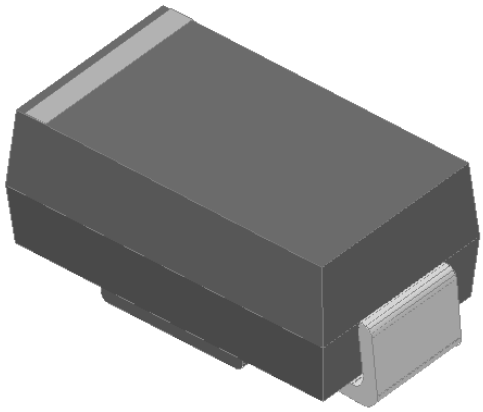
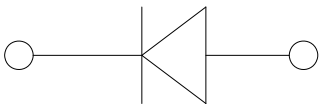
Surface Mount Schottky Rectifier





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 (Ta=25℃ 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	V_{RRM}	V	20	30	40	50	60	80	100	150	200
Average rectified output current @60Hz sine wave, resistance load, TL (FIG.1)	I_O	A	5.0								
Surge(non-repetitive)forward current @ 60Hz half-sine wave,1 cycle, Ta=25℃	I_{FSM}	A	100								
Storage temperature	T_{stg}	℃	-55 ~+175								
Junction temperature	Tj	℃	-55 ~+150					-55 ~+175			

■Electrical Characteristics (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SS								
				52A	53A	54A	55A	56A	58A	510A	515A	520A
Maximum instantaneous forward voltage drop per diode	V_F	V	I_{FM}=5.0A	0.60			0.70		0.85		0.90	
Maximum DC reverse current at rated DC blocking voltage per diode@ $V_{RM}=V_{RRM}$	I_{RRM}	mA	Ta=25℃	0.5					0.1			
			Ta=100℃	10					5			

Note1:Pulse test:300uS pulse widh,1% duty cycle

Note2:Pulse test:pulse widh 40mS

■Thermal Characteristics （T_a=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	SS								
			52A	53A	54A	55A	56A	58A	510A	515A	520A
Thermal resistance	$R_{\theta J-A}$	℃/W	60[1)]								
	$R_{\theta J-L}$		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：Io-TL Curve

