

20.0 Amp. Glass Passivated Ultrafast Recovery Rectifier

<p>TO-3P / TO-247AD</p> <p>Common Cathode Suffix "C"</p>	<p>Voltage 200 to 600 V</p>	<p>Current 20.0 A</p>	
	<p>FEATURES</p> <ul style="list-style-type: none"> • Ultrafast recovery time for high efficiency • Low power losses • Low forward voltage drop • High forward surge current capability • Solder dip 260°C, 10s • Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC • Meets MSL level 1, per J-STD-020, LF maximum peak of 260° C 		<p>RoHS COMPLIANT</p>
	<p>MECHANICAL DATA</p> <ul style="list-style-type: none"> • Case: TO-3P / TO-247AD. Epoxy meets UL 94V-0 flammability rating. • Polarity: As marked on the body. • Mounting Torque: 10 in-lbs maximum. • Terminals: Matte tin plated leads, solderable per MIL-STD-750 Method 2026, J-STD-002 and JESD22-B102. Consumer grade, meets JESD 201 class 1A whisker test. 		
<p>TYPICAL APPLICATIONS</p> <p>Used in high frequency rectifier of switching mode power supplies, inverters, freewheeling diodes, dc-to-dc converters, and other power switching application.</p>			

Maximun Ratings and Electrical Characteristics at 25°C

Marking Code		SF 2004PT	SF 2006PT	SF 2008PT
		SF2004PT	SF2006PT	SF2008PT
V _{RRM}	Maximum Recurrent Peak Reverse Voltage (V)	200	400	600
V _{RMS}	Maximum RMS Voltage (V)	140	280	420
V _{DC}	Maximum DC Blocking Voltage (V)	200	400	600
I _{F(AV)}	Maximum Average Forward Rectified Current @ T _c = 100 °C	20 A		
I _{FSM}	Peak Forward Surge Current 8.3 ms. single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	180 A		
T _{rr}	Maximum Reverse Recovery Time From I _F = 0.5 A; I _R = 1 A; I _{RR} = 0.25 A	35 nS		
C _j	Typical Junction Capacitance at 1MHz and reverse voltage of 4V _{DC}	175 pF		
T _j	Operating Temperature Range	- 55 to + 150 °C		
T _{stg}	Storage Temperature Range	- 55 to + 150 °C		

Electrical Characteristics at Tamb = 25 °C

V _F	Max. Instantaneous Forward Voltage @ 10.0 A @ 20.0 A (Note 2)	0.95 V 1.1 V	1.3 V 1.5 V	1.7 V 1.9 V
I _R	Maximum DC Reverse Current @ T _c = 25 °C at Rated DC Blocking Voltage @ T _c = 100 °C	10 µA 400 µA		
R _{thj-c}	Typical Thermal Resistance (Note 1)	2.5 °C/W		

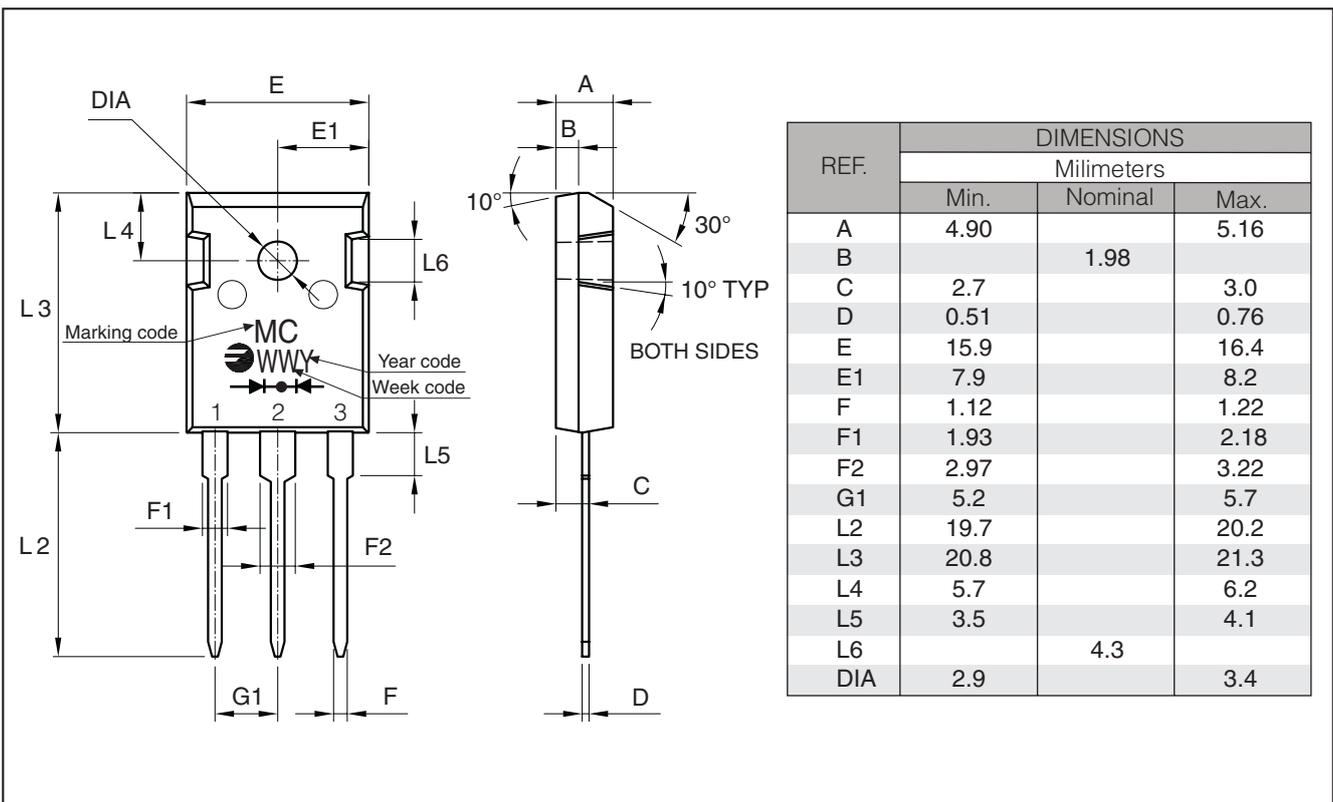
Note: 1. Mounted on Heatsink.
2. Pulse test: 300µs pulse width, 1% duty cycle.

