

# **Schottky Barrier rectifiers**

Using the Schottky Barrier principle with a Refractory metal capable of high temperature operation metal. proprietary barrier technology allows for reliable operation up to  $150^{\circ}$ C junction temperature. Typical application are in switching Mode Power Supplies such as adaptors, DC/DC converters free- wheeling and polarity protection diodes.

- \*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



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

The marking is indicated by part no. with. "M". ex:SR2100LM

## **MAXIMUM RATINGS**

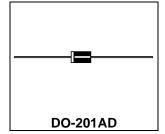
Characteristic	Symbol	SR2100L	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	100	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	70	V
Average Rectifier Forward Current	Io	2.0	Α
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware, single phase, 60Hz)	I <sub>FSM</sub>	50	Α
Operating and Storage Junction Temperature Range	$T_J$ , $T_{STG}$	-65 to +150	$^{\circ}\!$

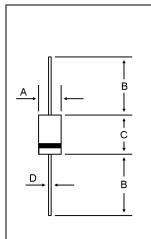
# **ELECTRICAL CHARACTERISTICS**

Characteristic	Symbol	SR2100L		Unit			
$\label{eq:maximum Instantaneous Forward Voltage} \begin{tabular}{l} $(I_F=0.1 \ Amp \ T_C=25^\circ\mathbb{C})$ \\ $(I_F=1.0 \ Amp \ T_C=25^\circ\mathbb{C})$ \\ $(I_F=2.0 \ Amp \ T_C=25^\circ\mathbb{C})$ \\ \end{tabular}$	VF	Min.  	Typ. 0.36 0.65 0.79	Max. 0.38 0.70 0.82	<b>V</b>		
Maximum Instantaneous Reverse Current ( Rated DC Voltage, $T_C = 25^{\circ}C$ ) ( Rated DC Voltage, $T_C = 125^{\circ}C$ )	I <sub>R</sub>		0.01 10		mA		
Maximum Thermal Resistance Junction to case	R <sub>eJC</sub>		55		°C/W		
Typical Junction Capacitance ( Reverse Voltage of 4 volts & f=1 MHz )	$C_P$		80		₽F		

# SCHOTTKY BARRIER RECTIFIERS

2.0 AMPERES 100 VOLTS





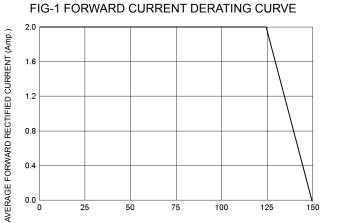
DIM	MILLIMETERS		
DIIVI	MIN	MAX	
Α	5.00	5.60	
В	25.40		
С	8.50	9.50	
D	1.20	1.30	

CASE---Transfer molded plastic

OLARITY---Cathode indicated polarity band 0.4

0.0

25



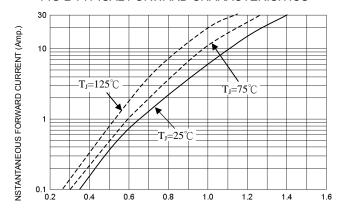
#### CASE TEMPERATURE ( $^{\circ}$ C)

100

125

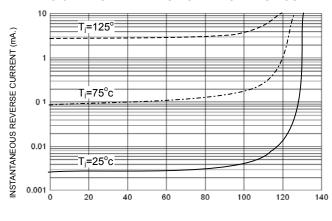
150

#### FIG-2 TYPICAL FORWARD CHARACTERISITICS



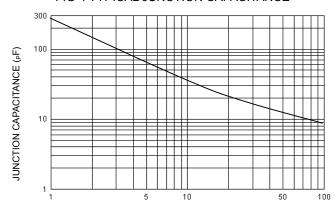
FORWARD VOLTAGE (Volts)

#### FIG-3 TYPICAL REVERSE CHARACTERISTICS



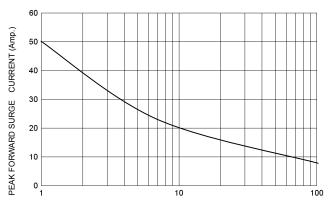
REVERSE VOLTAGE (Volts)

#### FIG-4 TYPICAL JUNCTION CAPACITANCE



REVERSE VOLTAGE (Volts)

### FIG-5 PEAK FORWARD SURGE CURRENT



NUMBER OF CYCLES AT 60 Hz

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SK33A-TP SK34B-TP SS3003CH-TL-E PDS3100Q-7 GA01SHT18 CRS10I30A(TE85L,QM MA4E2501L-1290 MBRB30H30CT-1G
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ACDBA240-HF ACDBA3100-HF CDBQC0530L-HF BAT54-13-F ACDBA340-HF ACDBA260LR-HF ACDBA1100-HF MA4E2502L1246 10BQ060-M3/5BT 10BQ040-M3/5BT