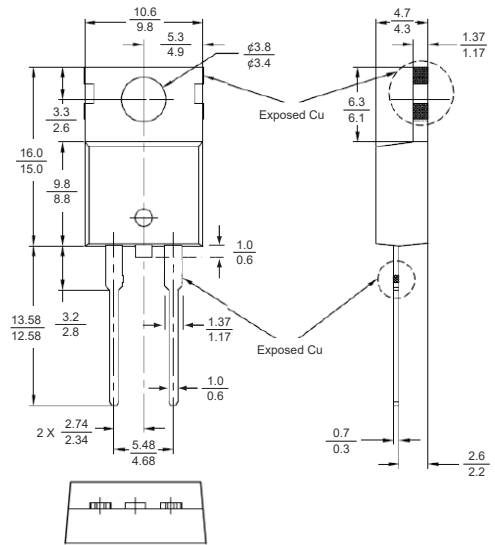
- Ultrafast Recovery
- 175°C Operating Junction Temperature
- High Frequency Operation
- Low IR Value
- High Surge Capacity
- Epitaxial Chip Construction

MECHANICAL DATA

- Switched Mode Power Supply
- Freewheeling Diode, Snubber Diode
- UPS


TO-220AC

Unit: mm


Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified
Absolute Maximum Ratings

Parameter	Symbol	Test Conditions	Values	Units
Repetitive peak reverse voltage	V_{RRM}		1200	V
Continuous forward current	$I_{F(AV)}$	$T_A=110^\circ\text{C}$	8	A
Single pulse forward current	I_{FSM}	$T_A=25^\circ\text{C}$	100	A
Maximum repetitive forward current	I_{FRM}	Square wave, 20kHz	30	A
Operating junction	T_J		175	$^\circ\text{C}$
Storage temperatures	T_{stg}		-55 to +175	$^\circ\text{C}$

Electrical characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Breakdown voltage Blocking voltage	V_R	$I_R=100\mu\text{A}$	1200			V
Forward voltage	V_F	$I_F=8\text{ A}$		2.6	3.3	V
		$I_F=8\text{ A}, T_J=125^\circ\text{C}$		2.2	3.3	V
Reverse leakage current	I_R	$V_R=V_{RRM}$			20	μA
		$T_J=150^\circ\text{C}, V_R=1200\text{V}$			200	μA
Reverse recovery time	T_{rr}	$I_F=0.5\text{A}, I_R=1\text{A}, I_{RR}=0.25\text{A}$			55	ns
		$I_F=1\text{A}, V_R=30\text{V}, di/dt=200\text{A}/\mu\text{s}$		23	35	ns

Thermal characteristics

Parameter	Symbol	Typ	MAX	Units
Junction-to-Case	R_{thJC}	-	3	$^\circ\text{C}/\text{W}$

RATINGS AND CHARACTERISTIC CURVES

Fig. 1- Forward current derating curve

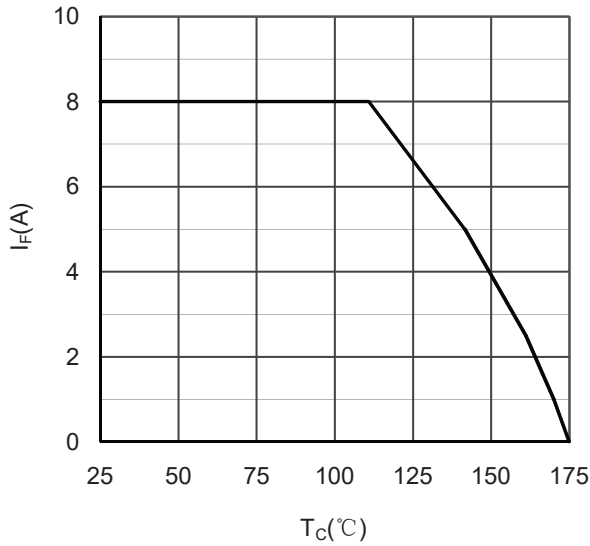


Fig. 2 - Typical forward characteristics

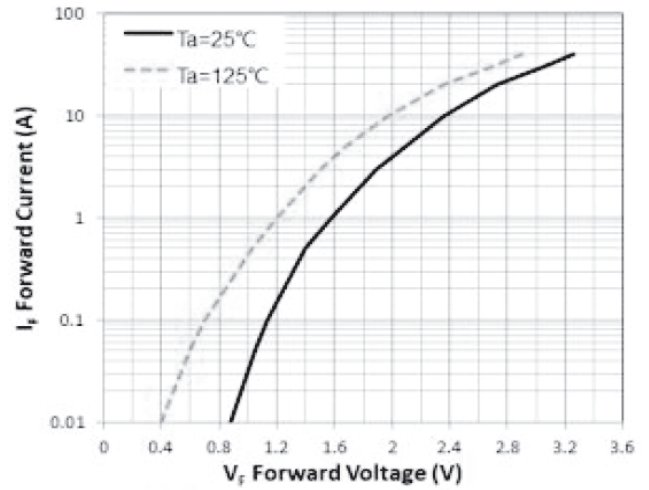


Fig. 3 - Typical reverse characteristics

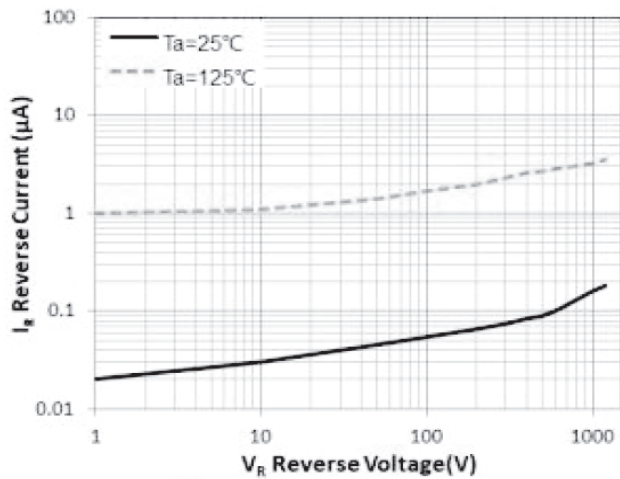


Fig. 4 - Forward surge current derating curve

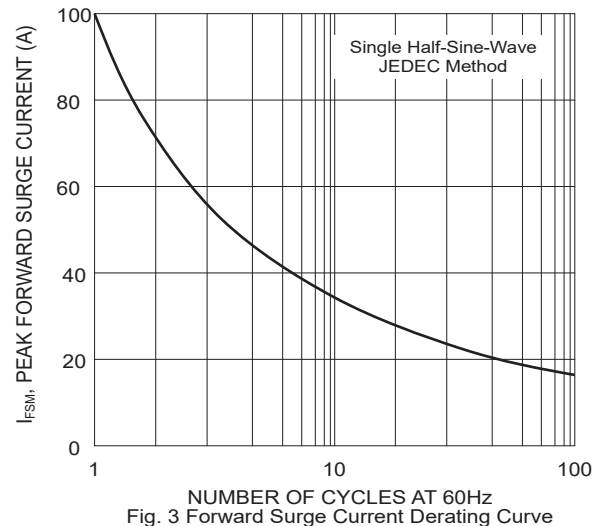


Fig. 3 Forward Surge Current Derating Curve

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