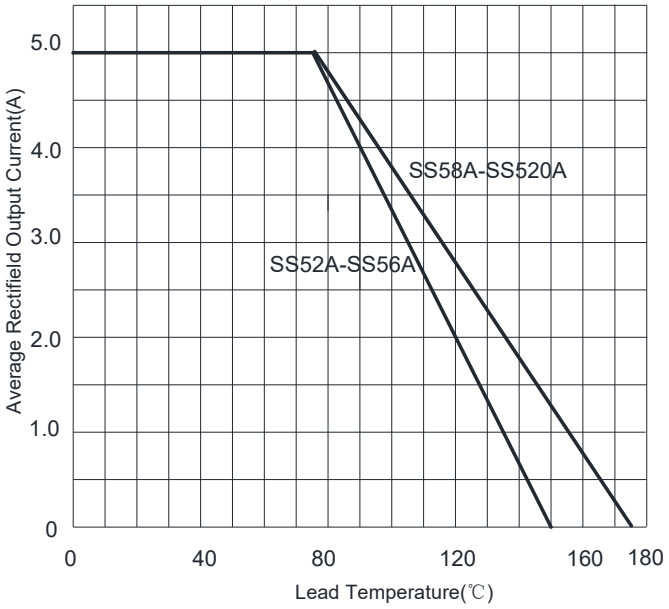


FIG2:Surge Forward Current Capability

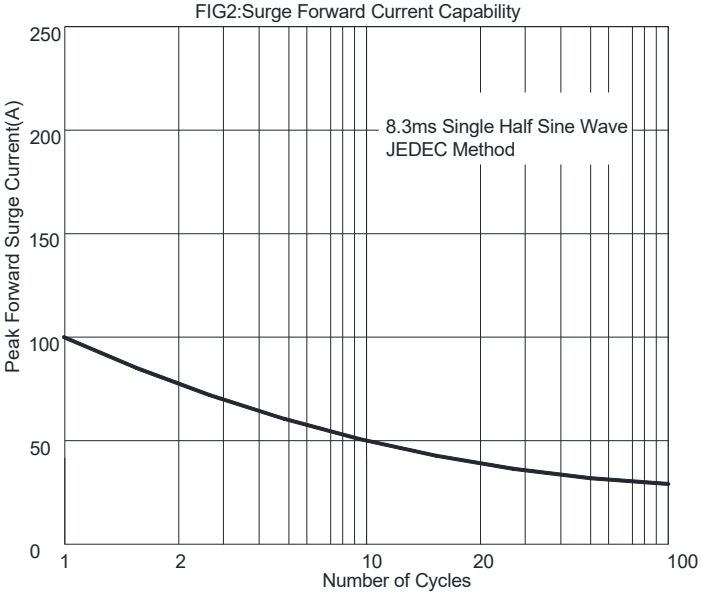


FIG.3: TYPICAL FORWARD CHARACTERISTICS

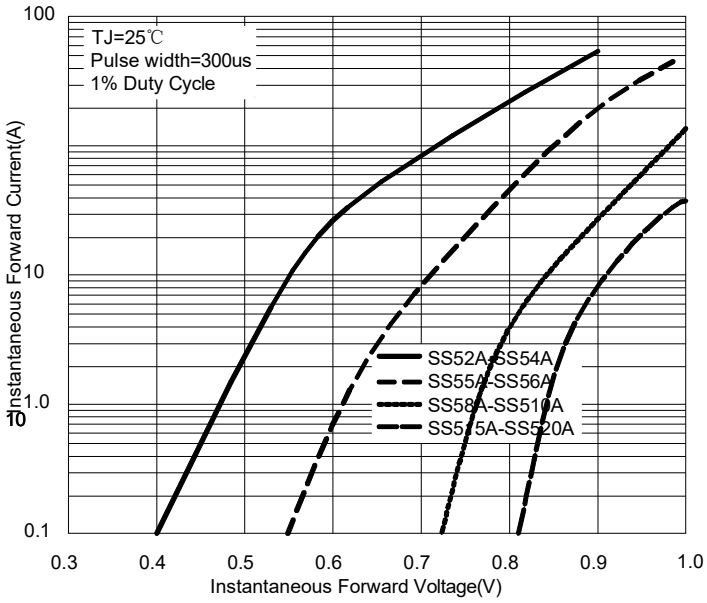
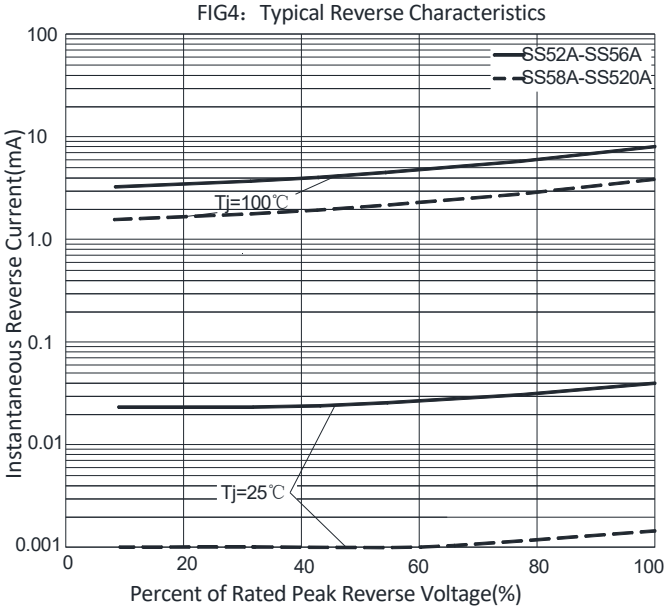


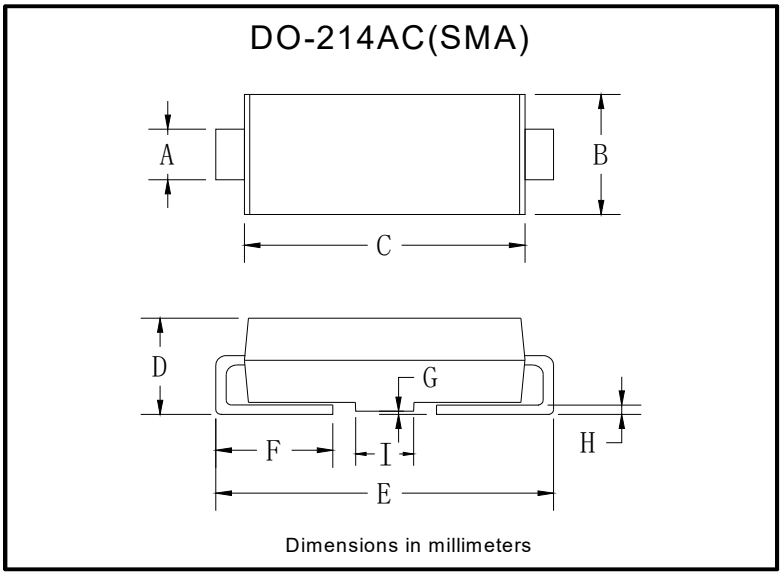
FIG4：Typical Reverse Characteristics



■Ordering Information (Example)

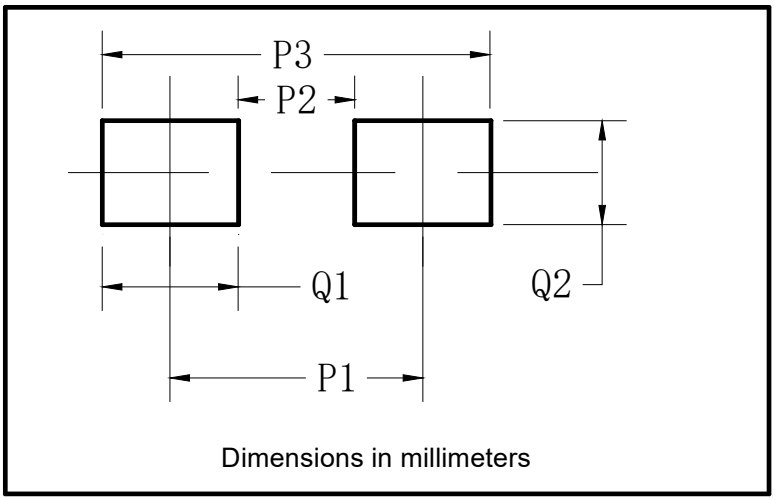
PREFERED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SS52A-SS520A	F1	Approximate 0.059	5000	/	80000	13” reel
SS52A-SS520A	F2	Approximate 0.059	7500	/	120000	13” reel
SS52A-SS520A	F3	Approximate 0.059	7500	/	60000	13” reel
SS52A-SS520A	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	/	100000	13” reel

■ Outline Dimensions



DO-214AC(SMA)		
Dim	Min	Max
A	1.25	1.58
B	2.40	2.83
C	4.00	4.75
D	1.90	2.30
E	4.93	5.28
F	0.76	1.41
G	0.05	0.20
H	0.15	0.31
I	1.70	2.10

■Suggested Pad Layout



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

Notice

All products, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise.
Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in STARSEA's terms and conditions of sale for such products, STARSEA assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of STARSEA products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.