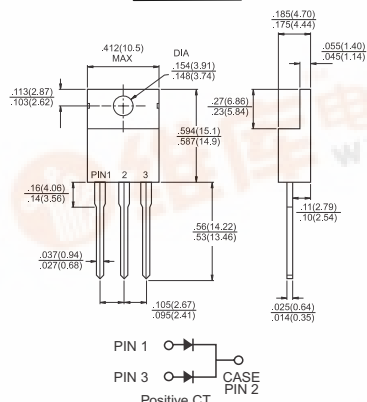


TSC 	SF1004G-Q1 10.0 AMPS. Glass Passivated Super Fast Rectifiers		
	Voltage Range 200 Volts Current 10.0 Amperes		
Features ✧ Low forward voltage drop ✧ High current capability ✧ High reliability ✧ High surge current capability	TO-220  Dimensions in inches and (millimeters)		
Mechanical Data ✧ Case: Molded plastic ✧ Epoxy: UL 94V-O rate flame retardant ✧ Terminals: Leads solderable per MIL-STD-202, Method 208 guaranteed ✧ Polarity: As marked ✧ High temperature soldering guaranteed: 260°C/10 seconds .16", (4.06mm) from case. ✧ Weight: 2.24 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%			
Type Number	Symbol	SF1004G-Q1	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	200	V
Maximum RMS Voltage	V _{RMS}	140	V
Maximum DC Blocking Voltage	V _{DC}	200	V
Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @ T _C = 100°C	I _(AV)	10.0	A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	125	A
Maximum Instantaneous Forward Voltage @ 5.0A @ 10.0A	V _F	1.1 1.25	V
Maximum DC Reverse Current @ T _A =25°C at Rated DC Blocking Voltage @ T _A =100°C	I _R	10.0 500	uA uA
Reverse Recovery Charge(Per Diode) @ IF=2A, VR ≥ 30V, -dIF/dt=20A/uS	QS	9	NC
Thermal Resistance Junction to Case (Note 3)	Rθ _{JC}	3.0	°C/W
Rating for Fusing (t < 8.3ms)	I ² t	65	A ² S
Maximum Reverse Recovery Time (Note 1)	T _{rr}	25	nS
Typical Junction Capacitance (Note 2)	C _j	10	pF
Operating Temperature Range	T _J	-50 to +150	°C
Storage Temperature Range	T _{STG}	-50 to +150	°C

Notes: 1. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$

2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

3. Thermal Resistance from Junction to Case Mounted on Heatsink. Size of 2 in x 3 in x 0.25 in, Al-Plate.

RATINGS AND CHARACTERISTIC CURVES (SF1004G-Q1)

FIG.1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

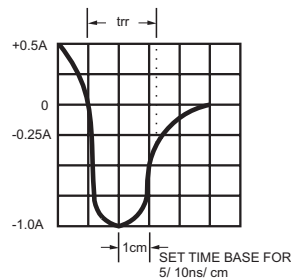
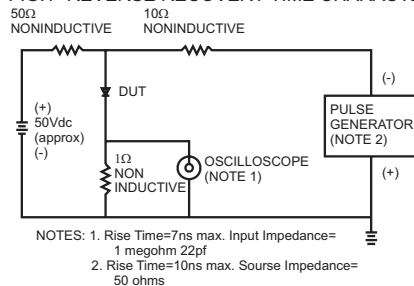


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

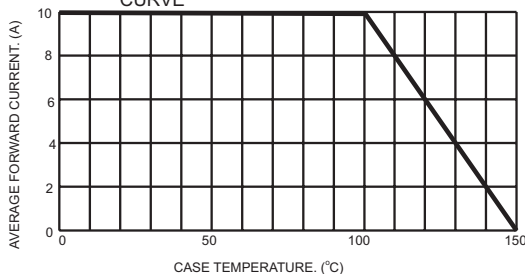


FIG.4- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

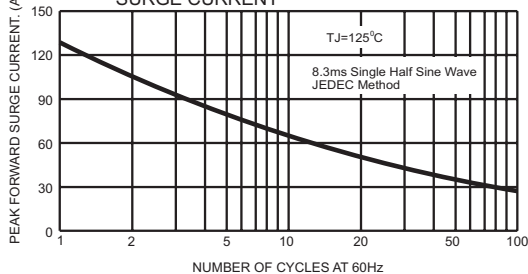


FIG.5- TYPICAL JUNCTION CAPACITANCE

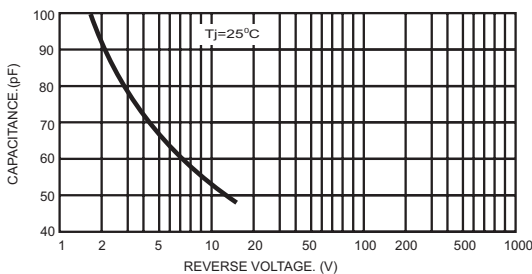


FIG.3- TYPICAL REVERSE CHARACTERISTICS

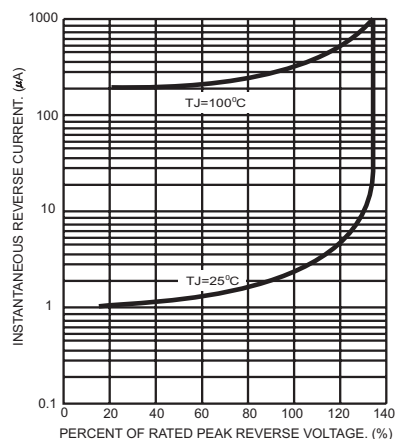


FIG.6- TYPICAL FORWARD CHARACTERISTICS

