

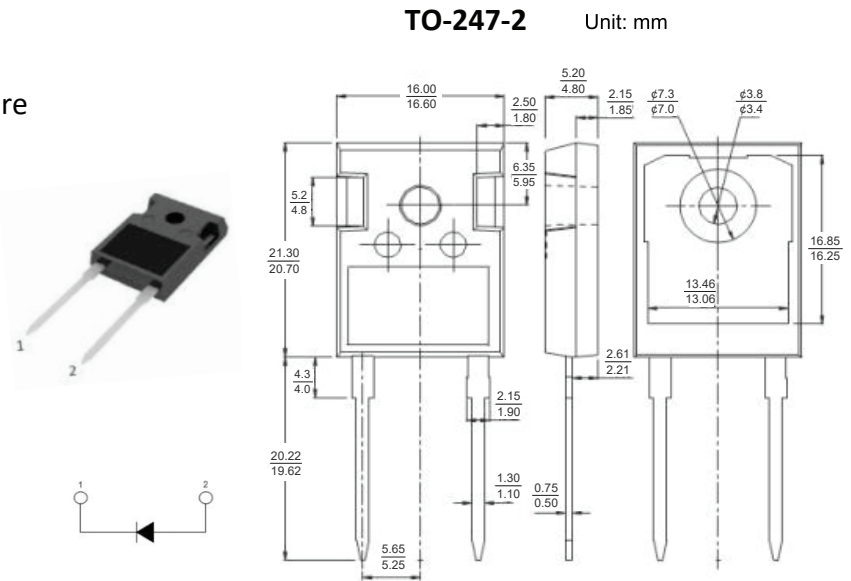
# **SUPERFAST RECTIFIER DATA SHEET**

## **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



## **Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified**

### **Absolute Maximum Ratings**

Parameter	Symbol	Test Conditions	Values	Units
Repetitive peak reverse voltage	V <sub>RRM</sub>		1200	V
Continuous forward current	I <sub>F(AV)</sub>	T <sub>A</sub> =110°C	60	A
Single pulse forward current	I <sub>FSM</sub>	T <sub>A</sub> =25°C	500	A
Maximum repetitive forward current	I <sub>FRM</sub>	Square wave, 20kHz	110	A
Operating junction	T <sub>J</sub>		175	°C
Storage temperatures	T <sub>stg</sub>		-55 to +175	°C

### **Electrical characteristics (T<sub>a</sub>=25°C unless otherwise specified)**

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Breakdown voltage Blocking voltage	V <sub>R</sub>	I <sub>R</sub> =100μA	1200			V
Forward voltage	V <sub>F</sub>	I <sub>F</sub> =60 A		2.8	3.3	V
		I <sub>F</sub> =60 A, T <sub>J</sub> =125°C		2.4	3.0	V
Reverse leakage current	I <sub>R</sub>	V <sub>R</sub> =V <sub>RRM</sub>			50	μA
		T <sub>J</sub> =150°C, V <sub>R</sub> =1200V			500	μA
Reverse recovery time	T <sub>rr</sub>	I <sub>F</sub> =0.5A, I <sub>R</sub> =1A, I <sub>RR</sub> =0.25A			80	ns
		I <sub>F</sub> =1A, V <sub>R</sub> =30V, di/dt =200A/us		35	50	ns

