

**Features**

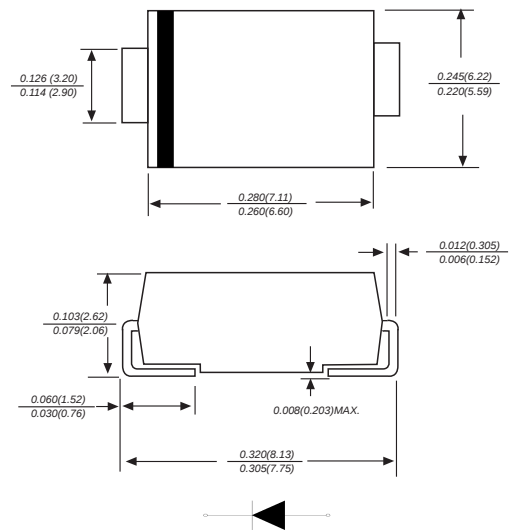
- Guardring for overvoltage protection
- Low power loss
- Extremely fast switching
- High forward surge capability
- High frequency operation
- Solder dip 260 °C max. 10 s, per JESD 22-B106

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

Dimensions in inches and (millimeters)

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

PARAMETER	SYMBOL	UNIT	SS82	SS84	SS86	SS810	SS815	SS820
Device marking code			SS82	SS84	SS86	SS810	SS815	SS820
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	8.0					
Surge(Non-repetitive)Forward Current @60Hz Half-sine wave,1 cycle, Ta=25°C	I_{FSM}	A	120					
Storage Temperature	T_{stg}	°C	-55 ~+150					
Junction Temperature	T_j	°C	-55~+125		-55 ~+150			

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SS82	SS84	SS86	SS810	SS815	SS820
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =8.0A	0.55	0.60	0.70	0.85	0.95	
Maximum DC reverse current at rated DC blocking voltage per diode	I _R	mA	Ta=25°C	0.2			0.1		
			Ta=100°C	20			5.0		
Typical junction capacitance	C _j	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C.	450		350	270	180	

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

PARAMETER		SYMBOL	UNIT	SS82	SS84	SS86	SS810	SS815	SS820
Thermal Resistance	Between junction and ambient	$R_{\theta JA}$	°C/W	45 ⁽¹⁾					
	Between junction and lead	$R_{\theta JL}$		12 ⁽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

Typical Characteristics

FIG.1: Io-TL Curve

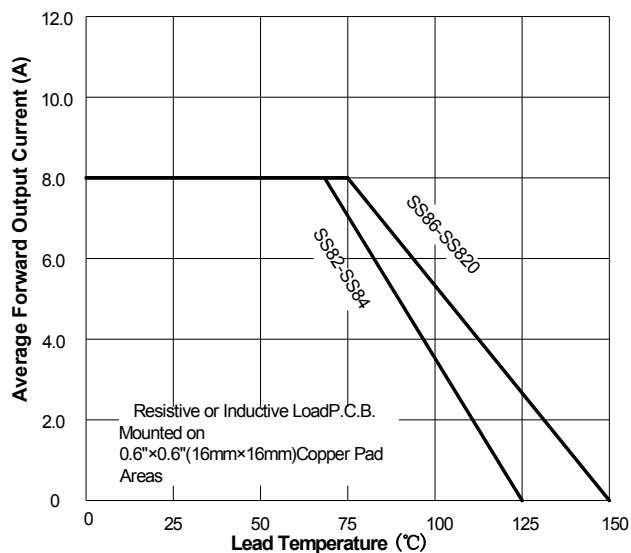


FIG.2: Forward Surge Current Capability

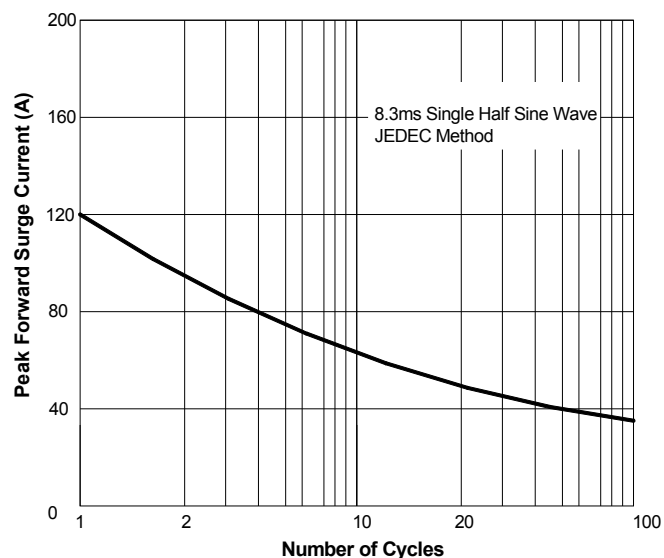


FIG.3: Forward Voltage

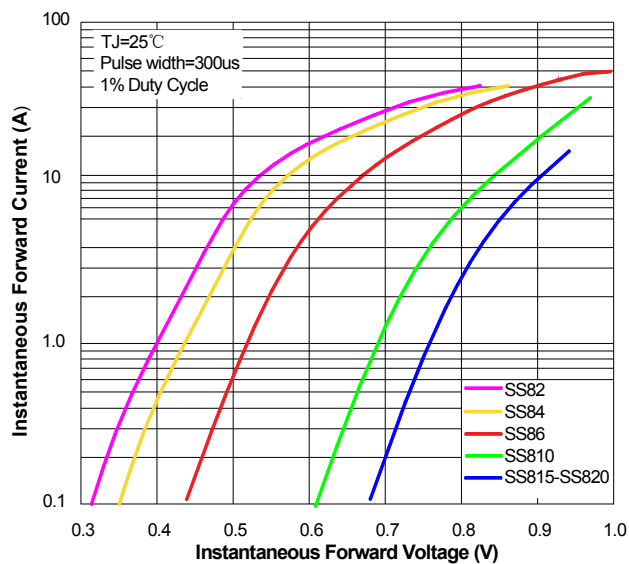


FIG.4: Typical Reverse Characteristics

