

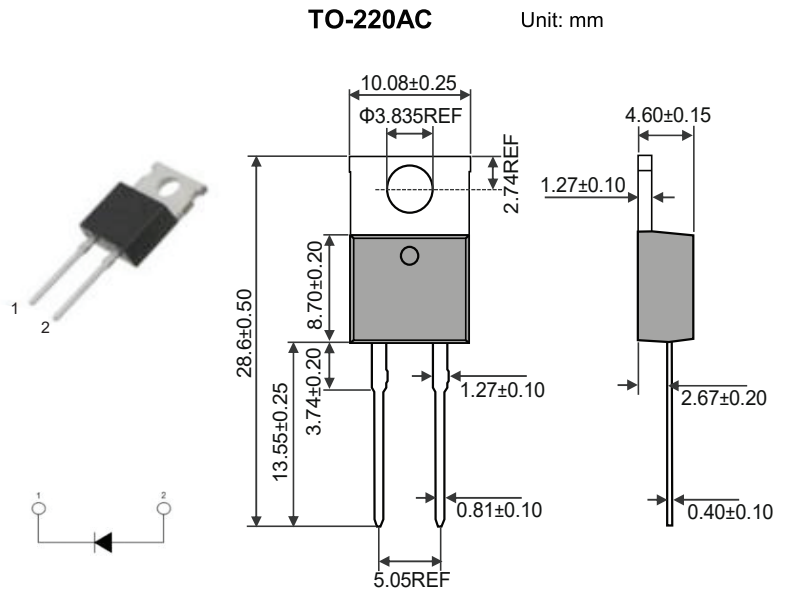
SUPER FAST RECTIFIER DATA SHEET

FEATURES

- Super fast switching for high efficiency.
- Low reverse leakage.
- High forward surge current capability.
- RoHs Product.

MECHANICAL DATA

Mainly used in switching power supply, PWM pulse width modulator, inverter as a freewheeling and other electronic circuits, high-frequency rectifier diode, diode or damping diode use



Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Absolute Maximum Ratings

Parameter	Symbol	Test Conditions	Values	Unit
Repetitive peak reverse voltage	V _{RRM}		600	V
Continuous forward current	I _{F(AV)}	(Rated VR-20Khz Square Wave)-50% duty cycle	30	A
Single pulse forward current	I _{FSM}	8.3 Half Mssine Wave-According to JEDEC Method	320	A
Operating junction	T _J		-40 to +175	°C
Storage temperatures	T _{stg}		-40 to +175	°C

Electrical characteristics (T_J=25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Breakdown voltage Blocking voltage	V _R	I _R =100μA	600			V
Forward voltage	V _F	I _F =30 A		2.2	2.6	V
		I _F =30 A, T _J =125°C			1.8	V
Reverse leakage current	I _R	V _R = V _{RRM}			10	μA
		T _J =125°C, V _R =600V			500	μA
Reverse recovery time	T _{rr}	I _F =0.5A, I _R =1A, I _{RR} =0.25A			40	ns

