

Surface Mount Schottky Rectifier

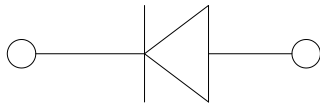


Features

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

Typical Applications

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



Mechanical Data

- **Package:** DO-214AC (SMA)
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

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

PARAMETER	SYMBOL	UNIT	SS								
			52A	53A	54A	55A	56A	58A	510A	515A	520A
Device marking code			SS								
			52A	53A	54A	55A	56A	58A	510A	515A	520A
Repetitive peak reverse voltage	VRRM	V	20	30	40	50	60	80	100	150	200
Average rectified output current @60Hz sine wave, resistance load, T _a (FIG.1)	I _O	A	5.0								
Surge(non-repetitive)forward current @ 60Hz half-sine wave,1 cycle, T _a =25°C	IFSM	A	100								
Storage temperature	T _{stg}	°C	-55 ~+150								
Junction temperature	T _j	°C	-55~+125				-55 ~+150				

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SS							
				52A	53A	54A	55A	56A	58A	510A	515A
Maximum instantaneous forward voltage drop per diode	V _F	V	IFM=5.0A	0.60		0.70		0.85		0.90	
Maximum DC reverse current at rated DC blocking voltage per diode@ V _{RM} =VRRM	I _{RRM}	mA	T _a =25°C	0.5				0.1			
			T _a =100°C	10				5			



SS52A THRU SS520A

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

PARAMETER	SYMBOL	UNIT	SS							
			52A	53A	54A	55A	56A	58A	510A	515A
Thermal resistance	R _θ J-A(1)	°C/W	60 ¹⁾							
	R _θ J-L(1)		22 ¹⁾							

Note

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

■ Characteristics (Typical)

