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

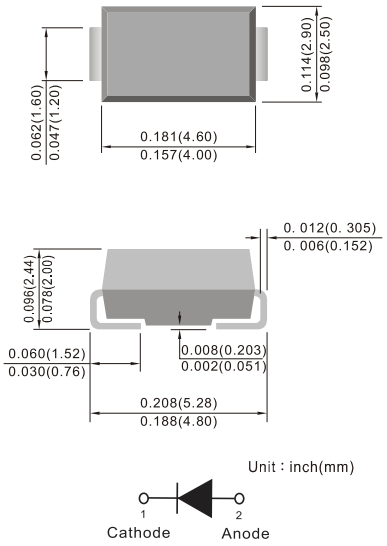
Typical Applications

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

DO-214AC (SMA)



■Maximum Ratings (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	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	150								
Storage temperature	T_{stg}	℃	-55 ~+150								
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	0.55			0.70		0.85		0.95	
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			

■Thermal Characteristics (Ta=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

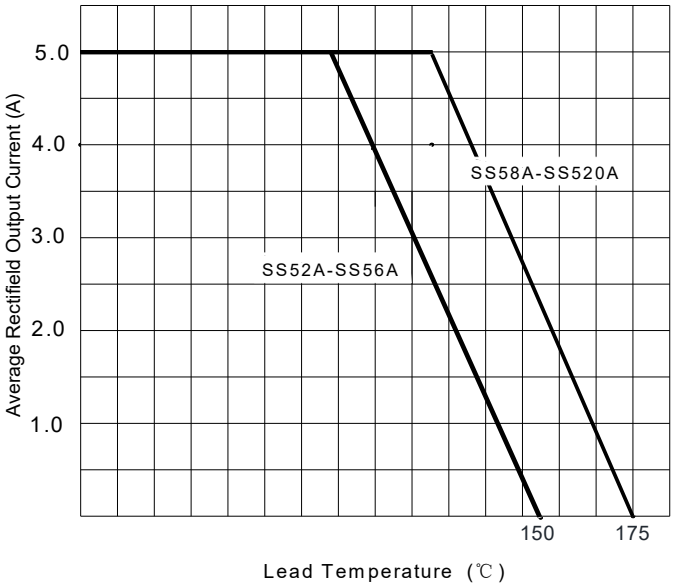


FIG2:Surge Forward Current Capability

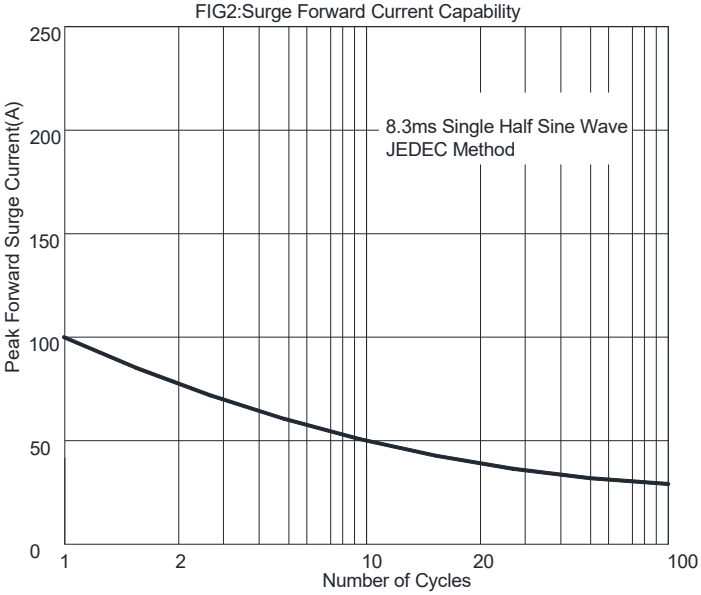


FIG.3: TYPICAL FORWARD CHARACTERISTICS

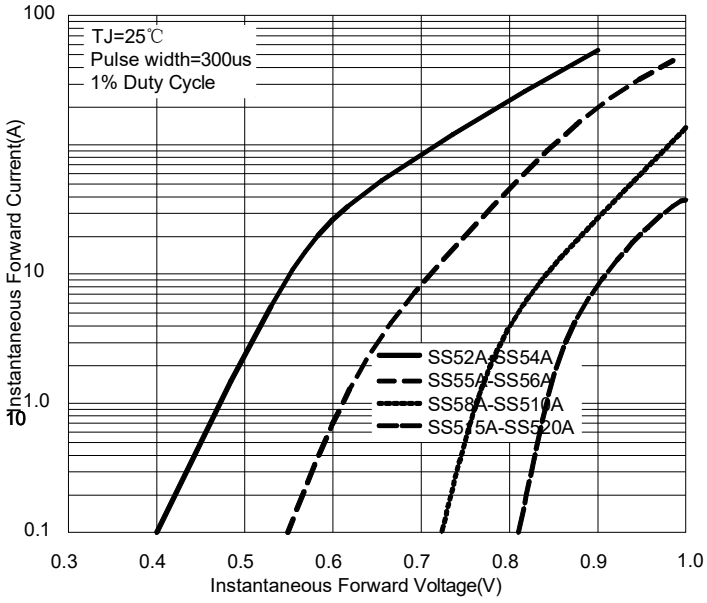


FIG4：Typical Reverse Characteristics