Certificate Number: Q10561

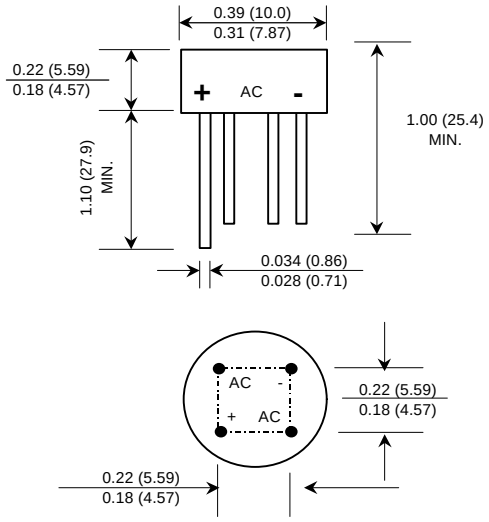
Certificate Number: E17276

FB40 - FB380/C 1000G

FAST RECOVERY GLASS PASSIVATED BRIDGE RECTIFIERS

PRV : 100 - 900 Volts
Io : 1.0 Amperes

WOB



Dimension in inches and (millimeter)

FEATURES :

* Glass passivated chip
* High case dielectric strength
* High surge current capability
* High reliability
* Low reverse current
* Low forward voltage drop
* Fast switching for high efficiency
* Ideal for printed circuit board
* Pb / RoHS Free

MECHANICAL DATA :

* Case : Reliable low cost construction utilizing molded plastic technique
* Epoxy : UL94V-O rate flame retardant
* Terminals : Plated leads solderable per MIL-STD-202, Method 208 guaranteed
* Polarity : Polarity symbols marked on case
* Mounting position : Any
* Weight : 1.29 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

RATING	SYMBOL	FB40-C 1000G	FB80-C 1000G	FB125-C 1000G	FB250-C 1000G	FB380-C 1000G	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	100	200	300	600	900	V
Maximum RMS Input Voltage R+C -Load	V_{RMS}	40	80	125	250	380	V
Maximum DC Blocking Voltage	V_{DC}	100	200	300	600	900	V
Maximum Average Forward Current For Free Air Operation at Tc = 45°C R+L -Load	$I_{F(AV)}$	1.2					A
C -Load		1.0					
Peak Forward Surge Current Single half sine wave on rated load (JEDEC Method) at T_J = 125 °C	I_{FSM}	30					A
Rating for fusing at T_J = 125°C (t < 100 ms.)	I^2t	10					A^2S
Maximum Series Resistor C-Load V_{RMS} = ± 10%	R_t	1.0	2.0	4.0	8.0	12.0	Ω
Maximum load Capacitance + 50% -10%	C_L	5000	2500	1000	500	200	µF
Maximum Forward Voltage per Diode at I_F = 1.0 A	V_F	1.3					V
Maximum Reverse Current at Rated Repetitive Peak Voltage per Diode	I_R	10					µA
Maximum Reverse Recovery Time (Note 1)	Trr	150			250	500	ns
Typical Thermal Resistance (Note 2)	RθJA	36					°C/W
Operating Junction Temperature Range	T_J	- 50 to + 125					°C
Storage Temperature Range	T_{STG}	- 50 to + 125					°C

Notes : 1) Measured with I_F = 0.5 Amp., I_R = 1 Amp., Irr = 0.25 Amp.
2) Thermal resistance from Junction to Ambient at 0.375" (9.5 mm) lead length P.C. Board with, 0.22" x 0.22" (5.5 x 5.5 mm) copper Pads.

RATING AND CHARACTERISTIC CURVES (FB40 - FB380/C1000G)

FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT FB40 C1000G - FB125 C1000G

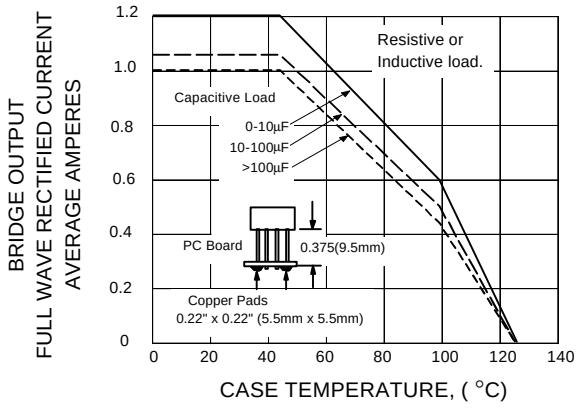


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT FB250 C1000G - FB380 C1000G

