

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 2011/65/EU 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>		

Maximum 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		

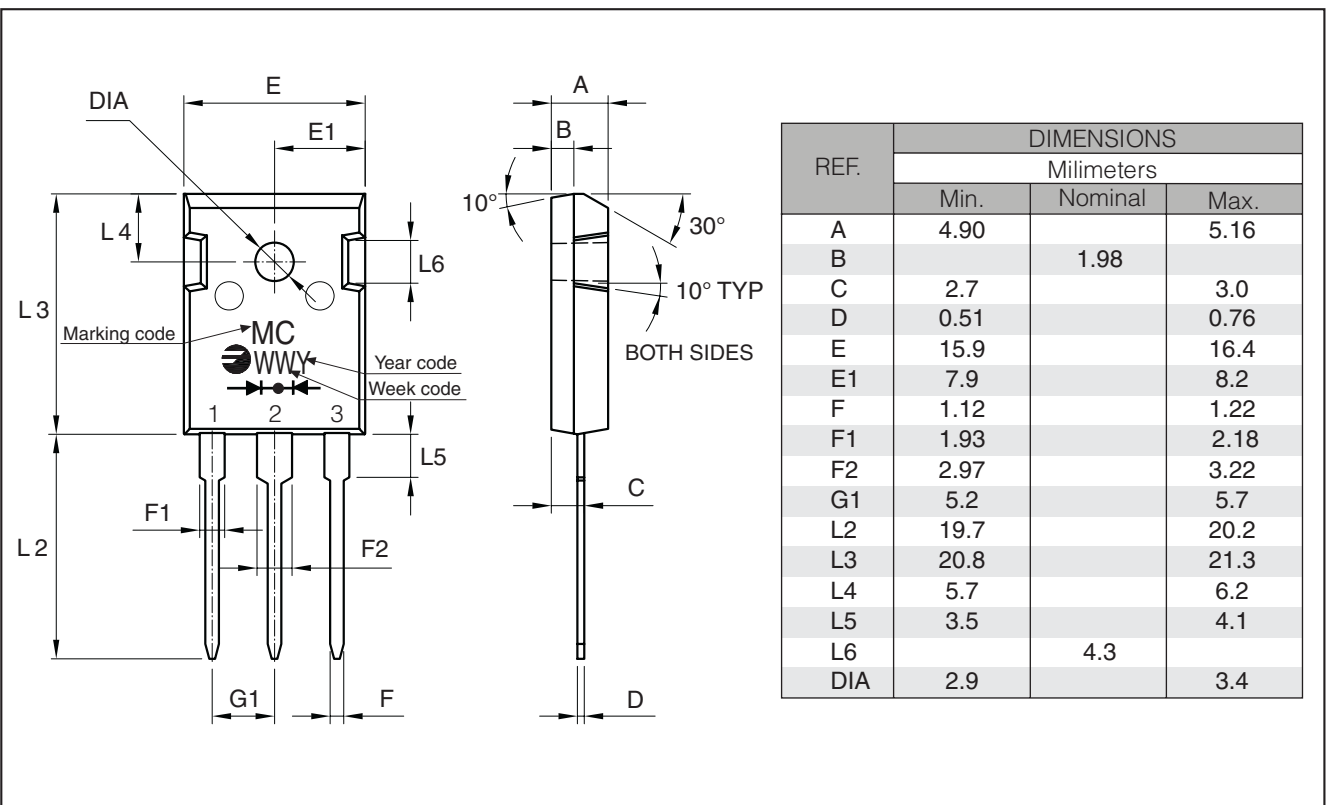
Note: 1. Mounted on Heatsink.
2. Pulse test: 300µs pulse width, 1% duty cycle.

