

RoHS Compliant Product

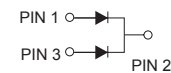
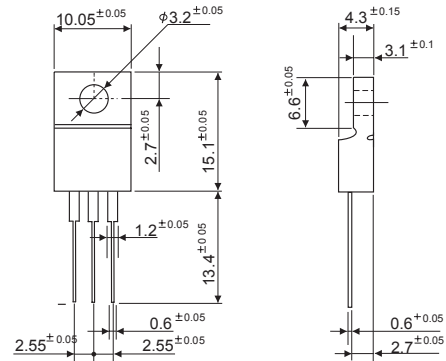
A suffix of "-C" specifies halogen-free

Description



Designed for use in switching power supplies. Inverters and as free wheeling diodes. These state-of-the-art devices have the following feature.

ITO-220



Dimensions in millimeters

Features

- * Low Power Loss, High Efficiency
- * Low Forward Voltage, High Current Capability
- * Low Stored Charge Majority Carrier Conduction
- * High Surge Capacity
- * Plastic Material Used Carries Underwriters Laboratory
- * Glass Passivated Chip Junctions
- * 150°C Operating Junction Temperature
- * High-Switching Speed 50 & 75 Nanosecond Recovery Time

Maximum Ratings And Electrical Characteristics

Characteristic	Symbol	SFP104	SFP105	Unit
Peak Repetitive Reverse Voltage	V_{RRM}			
Working Peak Reverse Voltage	V_{RWM}	400	600	V
DC Blocking Voltage	V_R			
RMS Reverse Voltage	$V_{R(RMS)}$	280	420	V
Average Rectifier Forward Current (per leg)	$I_{F(AV)}$		5.0	A
Total Device (Rated V_R), $T_C=100^\circ\text{C}$			10	
Peak Repetitive Forward Current (Rate V_R , Square Wave, 20kHz, $T_C=125^\circ\text{C}$)	I_{FM}		10	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfwave, single phase, 60Hz)	I_{FSM}		100	A
Operating and Storage Temperature Range	T_j, T_{stg}		-65 ~ +150	$^\circ\text{C}$
Maximum Instantaneous Forward Voltage ($I_F=5\text{A}$, $T_C=25^\circ\text{C}$)	V_F	1.30	1.50	V
($I_F=5\text{A}$, $T_C=125^\circ\text{C}$)		1.16	1.38	
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C=25^\circ\text{C}$)	I_R		5.0	μA
(Rated DC Voltage, $T_C=125^\circ\text{C}$)			200	
Reverse Recovery Time ($I_F=0.5\text{A}$, $I_R=1.0$, $I_{rr}=0.25\text{A}$)	T_{rr}		50	nS
Typical Junction Capacitance (Reverse Voltage of 4V & $f=1\text{MHz}$)	C_P	70	60	pF