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Ordering information

PREFERRED P/N	PACKAGE CODE	DELIVERY MODE	BASE QUANTITY	UNIT WEIGHT (g)
SF2008PTC 00TUC	TU	TUBE	900	5.6

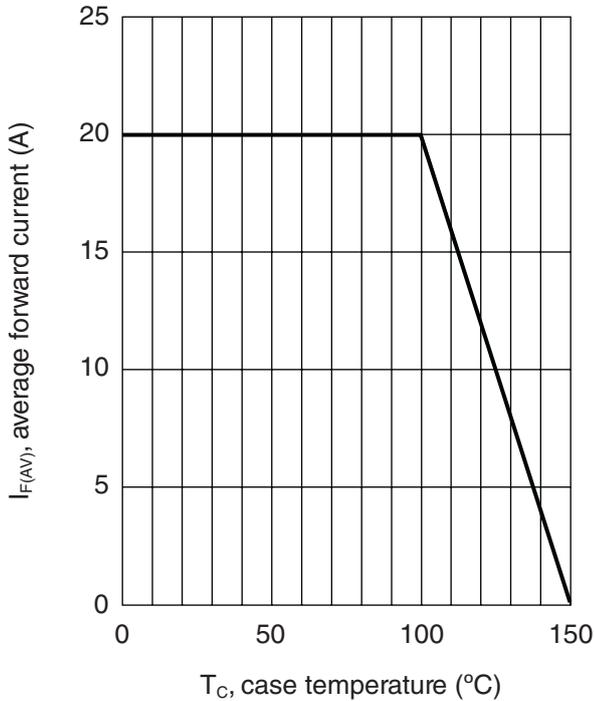
Package Outline Dimensions: (mm) TO-3P / TO-247AD



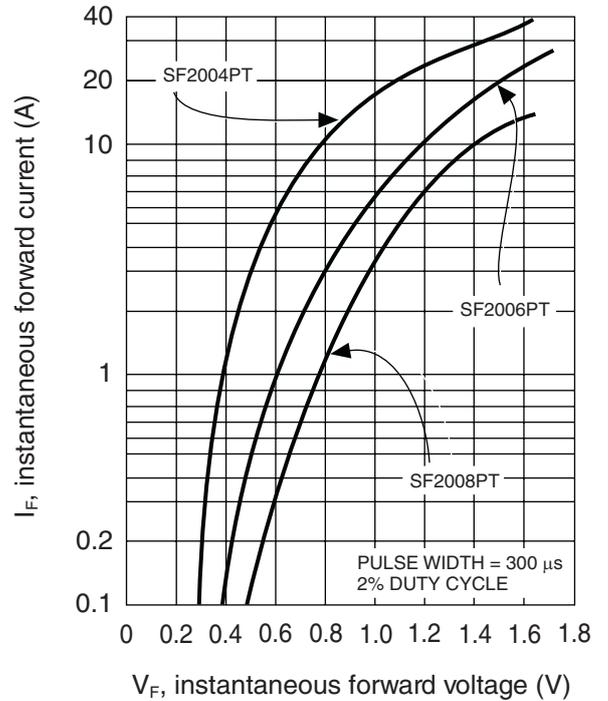
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Ratings and Characteristics (Ta 25 °C unless otherwise noted)

