

## Switchmode

### Full Plastic Dual Schottky Barrier Power Rectifiers

Using the Schottky Barrier principle in a metal-to-silicon power rectifiers. These state-of-the-art geometry features epitaxial construction with oxide passivation and metal overlay contact. Ideally suited for low voltage, high frequency rectification, or as free wheeling and polarity protection diodes.

#### Features

- \* Low Forward Voltage.
- \* Low Switching noise.
- \* High Current Capacity
- \* Guarantee Reverse Avalanche.
- \* Guard-Ring for Stress Protection.
- \* Low Power Loss & High efficiency.
- \* 150 Operating Junction Temperature
- \* Low Stored Charge Majority Carrier Conduction.
- \* Plastic Material used Carries Underwriters Laboratory

#### Mecanical Data

- \* Case :JEDEC ITO-220AB molded plastic body
- \* Termals:Plated lead,solderable per MIL-STD-750, Method 2026
- \* Polarity:As marked
- \* Mounting Torqure: 5 in-lbs. Max.
- \* Weight:1.7 g approx.



Plating pb free is indicated by box

"G" Green product

The green product is idicated by the date code before with alphabet "G" XMY

### MAXIMUM RATINGS

Characteristic	Symbol	SRF10150C	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	150	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_{R(RMS)}$	105	V
Average Rectifier Forward Current	$I_{F(AV)}$	5	A
Total Device (Rated $V_R$ , $T_C=100$ )		10	
Peak Repetitive Forward Current (Rate $V_R$ , Square Wave, 20kHz)	$I_{FM}$	10	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware, single phase, 60Hz)	$I_{FSM}$	125	A
Operating and Storage Junction Temperature Range	$T_J, T_{STG}$	-65 to +150	

### THERMAL RESISTANCES

Typical Thermal Resistance junction to case	$R_{\theta j-c}$		
Per diode	4.2	/w	
Total	3.2		
Coupling	3.0		

Where the diodes1 and 2 are used simultaneously:

$$T_J(\text{diode } 1) = P(\text{diode } 1) \times R_{\theta(j-c)}(\text{Per diode}) + P(\text{ diode } 2) \times R_{\theta c}$$

### ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	SRF10150C	Unit
Maximum Instantaneous Forward Voltage ( $I_F = 5.0$ Amp $T_C = 25$ ) ( $I_F = 5.0$ Amp $T_C = 125$ )	$V_F$	0.95 0.85	V
Maximum Instantaneous Reverse Current ( Rated DC Voltage, $T_C = 25$ ) ( Rated DC Voltage. $T_C = 125$ )	$I_R$	0.2 10	mA

To evaluation the conduction losses use the following equation:

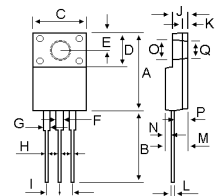
$$P = 0.68 \times I_{F(AV)} + 0.015 \times I_{F(RMS)}^2$$

### SCHOTTKY BARRIER RECTIFIERS

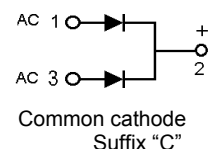
10 AMPERES  
150 VOLTS



ITO-220AB



DIM	MILLIMETERS	
	MIN	MAX
A	15.05	15.15
B	13.35	13.45
C	10.00	10.10
D	6.55	6.65
E	2.65	2.75
F	1.55	1.65
G	1.15	1.25
H	0.55	0.65
I	2.50	2.60
J	3.00	3.20
K	1.10	1.20
L	0.55	0.65
M	4.40	4.60
N	1.15	1.25
P	2.65	2.75
O	3.35	3.45
Q	3.15	3.25



