

■ **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, freewheelin DC/DC converters, and polarity protection applications.

■ **MECHANICAL DATA**

- **Package:** DO-214AM(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

■ **MAXIMUM RATINGS** (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SS52	SS54	SS56	SS510	SS515	SS520
Device marking code			<b>SS52</b>	<b>SS54</b>	<b>SS56</b>	<b>SS510</b>	<b>SS515</b>	<b>SS520</b>
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	V	20	40	60	100	150	200
Average Rectified Output Current @60Hz sine wave, Resistance load, T <sub>a</sub> (FIG.1)	I <sub>O</sub>	A	5.0					
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T <sub>a</sub> =25	I <sub>FSM</sub>	A	100					
Storage Temperature	T <sub>stg</sub>		-55 ~+150					
Junction Temperature	T <sub>j</sub>		-55~+125			-55 ~+150		

■ **ELECTRICAL CHARACTERISTICS** (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SS52	SS54	SS56	SS510	SS515	SS520
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	I <sub>FM</sub> =5.0A	0.55	0.60	0.70	0.85	0.90	
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>R</sub>	mA	T <sub>a</sub> =25	0.2			0.1		
			T <sub>a</sub> =100	20			5		
Typical junction capacitance	C <sub>j</sub>	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C.	280		220	180	100	

■ **THERMAL CHARACTERISTICS** (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SS52	SS53	SS54	SS55	SS56	SS58	SS510	SS515	SS520
Thermal Resistance	Junction to ambient	R <sub>θJ-A</sub>	47 <sup>(1)</sup>								
	Junction to lead	R <sub>θJ-L</sub>	13 <sup>(1)</sup>								

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

■ **PACKAGING INFORMATION**

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SS52~SS520	F1	Approximate 0.251	3000	6000	42000	13" reel

