

## II. Schottky Rectifier

### 5.0A Surface Mount Schottky Rectifier SS52~SS520

(Package: SMC (DO-214AB))

<p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>• The plastic package carries Underwriters Laboratory Flammability Classification 94V-0</li> <li>• Metal silicon junction, majority carrier conduction</li> <li>• Built-in strain relief</li> <li>• Low forward voltage drop</li> <li>• Low power loss, high efficiency</li> <li>• High forward surge current capability</li> <li>• High temperature soldering guaranteed</li> </ul> <p><b>MECHANICAL DATA</b></p> <ul style="list-style-type: none"> <li>• Case : Molded plastic</li> <li>• Polarity : Color band denotes cathode</li> <li>• Weight : 0.220 grams</li> </ul>	<p>Case: SMC Dimensions in inches and (millimeters)</p>
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### Ratings & Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

Characteristic	Symbol	SS 52	SS 53	SS 54	SS 55	SS 56	SS 58	SS 510	SS 515	SS 520	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	80	100	150	200	Volts
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	56	70	105	140	Volts
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	80	100	150	200	Volts
Maximum average forward rectified current at TL (see Fig. 1)	$I_O$	5.0									Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	100									Amps
Maximum instantaneous forward voltage at 5.0A DC	$V_F$	0.55		0.70		0.85		0.95		Volts	
Maximum DC reverse current $T_j = 25^\circ C$ at rated DC blocking voltage $T_j = 100^\circ C$	$I_R$	0.2		1.0						mA	
		20		50							
Typical junction capacitance (Note 1)	$C_j$	500		350						PF	
Typical thermal resistance (Note 2)	$R_{th-JA}$	15		10						$^\circ C/W$	
Operating junction temperature range	$T_j$	-55 to +150									$^\circ C$
Storage temperature range	$T_{stg}$	-55 to +150									$^\circ C$

Notes:

1. Measured at 1 MHz and applied reverse voltage of 4.0 volts D.C.

2. Thermal resistance junction to ambient.

# Ratings and Characteristic Curves of SS52~SS520

FIG. 1 – FORWARD CURRENT DERATING CURVE

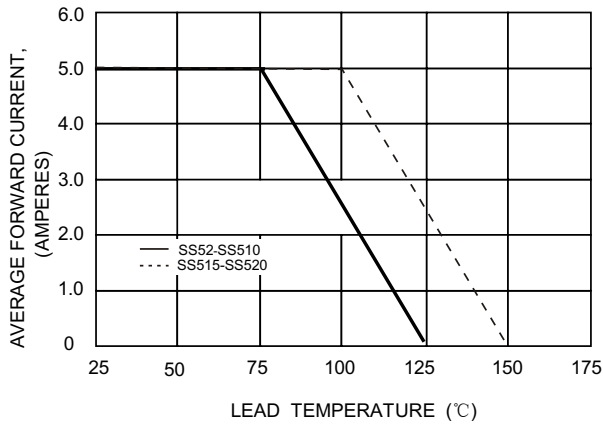


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

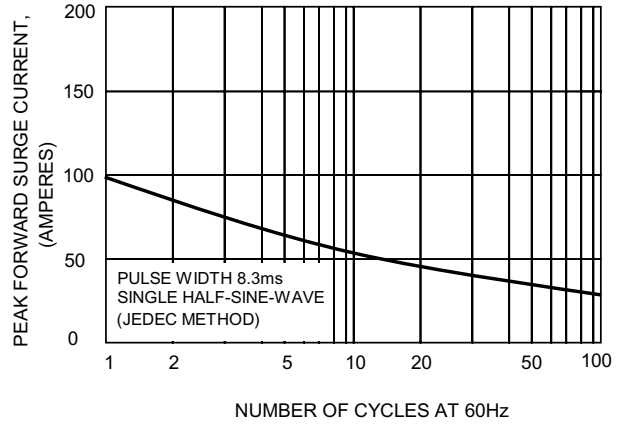


FIG.3 – TYPICAL JUNCTION CAPACITANCE

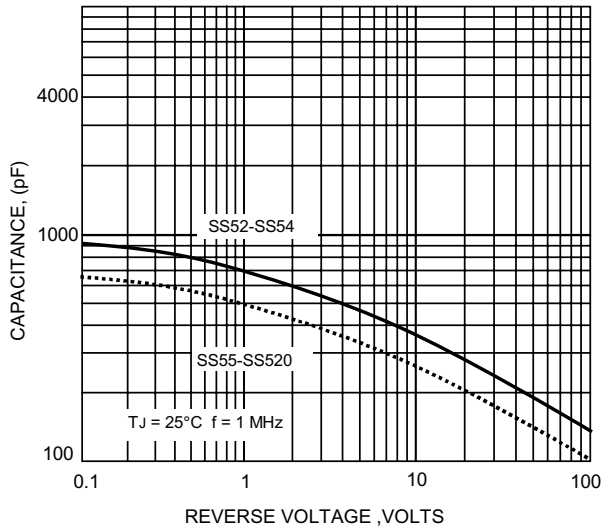


FIG.4-TYPICAL FORWARD CHARACTERISTICS

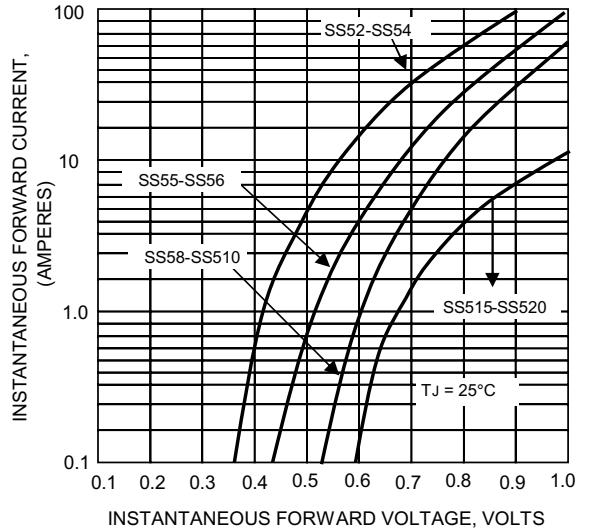


FIG.5-TYPICAL REVERSE CHARACTERISTICS