# SRF10150C

FIG-1 FORWARD CURRENT DERATING CURVE

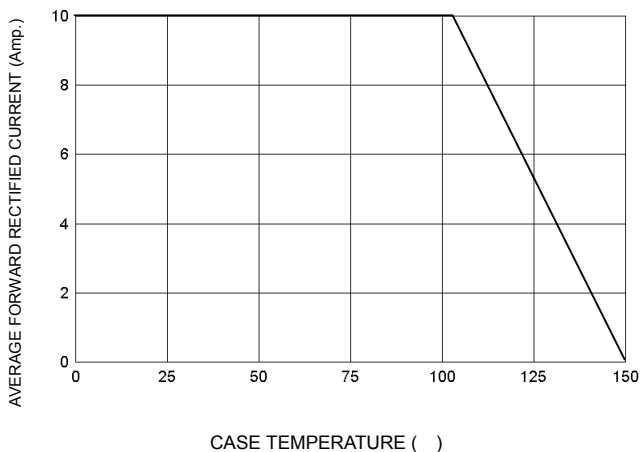


FIG-2 TYPICAL FORWARD CHARACTERISTICS

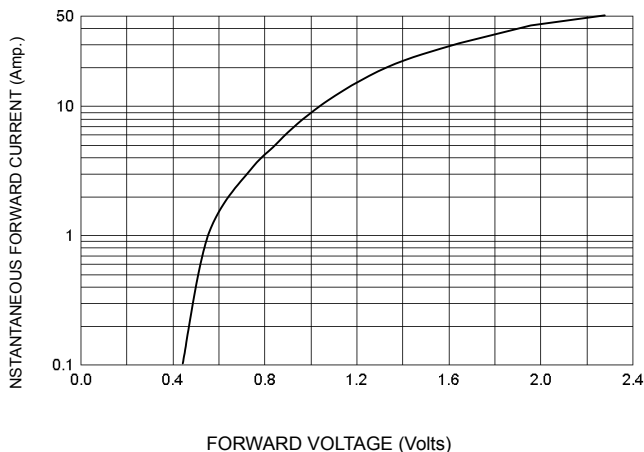


FIG-3 TYPICAL REVERSE CHARACTERISTICS

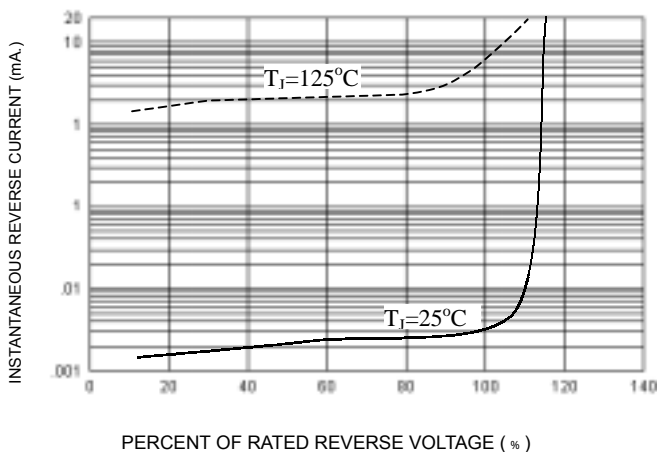


FIG-4 TYPICAL JUNCTION CAPACITANCE

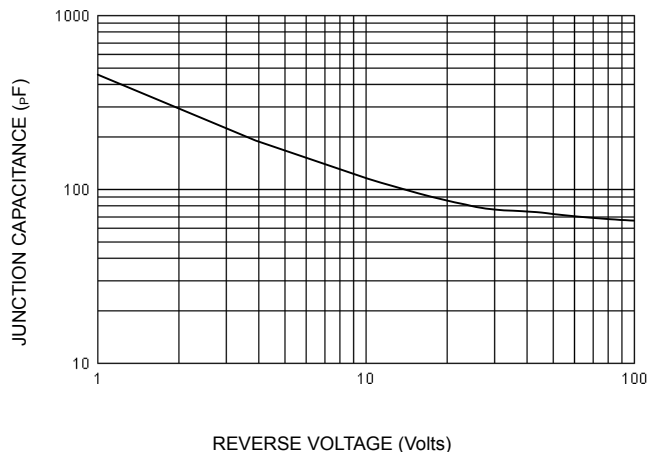


FIG-5 PEAK FORWARD SURGE CURRENT