■ **CHARACTERISTICS (TYPICAL)**

FIG.1:  $I_o$ - $T_a$  Curve

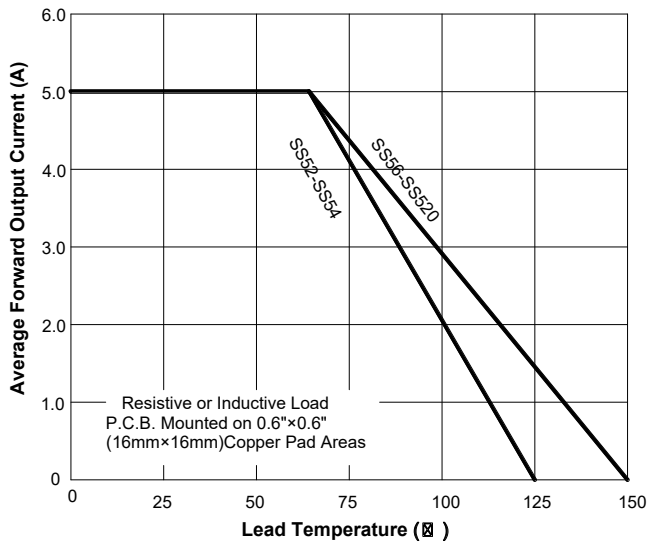


FIG.2: Forward Surge Current Capability

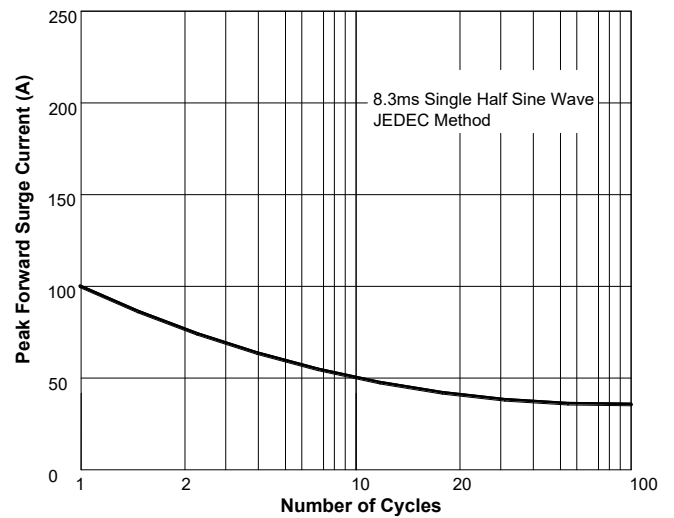


FIG.3: Forward Voltage

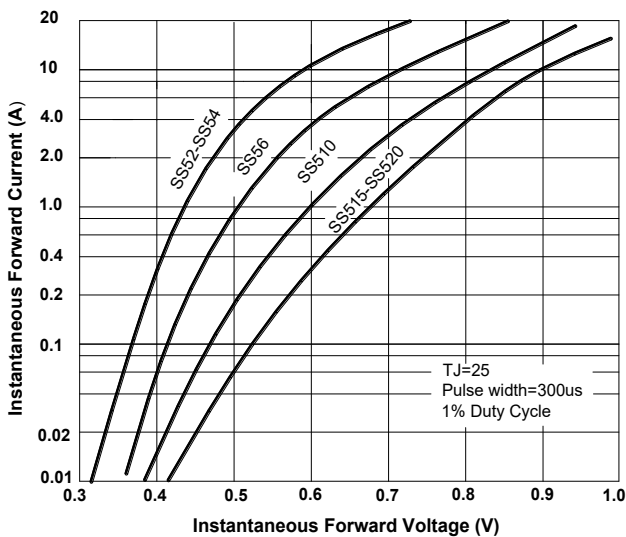
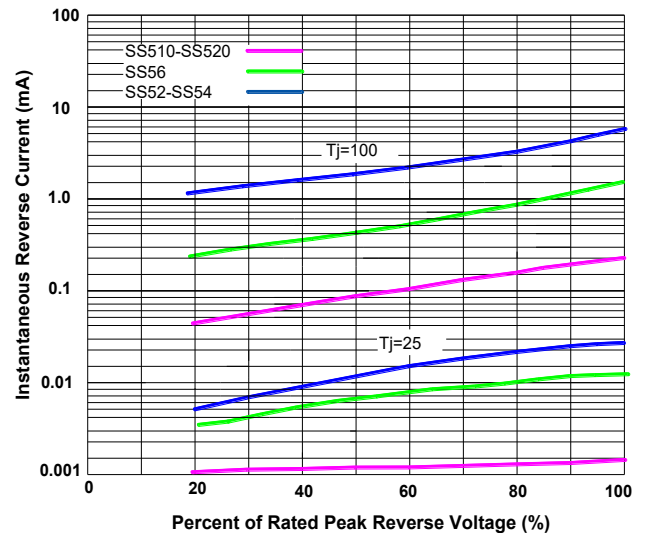
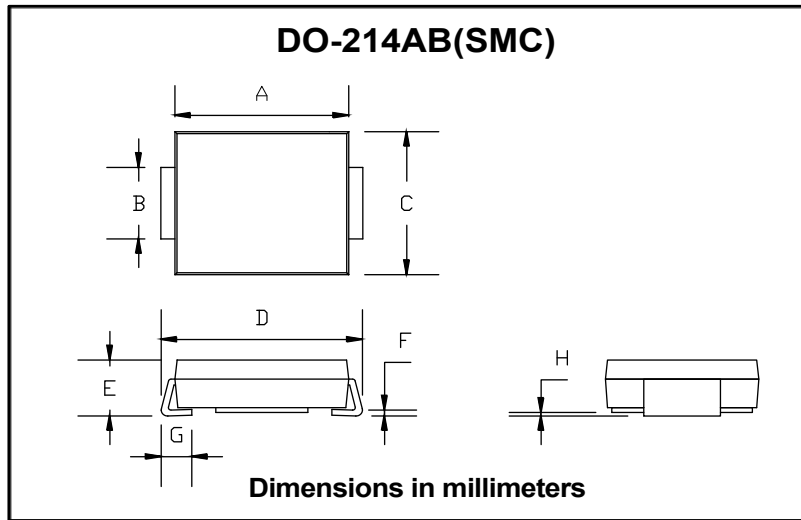


FIG.4: Typical Reverse Characteristics

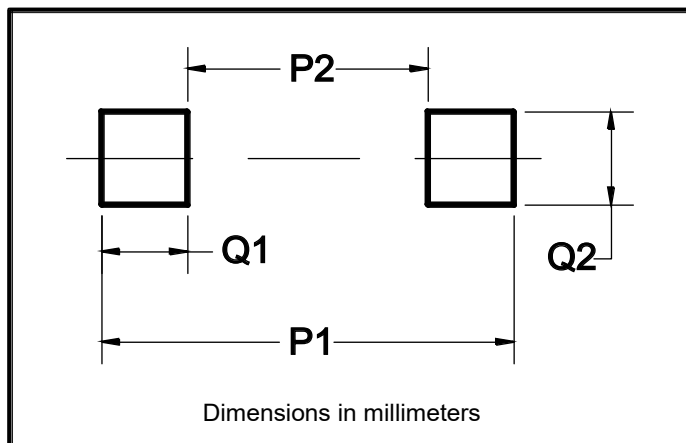


■ **OUTLINE DIMENSIONS**



DO-214AB (SMC)		
Dim	Min	Max
A	6.60	7.11
B	2.85	3.27
C	5.59	6.22
D	7.75	8.13
E	1.99	2.61
F	0.15	0.31
G	0.76	1.52
H	0.10	0.20

■ **SUGGESTED PAD LAYOUT**



Dim	Typ
P1	9.9
P2	3.84
Q1	3.03
Q2	3.82