Elektronische Bauelemente

SFP104~SFP105

Voltage 400 and 600

10.0AMP Super Fast Rectifier Diodes

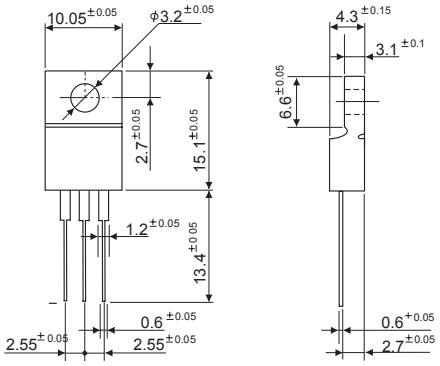
RoHS Compliant Product

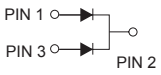
A suffix of "-C" specifies halogen-free

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

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FIG-1 TYPICAL FORWARD CHARACTERISITICS

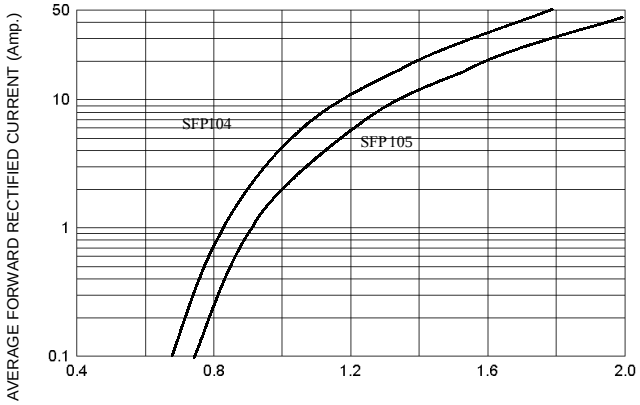


FIG-2 TYPICAL REVERSE CHARACTERISTICS

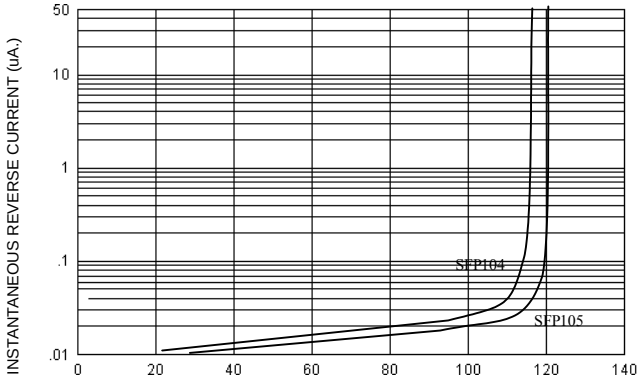


FIG-3 FORWARD CURRENT DERATING CURVE

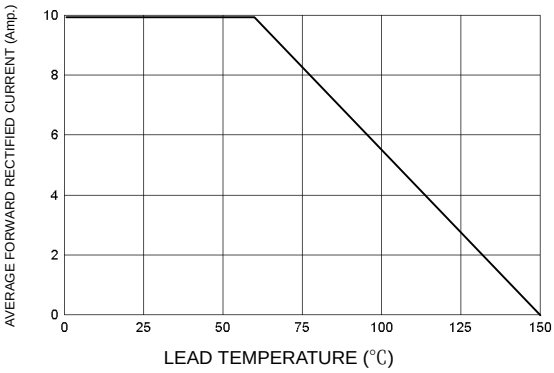


FIG-4TYPICAL JUNCTION CAPACITANCE

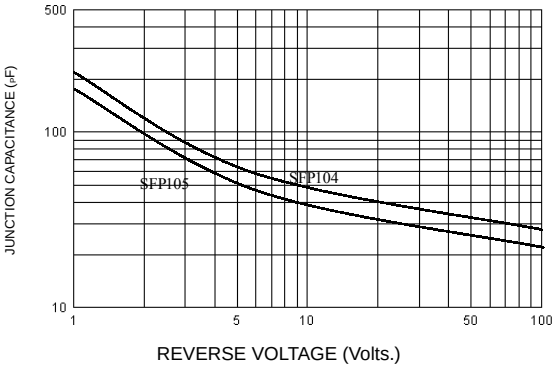
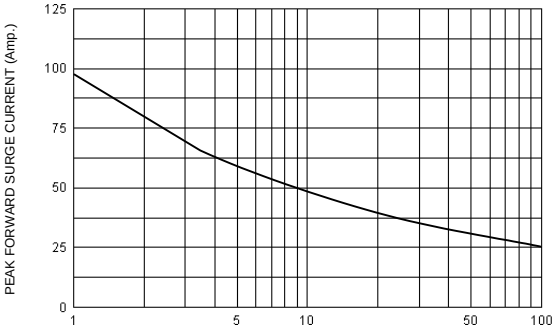
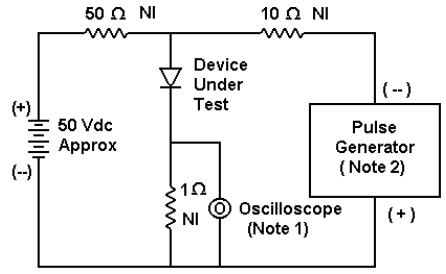
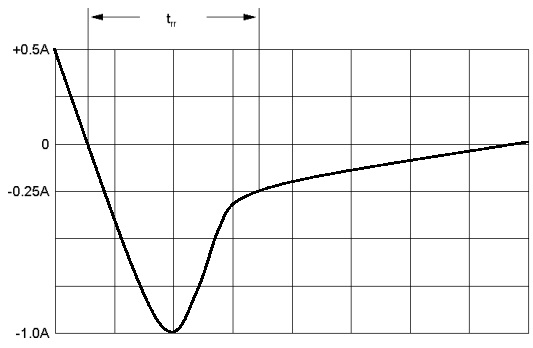


FIG-5PEAK FORWARD SURGE CURRENT





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



Set time base for 10/20 ns/cm

FIG-6 Reverse Recovery Time Characteristic and Test Circuit Diagram