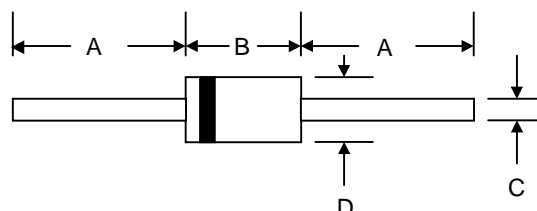


Switchmode Schottky Barrier Power Rectifiers

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



DO-201AD		
Dim	Min	Max
A	25.4	—
B	7.20	9.50
C	1.20	1.30
D	4.80	5.30
All Dimensions in mm		

MAXIMUM RATINGS

Characteristic	Symbol	SR506L	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	60	V
RMS Reverse Voltage	$V_{R(RMS)}$	42	V
Average Rectifier Forward Current	$I_{F(AV)}$	5	A
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 halfwave, single phase, 60Hz)	I_{FSM}	200	A
Operating and Storage Junction Temperature Range	T_J , T_{stg}	-65 to +150	°C

THERMAL RESISTANCES

Typical Thermal Resistance junction to body	$R_{\theta j-c}$	55	°C/w
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ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	SR506L			Unit
Maximum Instantaneous Forward Voltage ($I_F = 0.1$ Amp $T_C = 25^\circ\text{C}$) ($I_F = 2.5$ Amp $T_C = 25^\circ\text{C}$) ($I_F = 5.0$ Amp $T_C = 25^\circ\text{C}$)	V_F	Min	Typ.	Max.	V
		---	0.25	0.26	
		---	0.42	0.46	
		---	0.49	0.52	
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C = 25^\circ\text{C}$) (Rated DC Voltage, $T_C = 100^\circ\text{C}$)	I_R	0.3 30			mA

FIG-1 FORWARD CURRENT DERATING CURVE

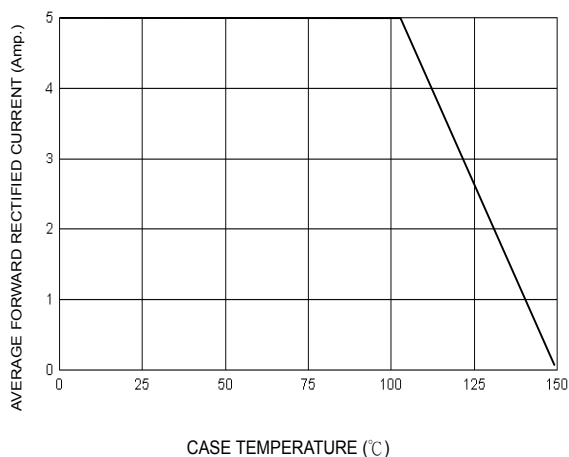


FIG-2 TYPICAL FORWARD CHARACTERISTICS

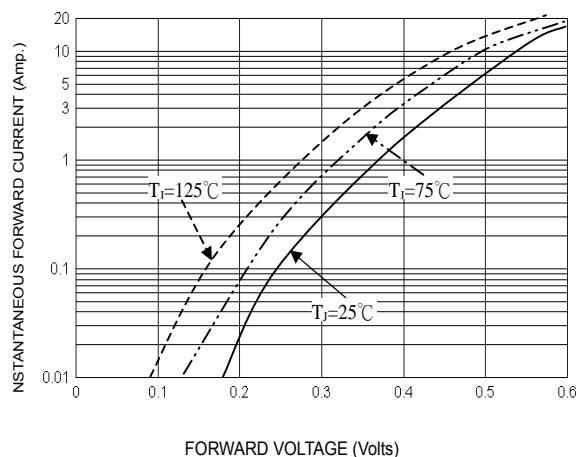


FIG-3 TYPICAL REVERSE CHARACTERISTICS

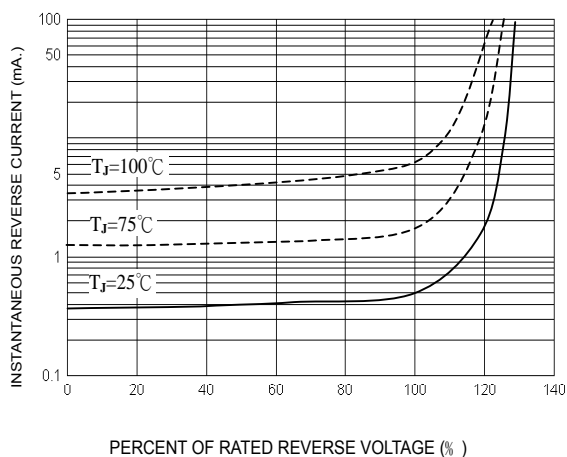


FIG-4 TYPICAL JUNCTION CAPACITANCE

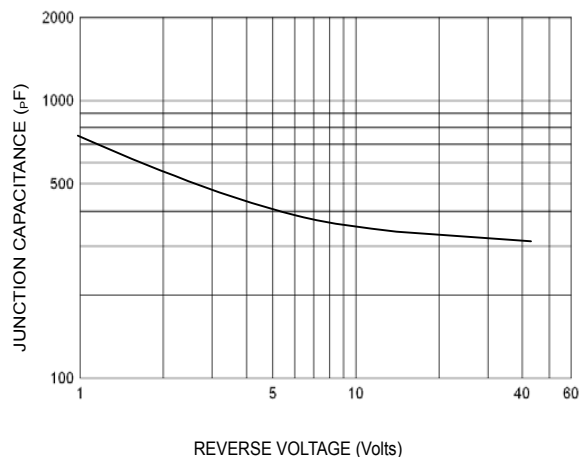


FIG-5 PEAK FORWARD SURGE CURRENT

