

Surface Mount Schottky Barrier Rectifiers
Reverse Voltage 20 to 150 Volts, Forward Current 5.0 Amperes

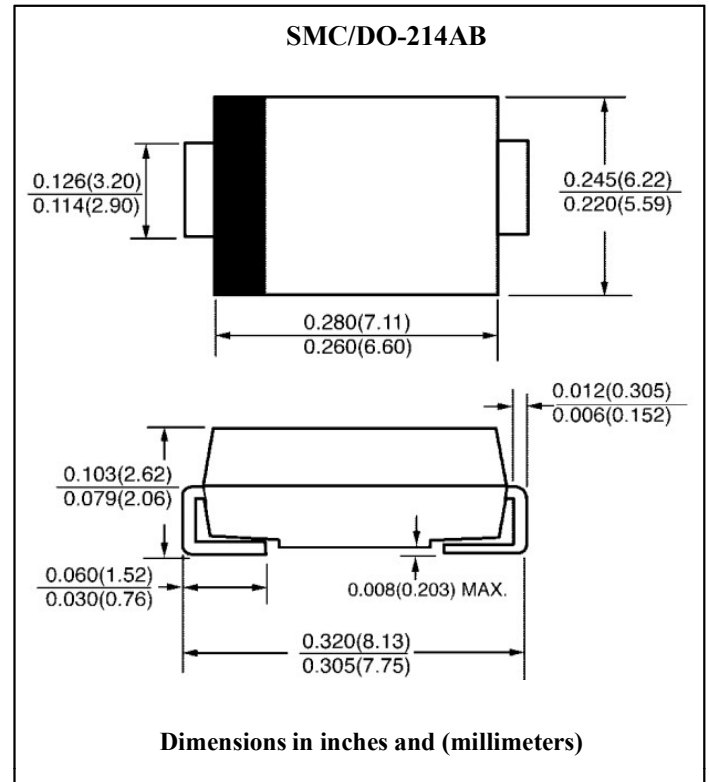
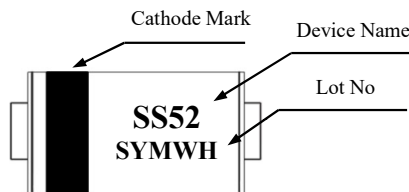
Features

- For surface mounted application
- Metal to silicon rectifier, majority carrier conduction
- Low forward voltage drop
- Easy pick and place
- High surge current capability
- Plastic material used carries Underwriters Laboratory Classification 94V-O
- Epitaxial construction
- High temperature soldering : 260°C /10 seconds at terminals

Mechanical Data

- Case : JEDEC DO-214AB Molded plastic
- Terminals : Pure tin plated, lead free
- Polarity : Indicated by cathode band
- Packaging : 16mm tape per EIA STD RS-481
- Weight : 0.21 grams

Marking



Maximum 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, derate current by 20%

Parameter	Symbol	SS52	SS53	SS54	SS55	SS56	SS59	SS510	SS515	Unit	Remark	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	90	100	150	V		
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	63	70	105	V		
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	90	100	150	V		
Maximum Average Forward Rectified Current at T_L (See Fig.1)	$I_F(AV)$	5.0								A		
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	120								A		
Maximum Instantaneous Forward Voltage @ 5.0A	V_F	0.55		0.75		0.85		0.95		V	$T_a=25^\circ C$	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	0.5					0.1				mA	$T_a=25^\circ C$
		20		10		2				mA	$T_a=125^\circ C$	
Typical Thermal Resistance	$R_{th(j-l)}$	19								$^\circ C / W$	Note 1	
	$R_{th(j-a)}$	60								$^\circ C / W$		
Operation Junction Temperature Range	T_J	-55 to +150								$^\circ C$		
Storage Temperature Range	T_{STG}	-55 to +150								$^\circ C$		

Note 1. Measured on P.C.Board with Size 0.6"×0.6" (16mm×16mm) Copper Pad Areas.



Ratings and Characteristics Curves (Ta=25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

