

Surface Mount Schottky Rectifier

Features

- Guardring for overvoltage protection
- Low power losses
- Extremely fast switching
- High forward surge capability
- High frequency operation
- Solder dip 260°C max. 10 s, per JESD 22-B106

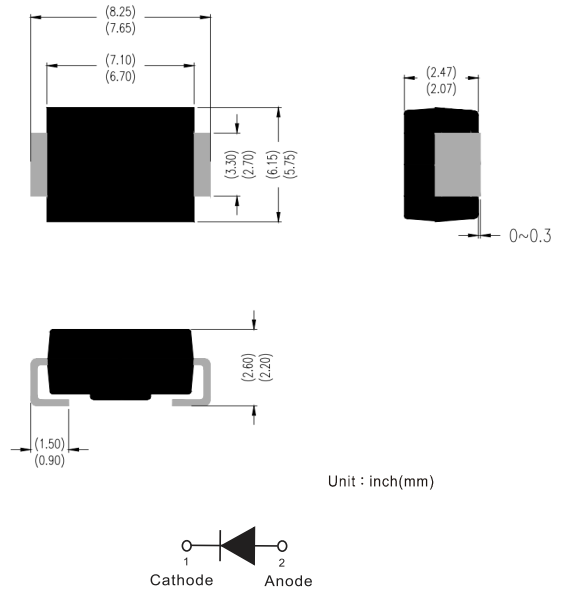
Typical Applications

For use in low voltage high frequency inverters, freewheeling, DC/DC converters, and polarity protection applications.

Mechanical Data

- **Package:** DO-214AB (SMC)
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Color band denotes the cathode end

DO-214AB (SMC)



■Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SS52	SS54	SS56	SS510	SS515	SS520
Repetitive Peak Reverse Voltage	V_{RRM}	V	20	40	60	100	150	200
Average Rectified Output Current @60Hz sine wave, Resistance load, Ta (FIG.1)	I_O	A	5.0					
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, Ta=25°C	I_{FSM}	A	100					
Storage Temperature	Tstg	°C	-55 ~+150					
Junction Temperature	Tj	°C	-55 ~+150			-55 ~+175		

■Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SS52	SS54	SS56	SS510	SS515	SS520
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =5.0A	0.55	0.55	0.70	0.85	0.95	
Maximum DC reverse current at rated DC blocking voltage per diode	I _R	mA	T _a =25°C	0.2			0.1		
			T _a =100°C	20			5		
Typical junction capacitance	C _j	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C.	280		220	180	100	

■ Thermal Characteristics ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	SS52	SS53	SS54	SS55	SS56	SS58	SS510	SS515	SS520
Thermal Resistance	Junction to ambient	$R_{\theta J-A}$	$^{\circ}\text{C/W}$	47 ⁽¹⁾								
	Junction to lead	$R_{\theta J-L}$		13 ⁽¹⁾								

Note(1)

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.6" x 0.6" (16 mm x 16 mm) copper pad areas

■ Characteristics (Typical)

FIG.1: I_o - T_a Curve

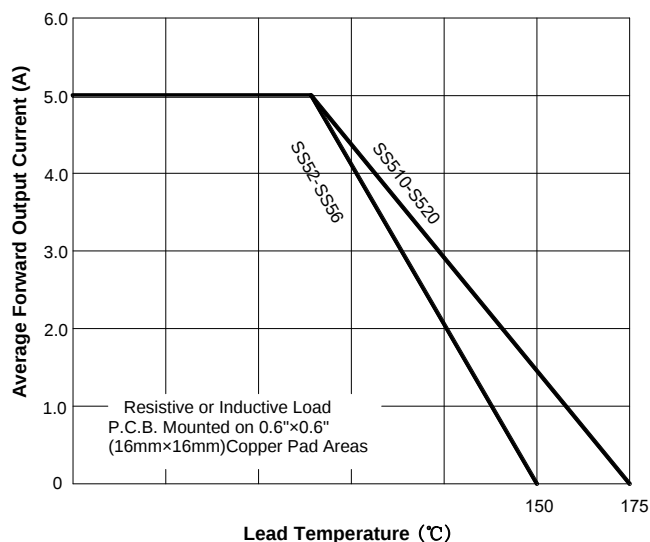


FIG.2: Forward Surge Current Capability

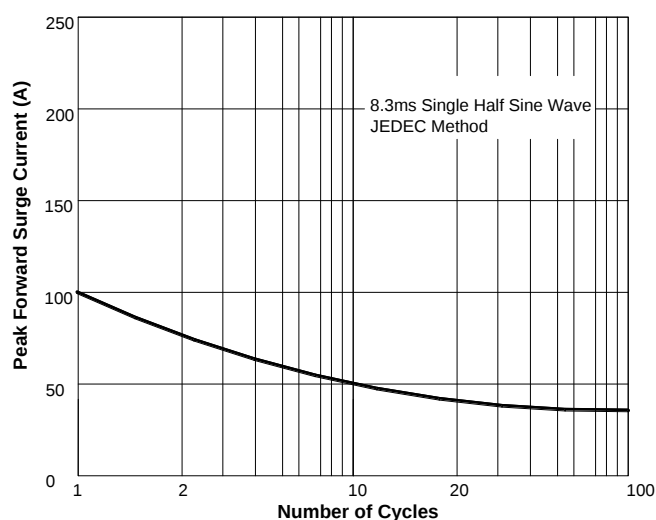


FIG.3: Forward Voltage

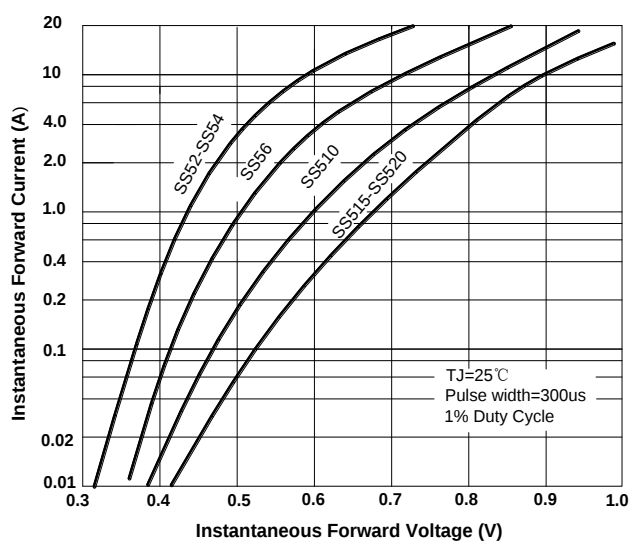


FIG.4: Typical Reverse Characteristics