20.0 Amp. Glass Passivated Ultrafast Recovery Rectifier

Ordering information

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

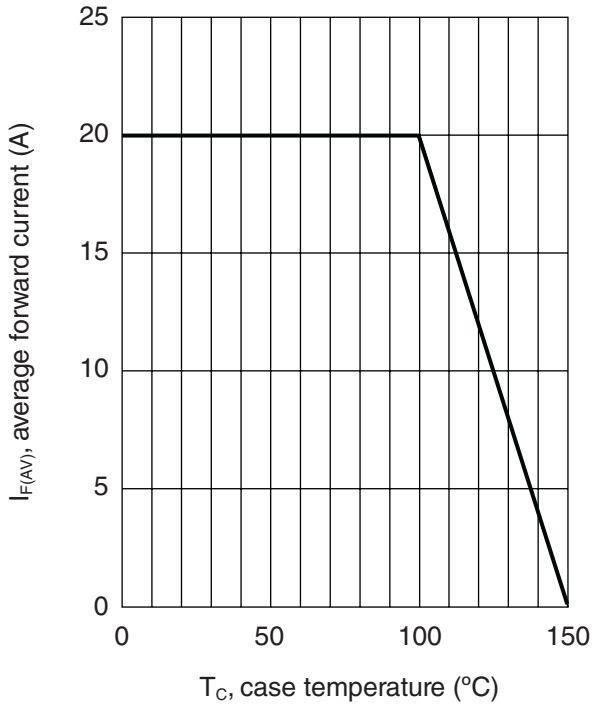
Package Outline Dimensions: (mm) TO-3P (TO-247AD)



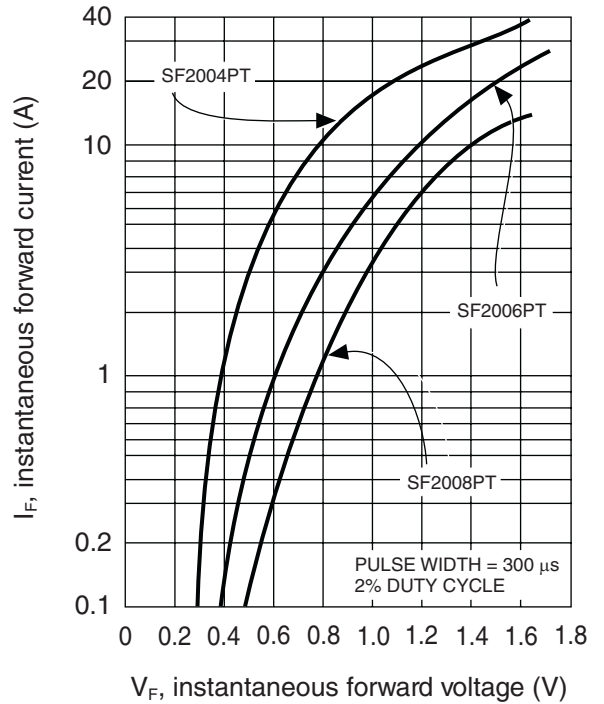
20.0 Amp. Glass Passivated Ultrafast Recovery Rectifier

