

### Switchmode Schottky Barrier Power Rectifiers

Using the Schottky Barrier principle with high temperature operation metal. The proprietary barrier technology allows for reliable operation up to 150°C junction temperature. Typical application are in switching Mode Power Supplies such as adaptators, Photovoltaic Solar cell protection, free-wheeling and polarity protection diodes.

#### Features

- \* Ultra Low Forward Voltage.
- \* Low Switching noise.
- \* High Current Capacity
- \* 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*

#### SCHOTTKY BARRIER RECTIFIERS

**5 AMPERES  
45 VOLTS**



**DO-201AD**

### MAXIMUM RATINGS

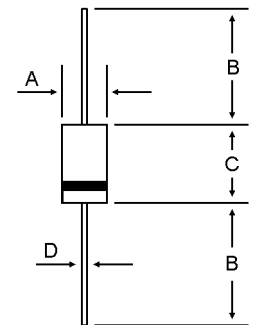
Characteristic	Symbol	SRM504	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	45	V
RMS Reverse Voltage	$V_{R(RMS)}$	31.5	V
Average Rectifier Forward Current	$I_{F(AV)}$	5	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfwave, single phase, 60Hz)	$I_{FSM}$	75	A
Operating and Storage Junction Temperature Range	$T_J, T_{stg}$	-65 to +150	°C

### THERMAL RESISTANCES

Typical Thermal Resistance junction to body	$R_{\theta j-c}$	5.5	°C/w
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### ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	SRM504			Unit
		Min	Typ.	Max.	
Maximum Instantaneous Forward Voltage ( $I_F = 0.1$ Amp $T_C = 25^\circ C$ ) ( $I_F = 5.0$ Amp $T_C = 25^\circ C$ )	$V_F$	---	0.28 0.49	0.30 0.51	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C = 25^\circ C$ ) (Rated DC Voltage, $T_C = 125^\circ C$ )	$I_R$	---	0.08 10	0.1 12	mA