### **Thermal characteristics**

Parameter	Symbol	Typ	MAX	Units
Junction-to-Case	R <sub>thJC</sub>	-	0.7	°C/W

## RATINGS AND CHARACTERISTIC CURVES

Fig. 1- Forward current derating curve

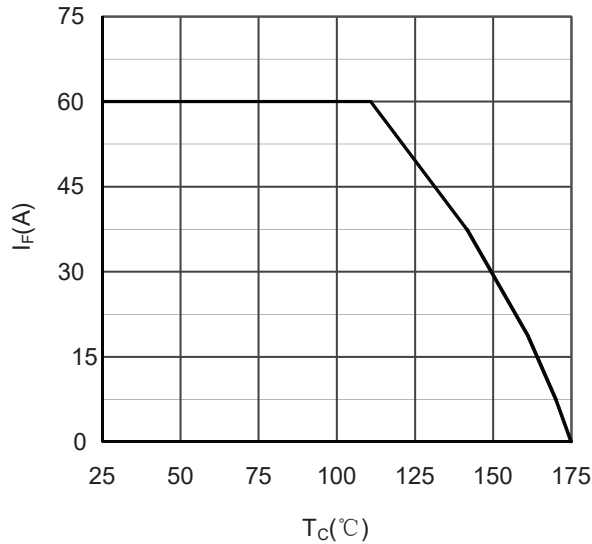


Fig. 2 - Typical forward characteristics

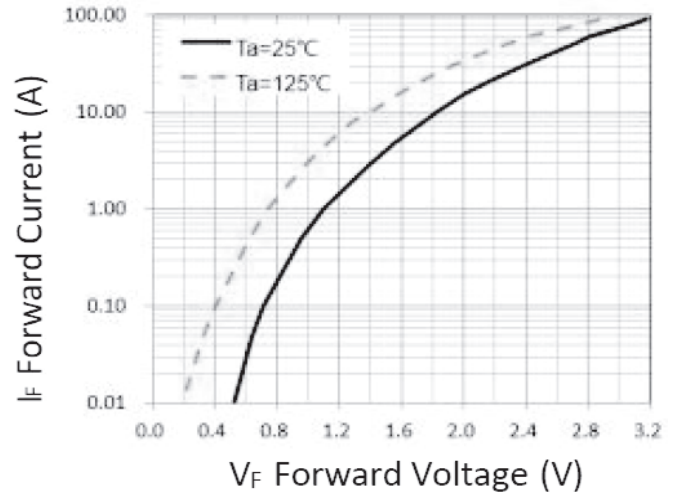


Fig. 3 - Typical reverse characteristics

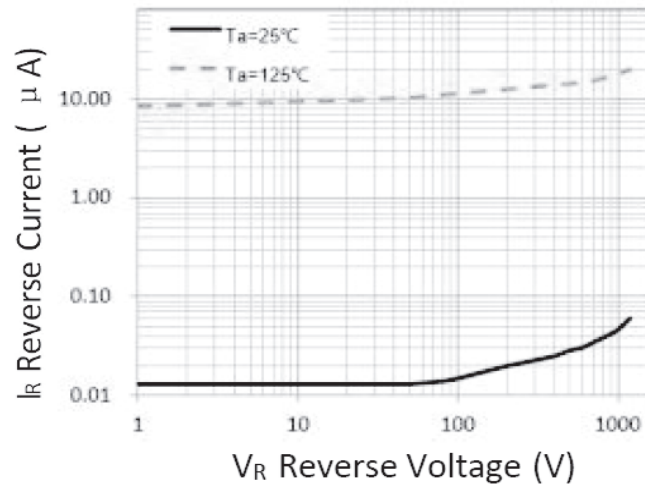


Fig. 4 - Forward surge current derating curve

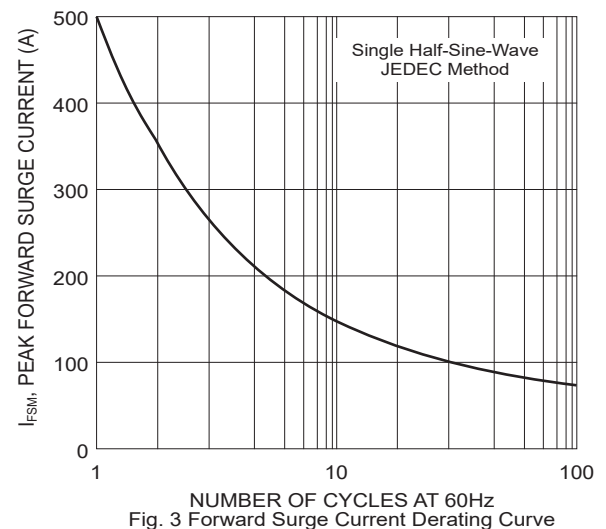


Fig. 3 Forward Surge Current Derating Curve

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