

# Switchmode Full Plastic Dual Schottky Barrier Power Rectifiers

Using the Schottky Barrier principle with a Molybdenum barrier metal. 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°C Operating Junction Temperature
- \*Low Stored Charge Majority Carrier Conduction.
- \*Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O

\*ESD: 8KV(Min.) Human-Body Model



\* In compliance with EU RoHs 2002/95/EC directives

#### **MAXIMUM RATINGS**

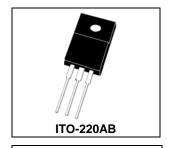
Characteristic	Symbol	SRF1065C	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$\begin{matrix} V_{RRM} \\ V_{RWM} \\ V_{R} \end{matrix}$	65	V
RMS Reverse Voltage	$V_{R(RMS)}$	45.5	V
Average Rectifier Forward Current ( per doode ) Total Device (Rated $V_R$ ), $T_C$ =125 $^{\circ}$ C	I <sub>F(AV)</sub>	5.0 10	Α
Peak Repetitive Forward Current (Rate V <sub>R</sub> , Square Wave, 20kHz)	I <sub>FM</sub>	10	Α
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware, single phase, 60Hz)		125	Α
Operating and Storage Junction Temperature Range	$T_J$ , $T_{stg}$	-65 to +150	$^{\circ}\!\mathbb{C}$

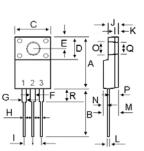
### **ELECTRIAL CHARACTERISTICS**

Characteristic	Symbol	SRF1065C	Unit
Maximum Instantaneous Forward Voltage ( $I_F = 5 \text{ Amp } T_C = 25^{\circ}C$ ) ( $I_F = 5 \text{ Amp } T_C = 100^{\circ}C$ )	V <sub>F</sub>	0.70 0.60	٧
Typical Thermal Resistance junction to case	R <sub>θ j-c</sub>	4.2	°C/w
Maximum Instantaneous Reverse Current ( Rated DC Voltage, $T_C = 25^{\circ}C$ ) ( Rated DC Voltage, $T_C = 125^{\circ}C$ )		0.5 20	mA

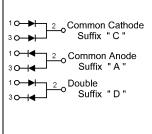
#### SCHOTTKY BARRIER RECTIFIERS

10 AMPERES 65 VOLTS



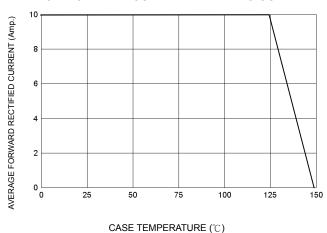


DIM	MILLIMETERS		
	MIN	MAX	
Α	14.90	15.15	
В	13.35	13.55	
С	10.00	10.10	
D	6.55	6.65	
E	2.65	2.75	
F	1.55	1.65	
G	1.15	1.25	
Н	0.55	0.65	
1	2.50	2.60	
J	3.00	3.20	
K	1.10	1.20	
L	0.55	0.65	
M	4.40	4.60	
N	1.15	1.25	
0	3.35	3.45	
Р	2.65	2.75	
Q	3.15	3.25	
R	3.60	3.80	

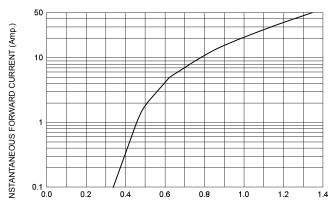


## **SRF1065C**



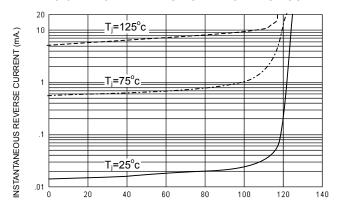


#### FIG-2 TYPICAL FORWARD CHARACTERISITICS



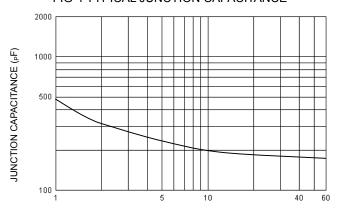
FORWARD VOLTAGE (Volts)

#### FIG-3 TYPICAL REVERSE CHARACTERISTICS



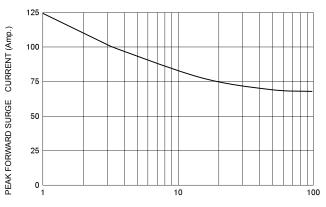
PERCENT OF RATED REVERSE VOLTAGE (% )

#### FIG-4 TYPICAL JUNCTION CAPACITANCE



REVERSE VOLTAGE (Volts)

#### FIG-5 PEAK FORWARD SURGE CURRENT



NUMBER OF CYCLES AT 60 Hz



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