DIM	MILLIMETERS	
	MIN	MAX
A	5.00	5.60
B	25.40	---
C	8.50	9.50
D	1.20	1.30

CASE---  
Transfer molded plastic

POLARITY---  
Cathode indicated polarity band

# SRM504

FIG-1 FORWARD CURRENT DERATING CURVE

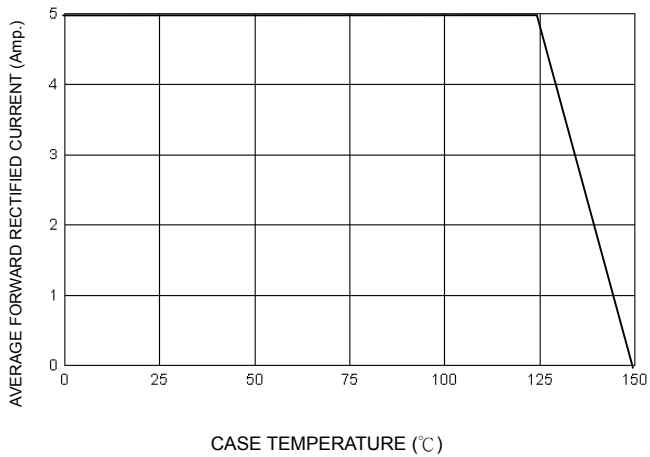


FIG-2 TYPICAL FORWARD CHARACTERISTICS

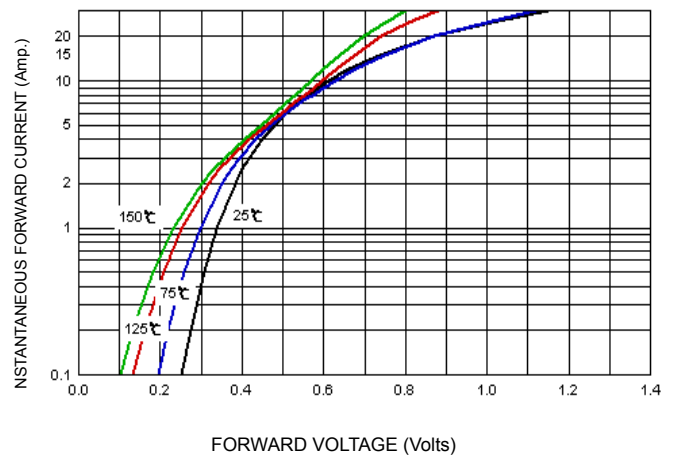


FIG-3 TYPICAL REVERSE CHARACTERISTICS

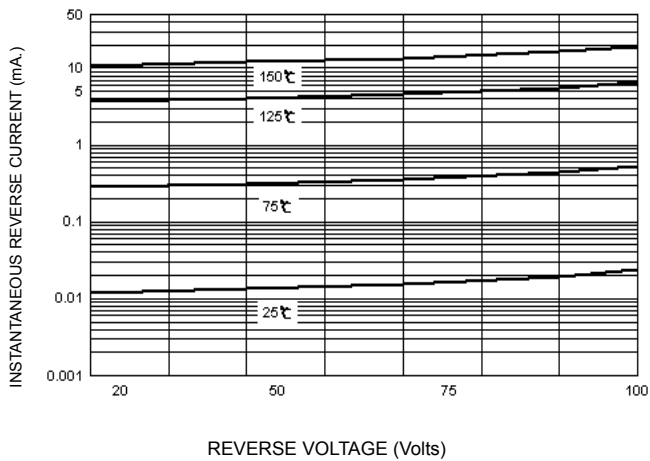


FIG-4 TYPICAL JUNCTION CAPACITANCE

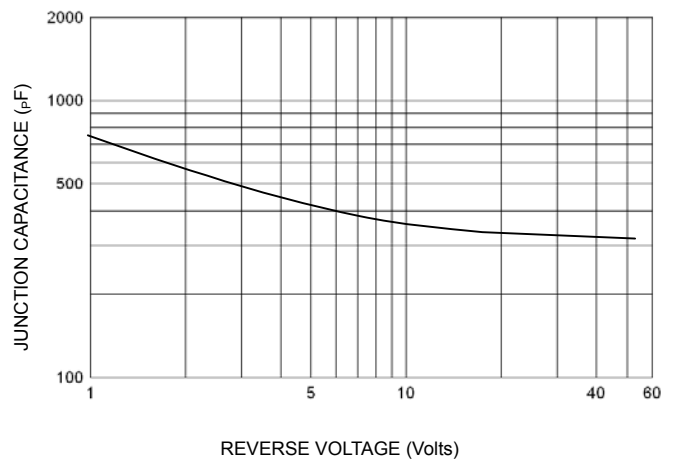
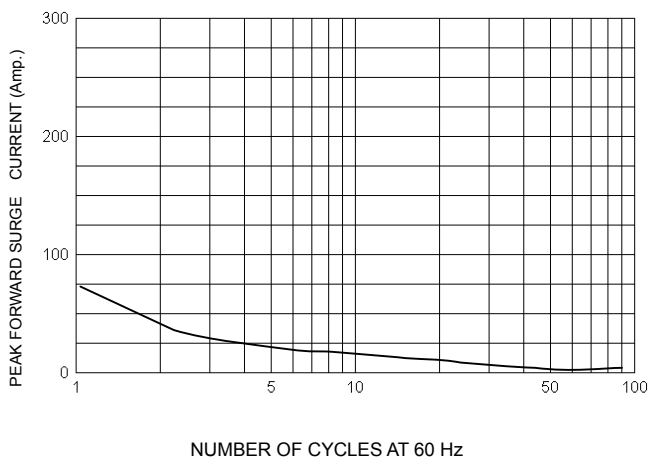


FIG-5 PEAK FORWARD SURGE CURRENT



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