FIG1: I_o-TL Curve

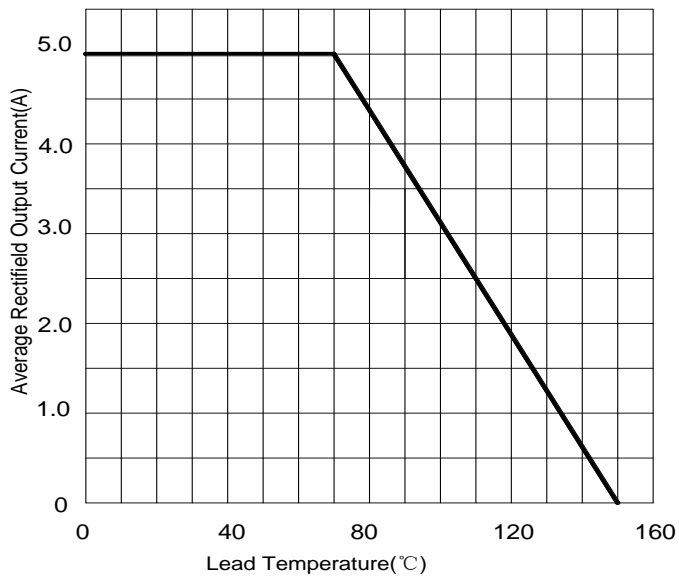


FIG2: Surge Forward Current Capability

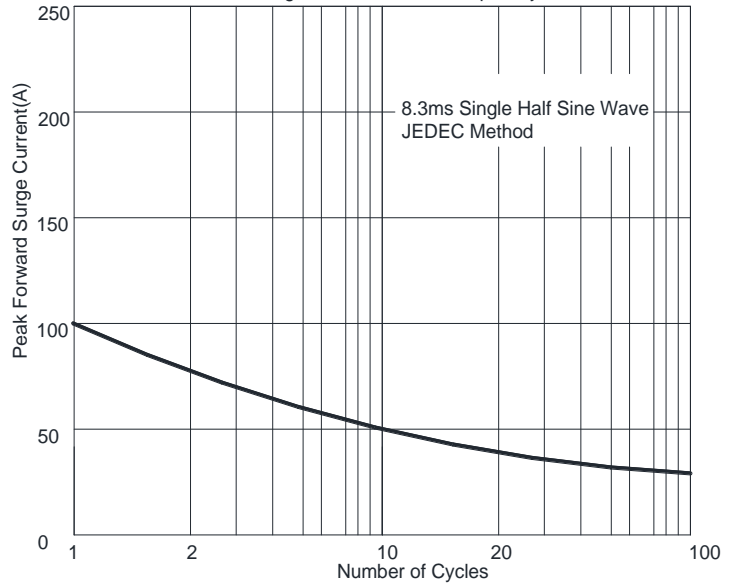


FIG.3: TYPICAL FORWARD CHARACTERISTICS

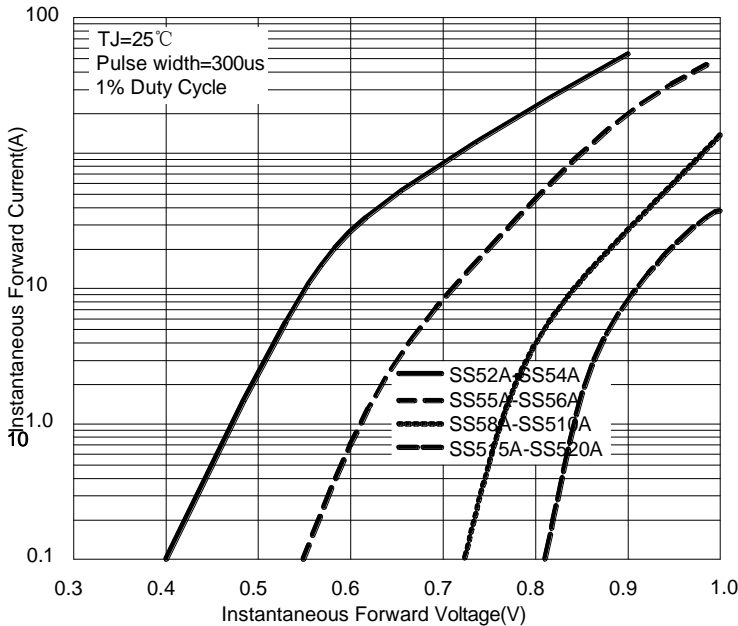
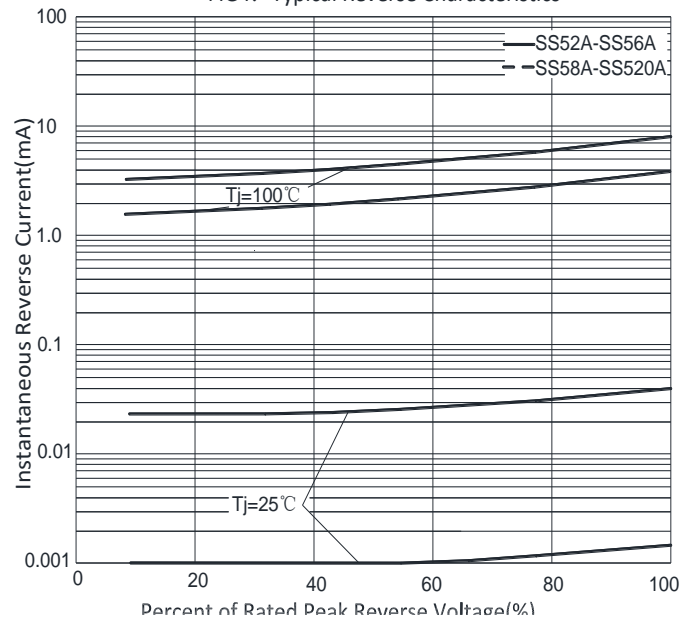


FIG4: Typical Reverse Characteristics



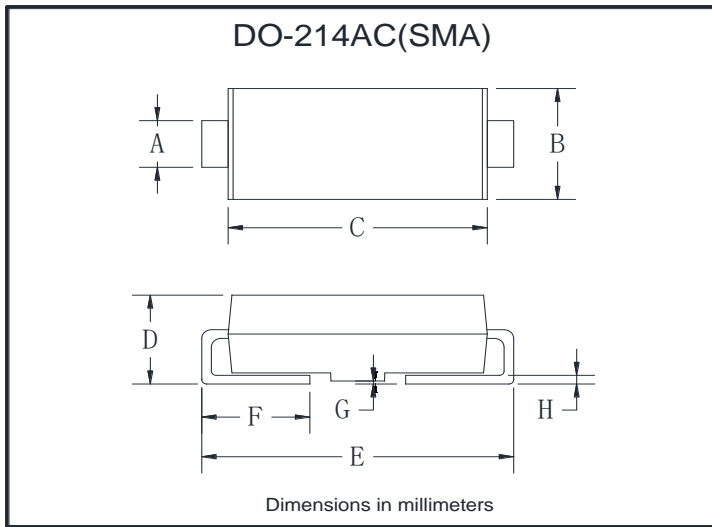


SS52A THRU SS520A

■ Ordering Information (Example)

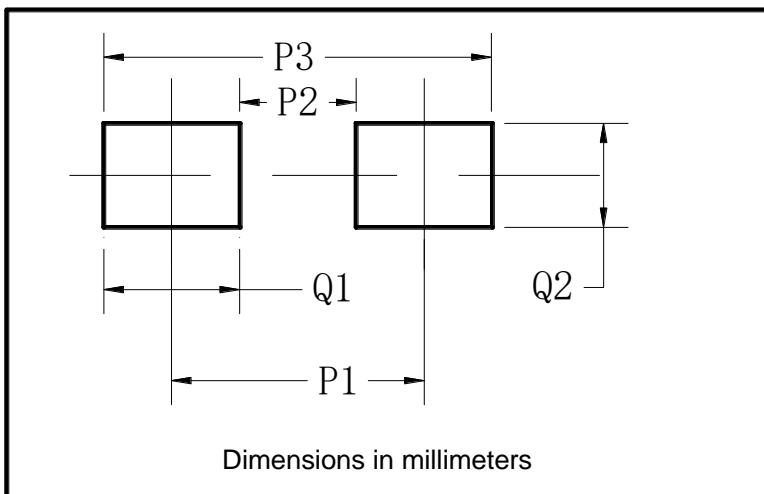
PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SS52A-SS520A	F1	Approximate 0.059	5000	10000	80000	13" reel
SS52A-SS520A	F2	Approximate 0.059	7500	15000	120000	13" reel
SS52A-SS520A	F3	Approximate 0.059	7500	15000	60000	13" reel
SS52A-SS520A	F4	Approximate 0.059	1800	7200	57600	7" reel
SS52A-SS520A	F5	Approximate 0.059	2000	8000	64000	7" reel
SS52A-SS520A	F6	Approximate 0.059	5000	10000	100000	13" reel

■ Outline Dimensions



DO-214AC(SMA)		
Dim	Min	Max
A	1.25	1.58
B	2.40	2.83
C	4.25	4.75
D	1.90	2.30
E	4.93	5.28
F	0.76	1.41
G	0.08	0.20
H	0.15	0.31

■ Suggested Pad Layout



DO-214AC(SMA)	
Dim	Millimeters
P1	4.00
P2	1.50
P3	6.50
Q1	2.50
Q2	1.70



SS52A THRU SS520A

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