sapcon®

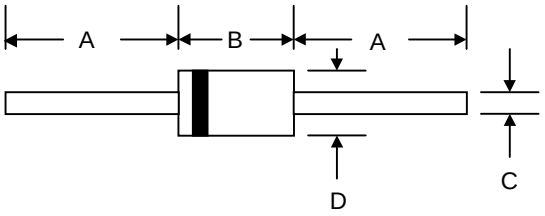
SR504L

Switchmode Schottky Barrier Power Rectifiers

Using the Schottky Barrier principle with high temperature operation metal. The properitary barrier technology allows for reliable operation up to 150℃ 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℃ 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*



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	SR504L	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	28	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 halfware, single phase, 60Hz)	I_{FSM}	150	A
Operating and Storage Junction Temperature Range	T_J , T_{stg}	-55 to +150	℃

THERMAL RESISTANCES

Typical Thermal Resistance junction to body	$R_{\theta j\text{-}c}$	15	℃/w

ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	SR504L	Unit
Maximum Instantaneous Forward Voltage (I_F =5.0 Amp T_C = 25℃)	V_F	Min Typ. Max. --- 0.38 ---	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, T_C = 25℃) (Rated DC Voltage, T_C = 100℃)	I_R	0.2 30	mA

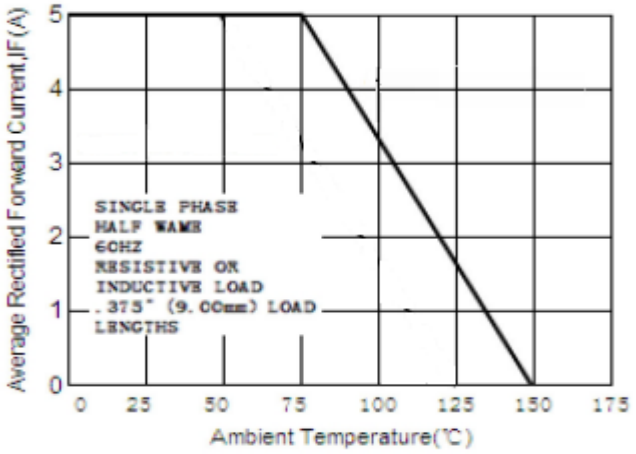


Figure 1.Forward Current Derating Curve

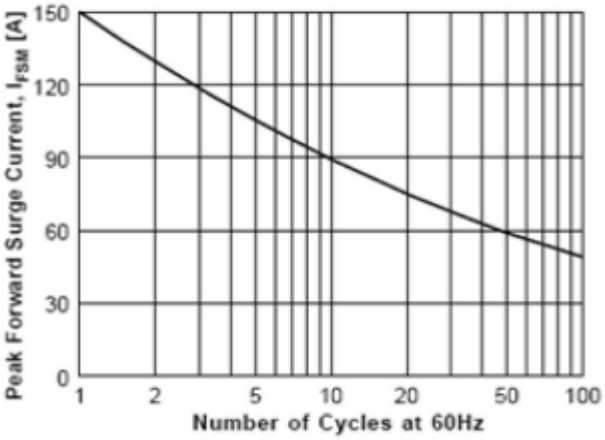


Figure 2. Non-Repetitive Surge Current

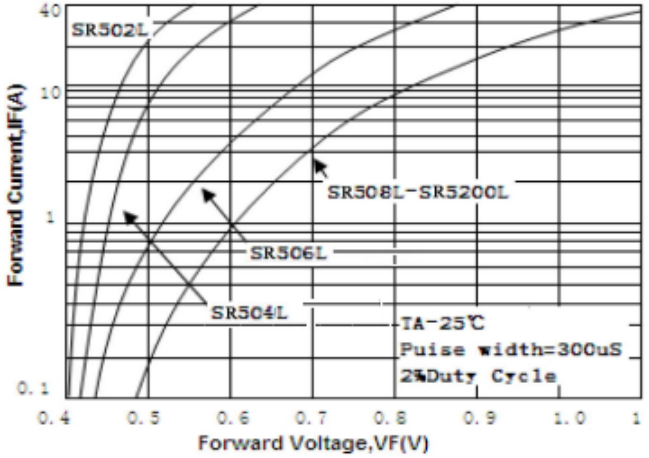
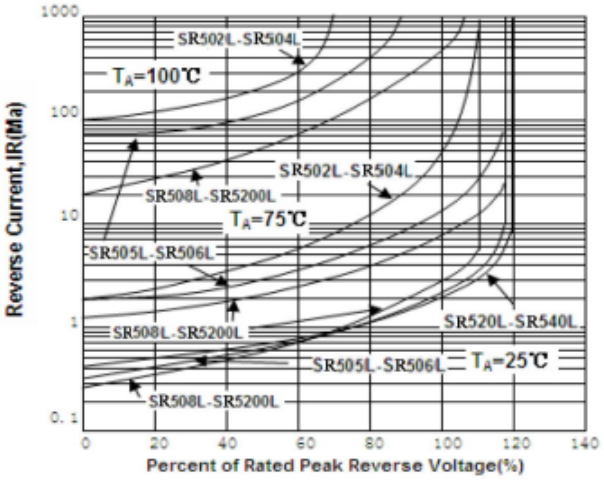


Figure 3.Forward Voltage Characteristics



Pigure 4.Reverse Current vs Reverse Voltage

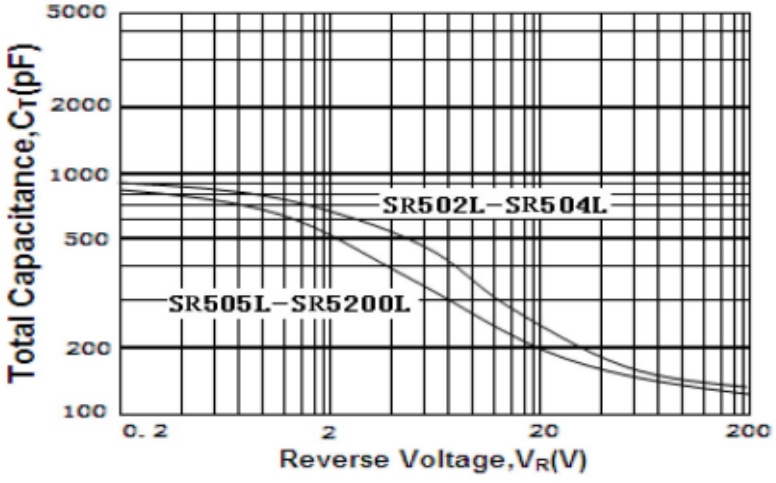


Figure 5. Total Capacitance