Thermal characteristics

Parameter	Symbol	Typ	MAX	Unit
Junction-to-Case	R _{thJC}	-	1.0	°C/W

RATINGS AND CHARACTERISTIC CURVES

Fig. 1- Current derating curve, per element

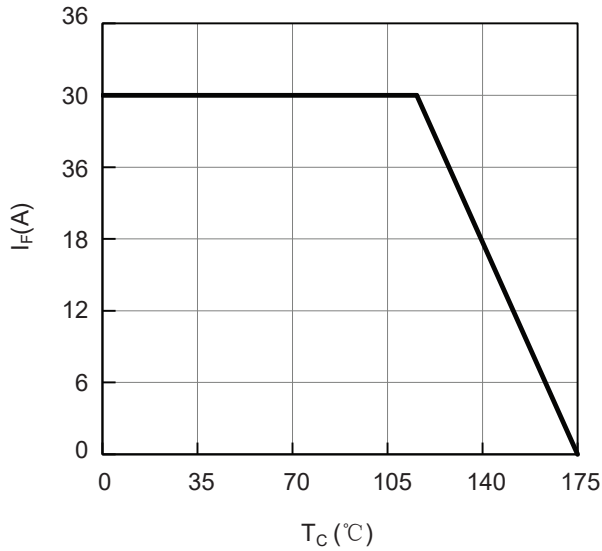


Fig. 2 - The forward voltage and forward current curve

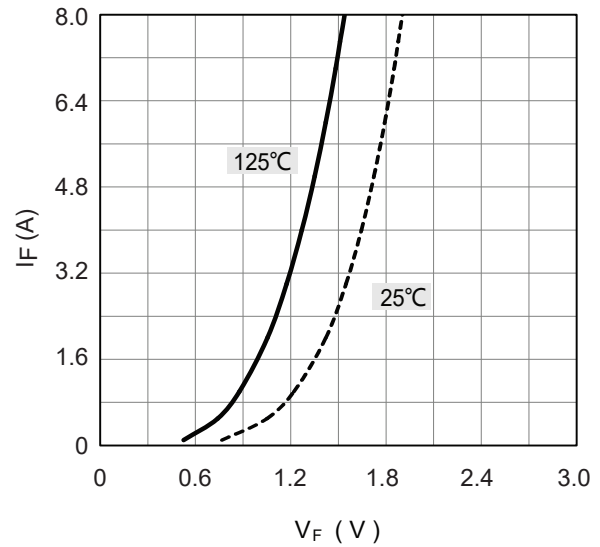


Fig. 3 - The reverse leakage current and the reverse voltage (single-device) curve.

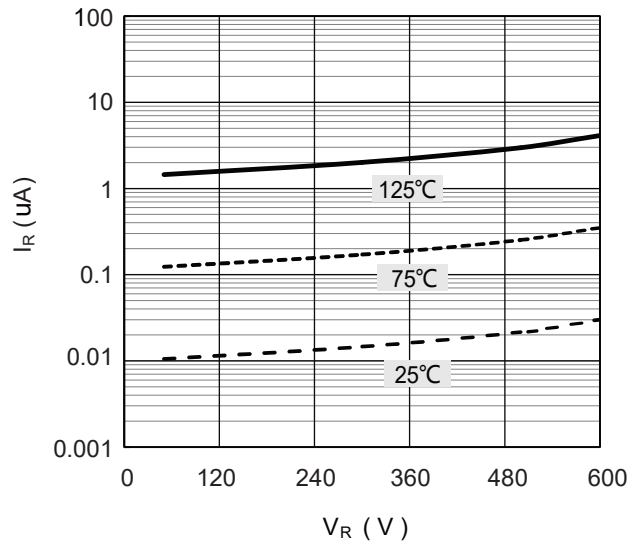
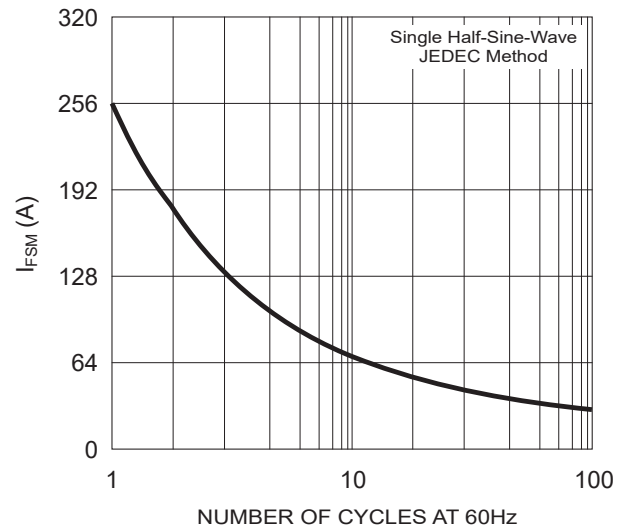


Fig. 4 - Forward surge current derating curve



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