Surface Mount General Purpose Rectifier

Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

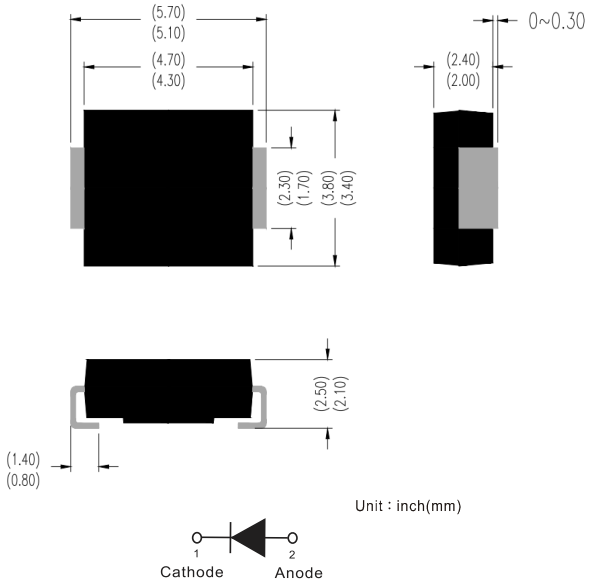
Typical Applications

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer, and telecommunication.

Mechanical Data

- **Package**: DO-214AA (SMB)
  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-214AA (SMB)



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

PARAMETER	SYMBOL	UNIT	S5A	S5B	S5D	S5G	S5J	S5K	S5M
Maximum Repetitive peak reverse voltage	V_{RRM}	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	V_{RMS}	V	35	70	140	280	420	560	700
Maximum DC Blocking Voltage	V_{DC}	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, resistance load, TL (Fig.1)	IO	A	5.0						
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25℃	I_{FSM}	A	150						
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃			300						
Current squared time @1ms≤t≤8.3ms Tj=25℃	I^2t	A^2s	94						
Storage temperature	Tstg	℃	-55 ~ +150						
Junction temperature	Tj	℃	-55 ~ +150						

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	S5A	S5B	S5D	S5G	S5J	S5K	S5M
Maximum instantaneous forward voltage	VF	V	I_{FM}=5.0A	1.1						
Maximum DC reverse current at rated DC blocking voltage	IR	μA	Tj=25℃	5						
			Tj=125℃	100						
Typical junction capacitance	Cj	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	34						

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

PARAMETER	SYMBOL	UNIT	S5A	S5B	S5D	S5G	S5J	S5K	S5M
Typical Thermal resistance	RθJ-A	℃/W	80[1]						
	RθJ-L		35[1]						
	RθJ-C		30[1]						

Note:
(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3" x 0.3" (8.0 mm x 8.0 mm) copper pad areas

■ Characteristics (Typical)

FIG1：Io-TL Curve

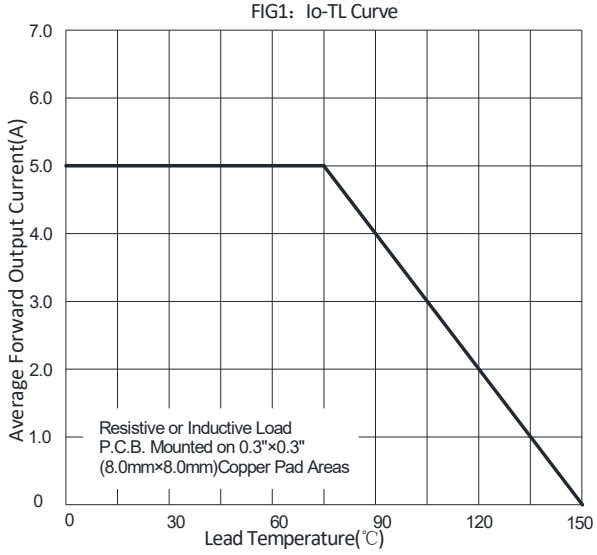


FIG2：Surge Forward Current Capability

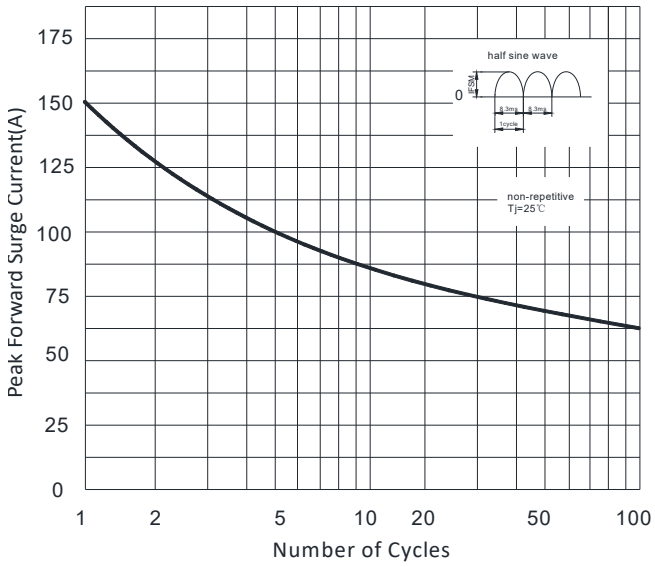


FIG3：Typical Forward Voltage

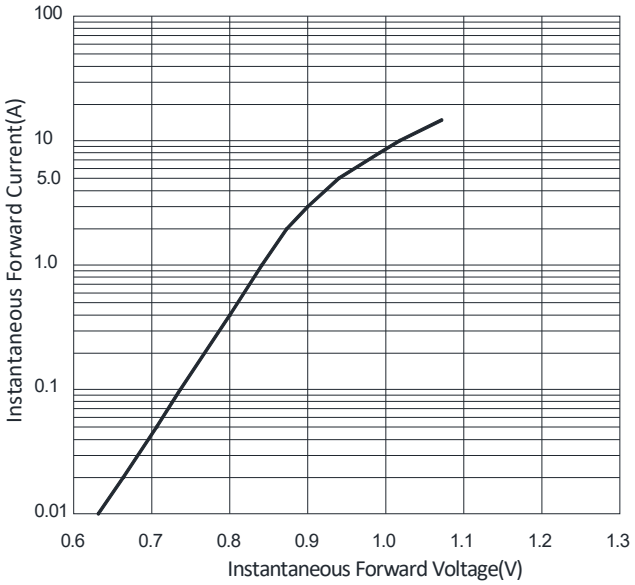


FIG4:Typical Reverse Characteristics