FIG-1 TYPICAL FORWARD CHARACTERISTICS

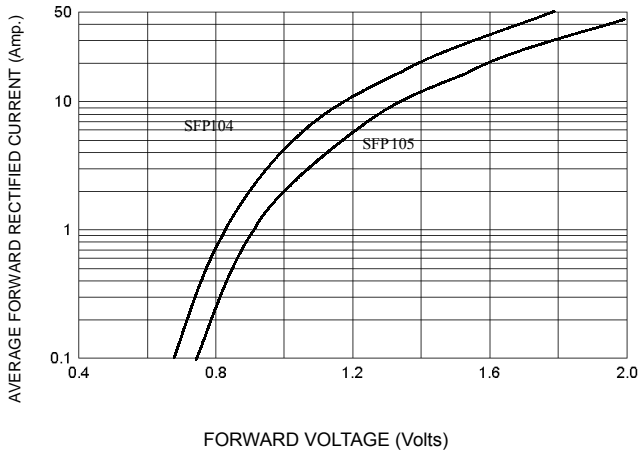


FIG-3 FORWARD CURRENT DERATING CURVE

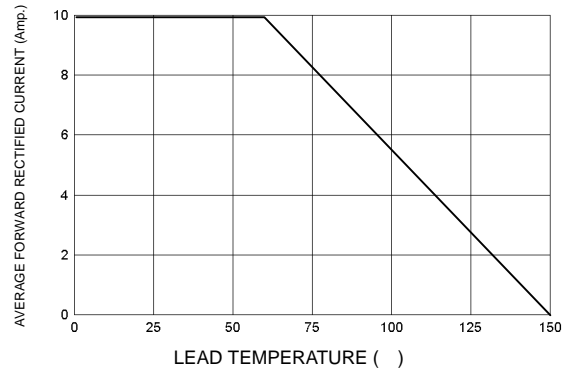


FIG-2 TYPICAL REVERSE CHARACTERISTICS

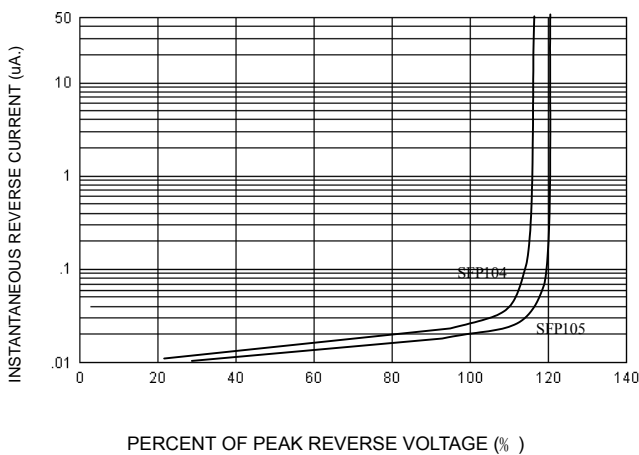


FIG-4 TYPICAL JUNCTION CAPACITANCE

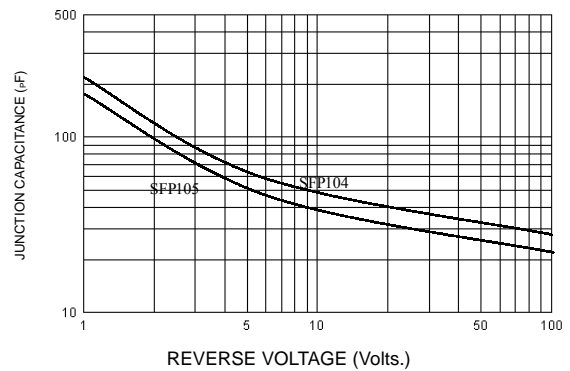
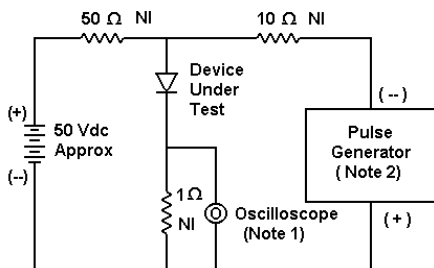
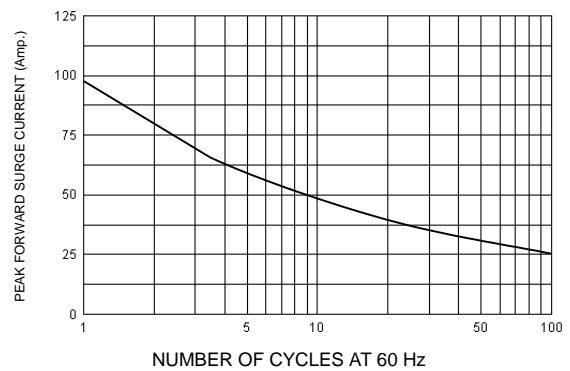
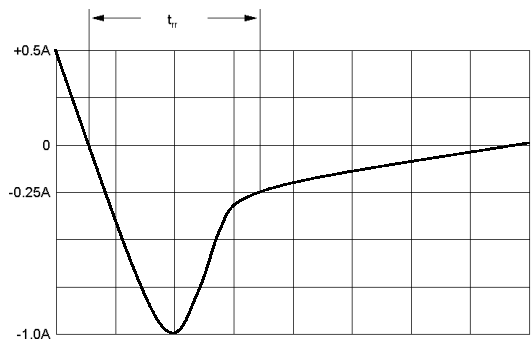


FIG-5 PEAK FORWARD SURGE CURRENT



- Notes:
1. Rise Time = 7 ns max. Input Impedance = 1 M Ohm, 22 pF
2. Rise Time = 10 ns max. Input Impedance = 50 Ohm



Set time base for 10/20 ns/cm

FIG-6 Reverse Recovery Time Characteristic and Test Circuit Diagram