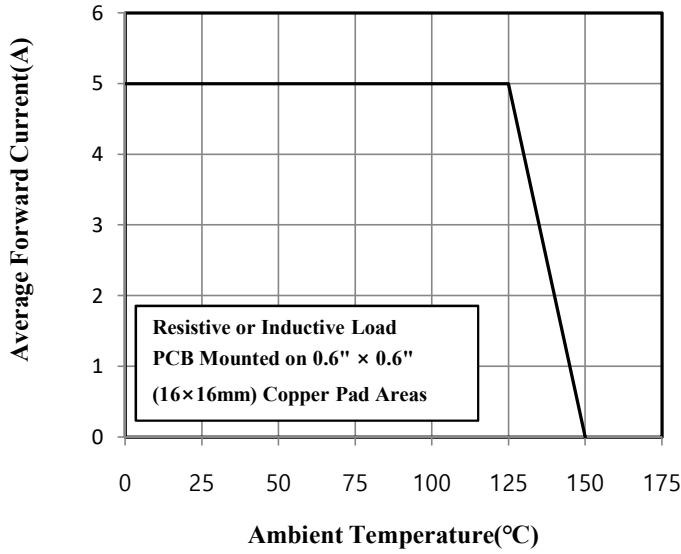


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

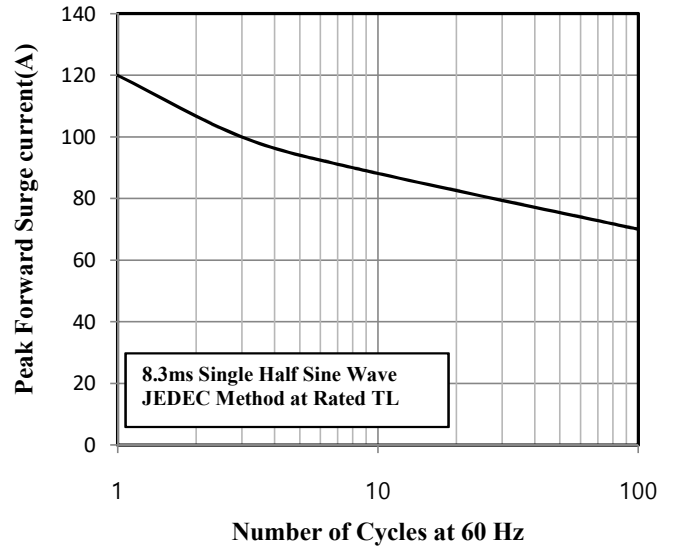


Fig.3 Typical Instantaneous Forward Characteristics

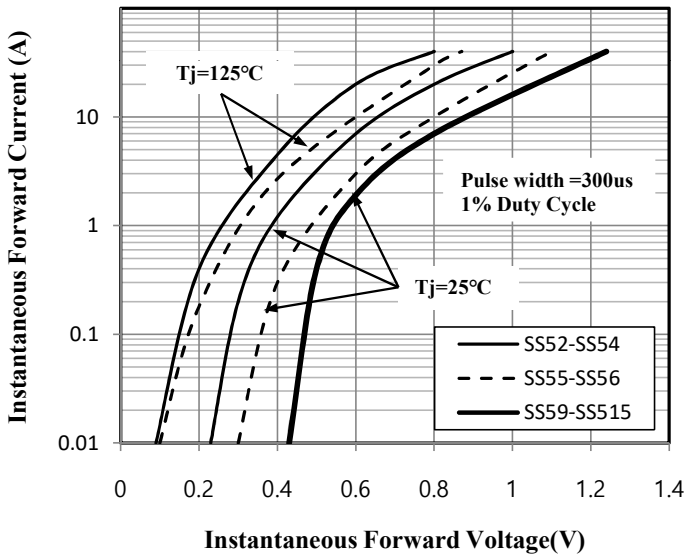


Fig.4 Typical Reverse Characteristics

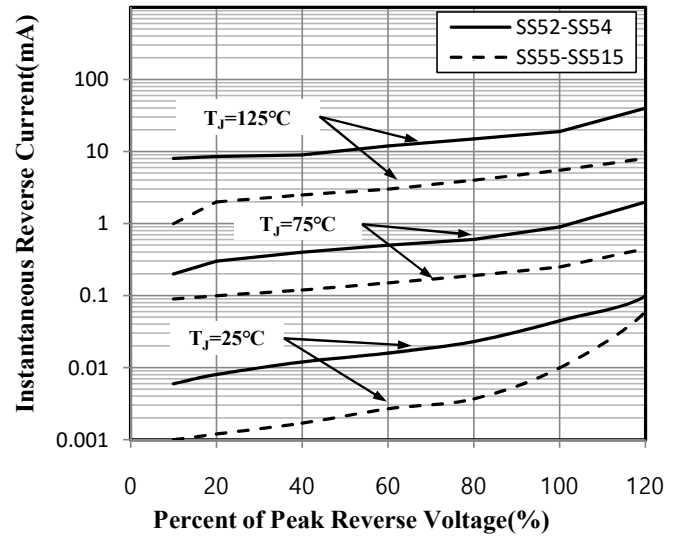


Fig.5 Typical Junction Capacitance

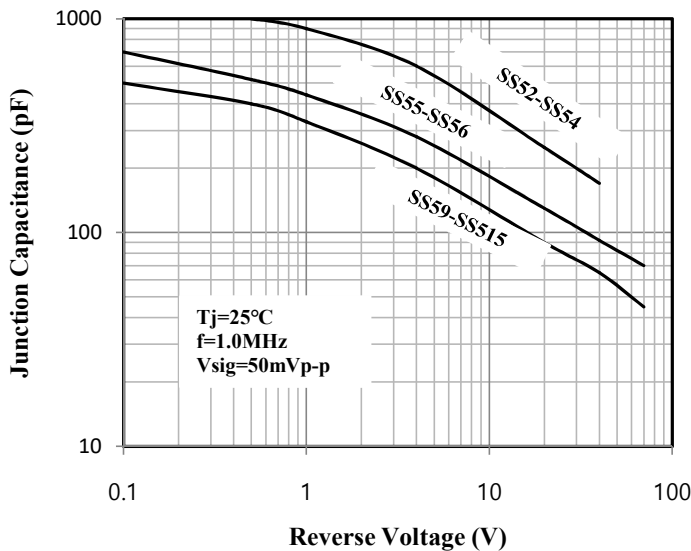


Fig.6 Typical Transient Thermal Characteristics