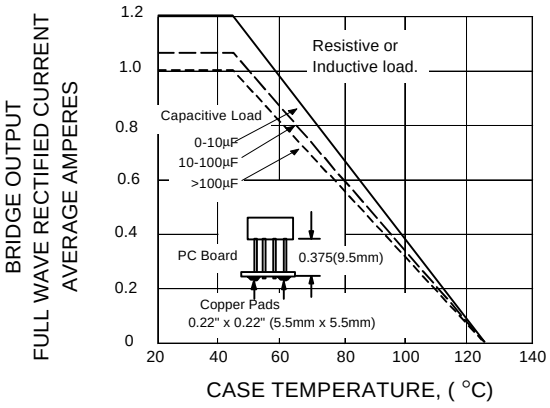


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

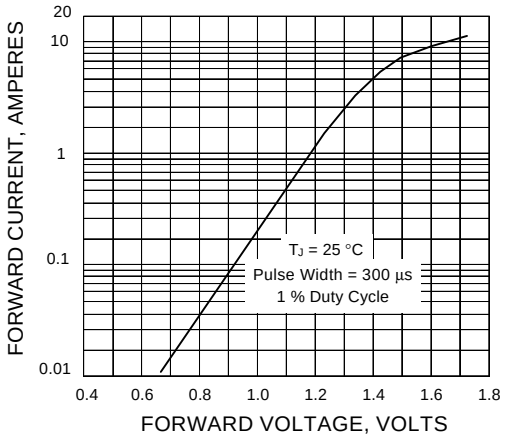
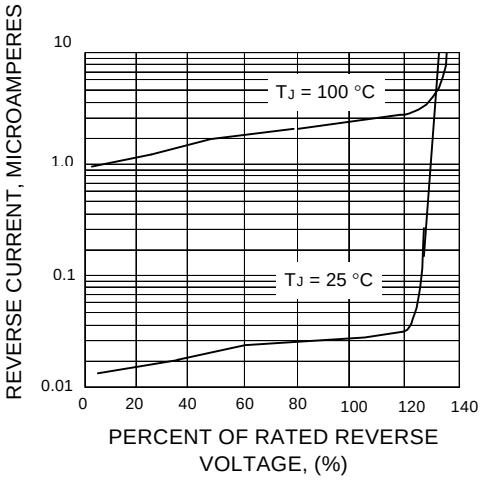


FIG.4 - TYPICAL REVERSE CHARACTERISTICS



RATING AND CHARACTERISTIC CURVES (FB40 - FB380/C1000G)

FIG.5 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

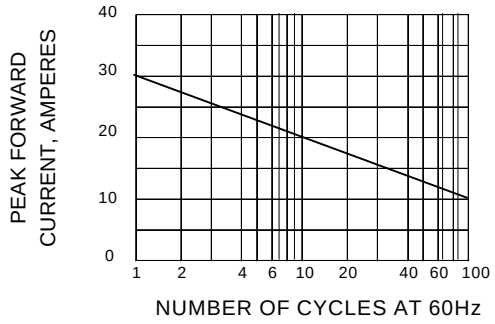


FIG.6 - TYPICAL JUNCTION CAPACITANCE PER BRIDGE ELEMENT

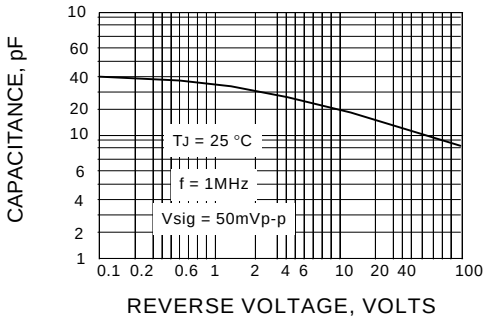
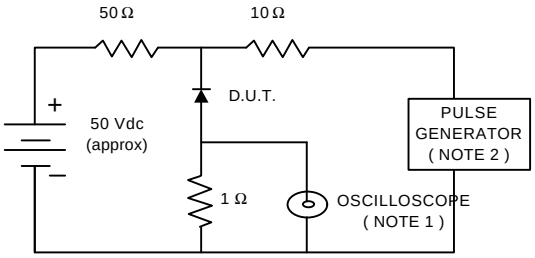
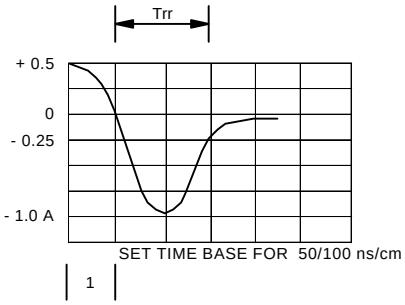


FIG.7 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM





NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.
2. Rise time = 10 ns max., Source Impedance = 50 ohms.
3. All Resistors = Non-inductive Types.