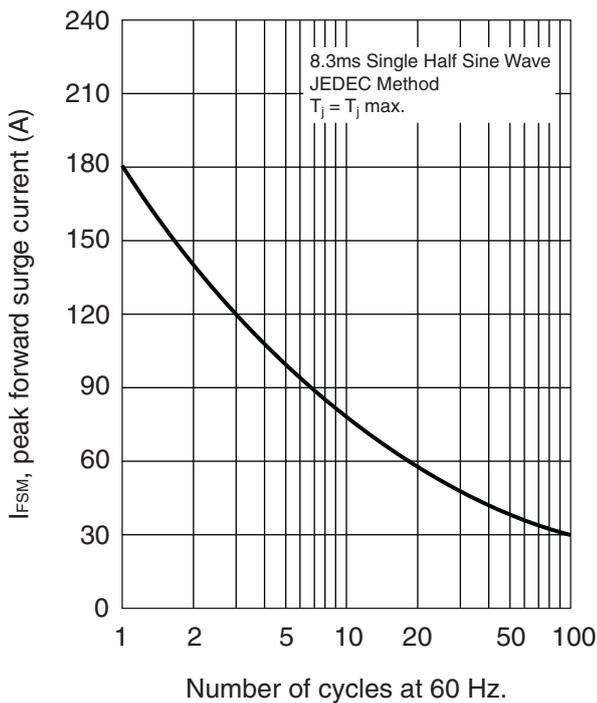
MAXIMUM FORWARD CURRENT DERATING CURVE



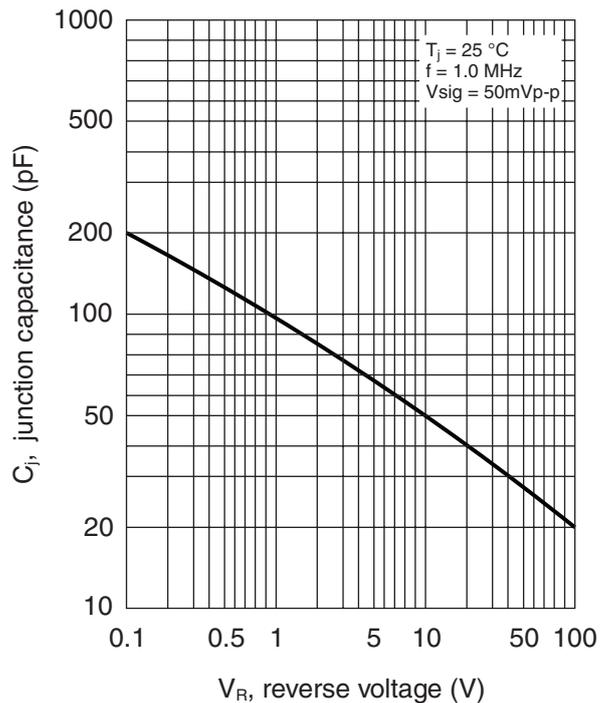
TYPICAL FORWARD CHARACTERISTICS PER DIODE



MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER DIODE



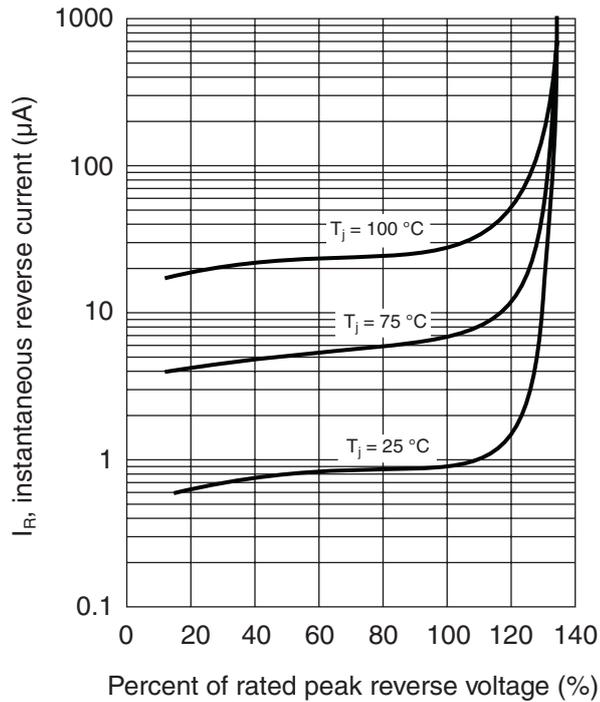
TYPICAL JUNCTION CAPACITANCE PER DIODE



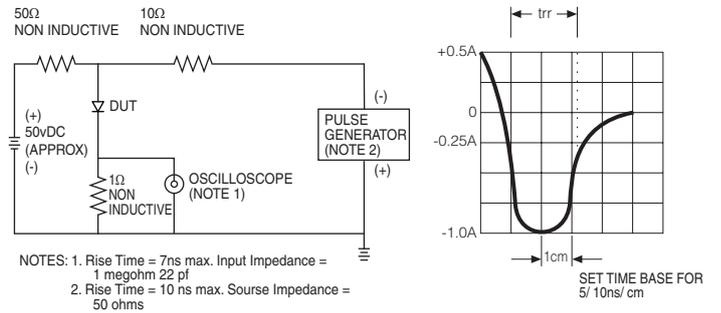
20.0 Amp. Glass Passivated Ultrafast Recovery Rectifier

Ratings and Characteristics (Ta 25 °C unless otherwise noted)

TYPICAL REVERSE CHARACTERISTICS PER DIODE



REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



20.0 Amp. Glass Passivated Ultrafast Recovery Rectifier

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