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

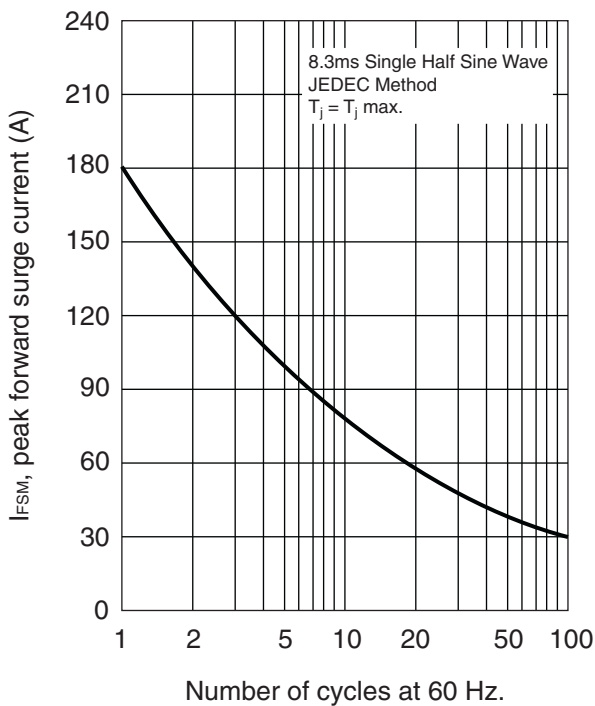
MAXIMUM FORWARD CURRENT DERATING CURVE



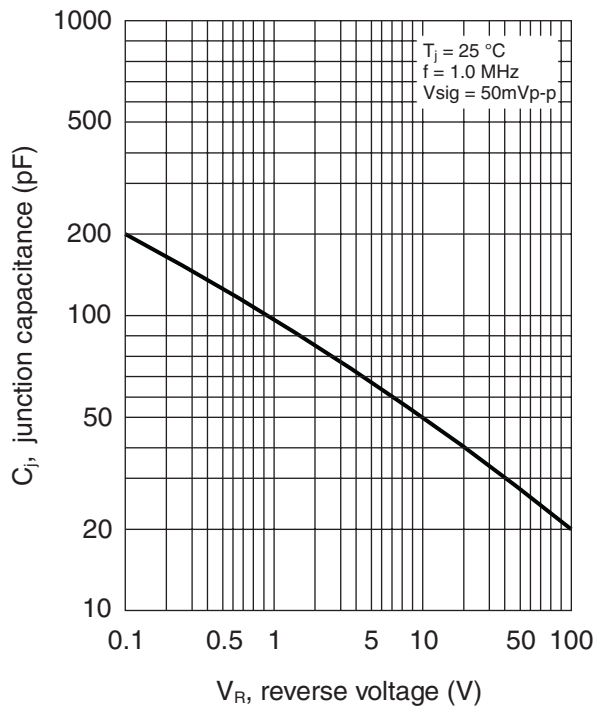
TYPICAL FORWARD CHARACTERISTICS PER DIODE



MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER DIODE



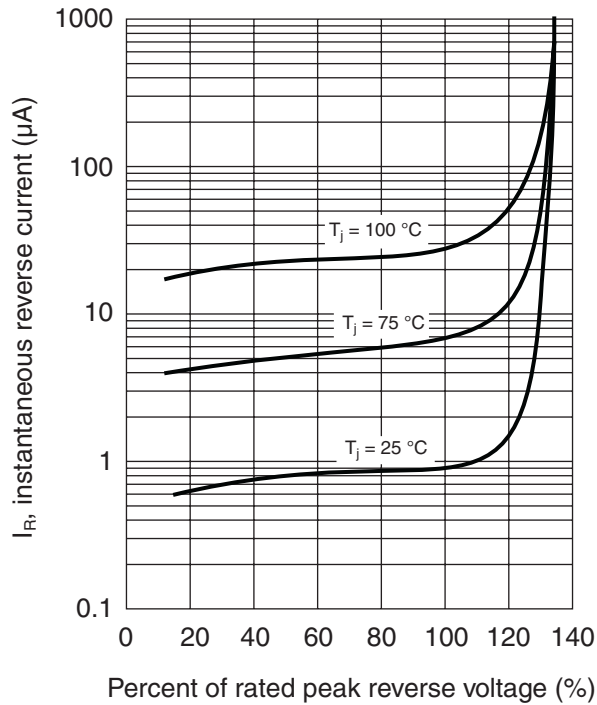
TYPICAL JUNCTION CAPACITANCE PER DIODE



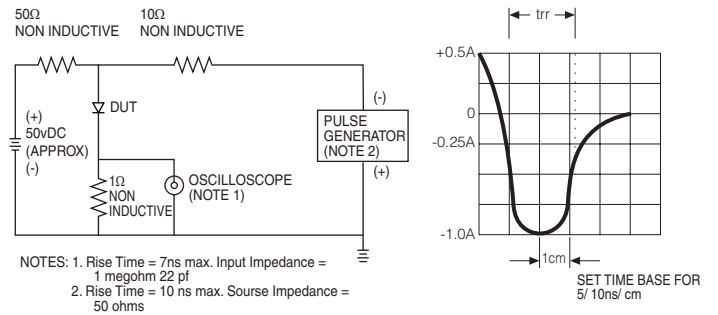
20.0 Amp. Glass Passivated Ultrafast Recovery Rectifier

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

Disclaimer

All product, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise.

Fagor Electrónica, S.Coop., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Fagor"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Fagor makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Fagor disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Fagor's knowledge of typical requirements that are often placed on Fagor products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Fagor's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Fagor products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Fagor product could result in personal injury or death. Customers using or selling Fagor products not expressly indicated for use in such applications do so at their own risk and agree to fully indemnify and hold Fagor and its distributors harmless from and against any and all claims, liabilities, expenses and damages arising or resulting in connection with such use or sale, including attorneys fees, even if such claim alleges that Fagor or its distributor was negligent regarding the design or manufacture of the part. Please contact authorized Fagor personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Fagor, Product names and markings noted herein may be trademarks of their respective owners.