

SUPER FAST RECTIFIER DATA SHEET
FEATURES

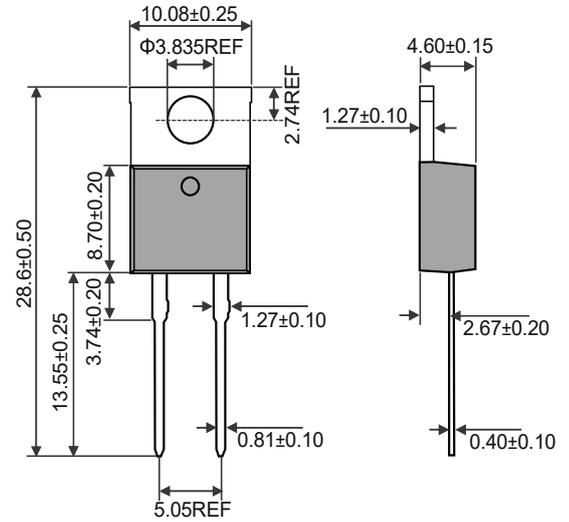
- Super fast switching for high efficiency.
- Low reverse leakage.
- High forward surge current capability.
- RoHs Product.

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


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	Unit
Repetitive peak reverse voltage	V_{RRM}		600	V
Continuous forward current	$I_{F(AV)}$	(Rated VR-20Khz Square Wave)-50% duty cycle	15	A
Single pulse forward current	I_{FSM}	8.3 Half Mssine Wave-According to JEDEC Method	250	A
Operating junction	T_J		-40 to +175	$^\circ\text{C}$
Storage temperatures	T_{stg}		-40 to +175	$^\circ\text{C}$

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

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Breakdown voltage Blocking voltage	V_R	$I_R=100\mu\text{A}$	600			V
Forward voltage	V_F	$I_F=15\text{ A}$		1.9	2.2	V
		$I_F=15\text{ A}, T_J=125^\circ\text{C}$			1.5	V
Reverse leakage current	I_R	$V_R=V_{RRM}$			10	μA
		$T_J=125^\circ\text{C}, V_R=600\text{V}$			100	μA
Reverse recovery time	T_{rr}	$I_F=0.5\text{A}, I_R=1\text{A}, I_{RR}=0.25\text{A}$		25	30	ns

Thermal characteristics

Parameter	Symbol	Typ	MAX	Unit
Junction-to-Case	R_{thJC}	-	1.5	$^\circ\text{C}/\text{W}$

RATINGS AND CHARACTERISTIC CURVES

Fig. 1- Current derating curve, per element

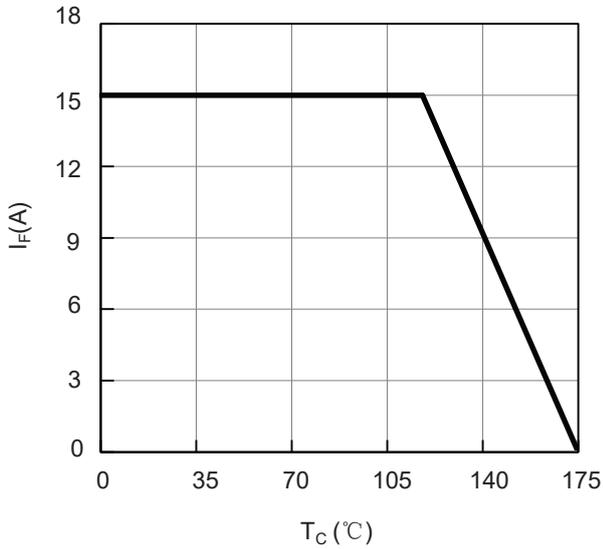


Fig. 2 - The forward voltage and forward current curve

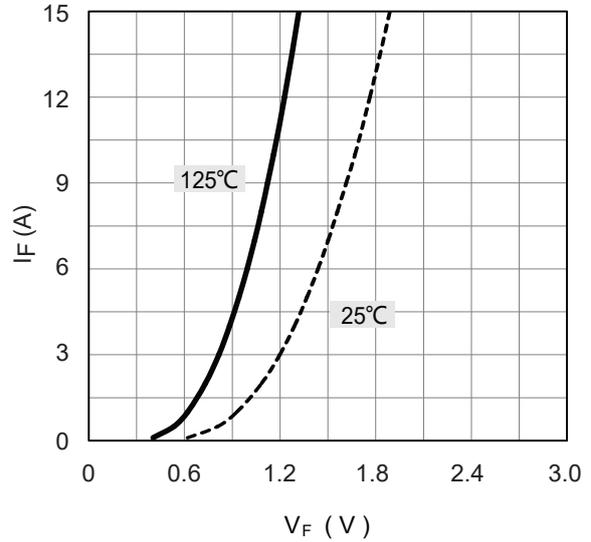


Fig. 3 - The reverse leakage current and the reverse voltage (single-device) curve.

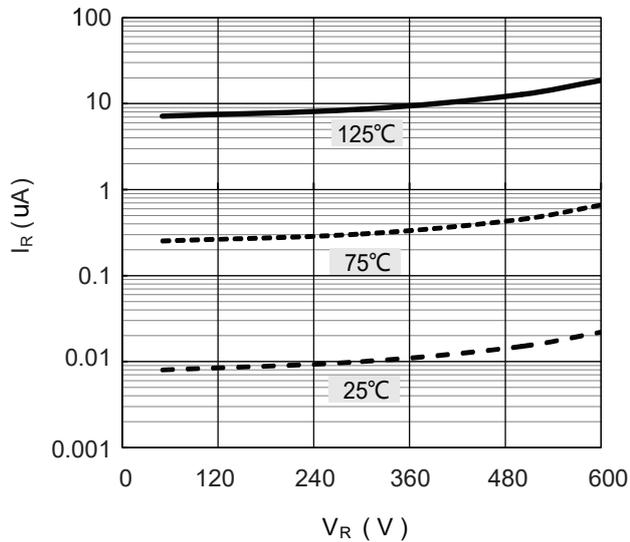
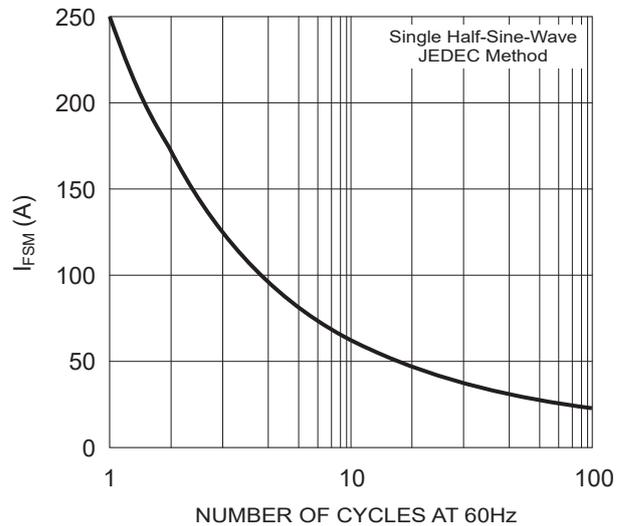


Fig. 4 - Forward surge current derating curve



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