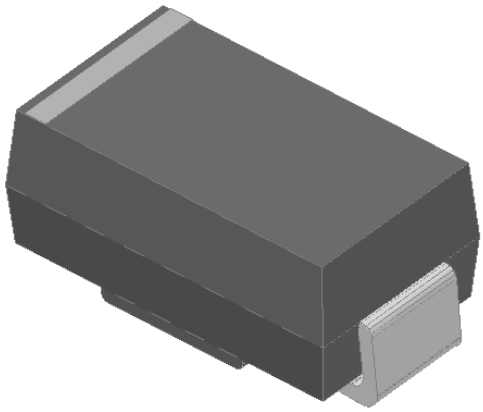
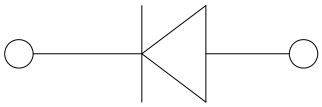
S1A THRU S1M

RoHS
COMPLIANT

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-214AC (SMA)
  Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **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	S1A	S1B	S1D	S1G	S1J	S1K	S1M
Device marking code			S1A	S1B	S1D	S1G	S1J	S1K	S1M
Repetitive peak reverse voltage	V_{RRM}	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, Resistance load, Ta (FIG.1)	I_O	A	1.0						
Surge(non-repetitive)forward current @ 60Hz Half-sine wave,1 cycle, Ta=25℃	I_{FSM}	A	30						
Current squared time @1ms≤t≤8.3ms Tj=25℃， Rating of per diode	I^2t	A^2S	3.7						
Storage temperature	T_{stg}	℃	-55~+150						
Junction temperature	T_j	℃	-55 ~ +150						

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	S1A	S1B	S1D	S1G	S1J	S1K	S1M
Maximum instantaneous forward voltage drop per diode	V_F	V	I_{FM}=1.0A	1.1						
Maximum DC reverse current at rated DC blocking voltage per diode @ VRM=VRRM	I_{RRM}	μA	Ta=25℃	5						
			Ta=100℃	100						

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

PARAMETER	SYMBOL	UNIT	S1A	S1B	S1D	S1G	S1J	S1K	S1M
Thermal Resistance	RθJ-A(1)	℃/W	55[1)]						
	RθJ-L(1)	℃/W	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)

FIG.1: Io-Ta Curve

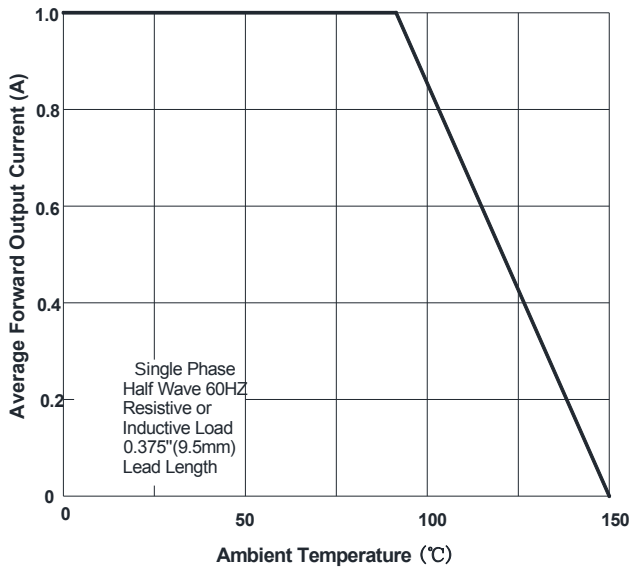


FIG.2: Surge Forward Currrent Capability

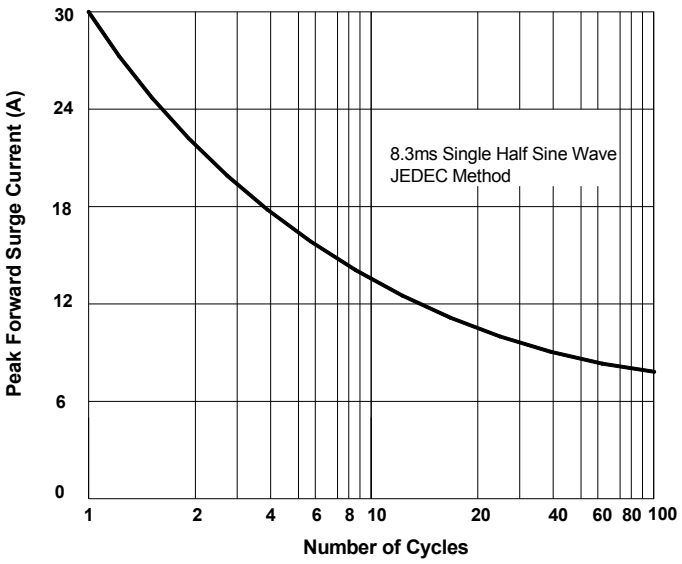


FIG.3: Forward Voltage

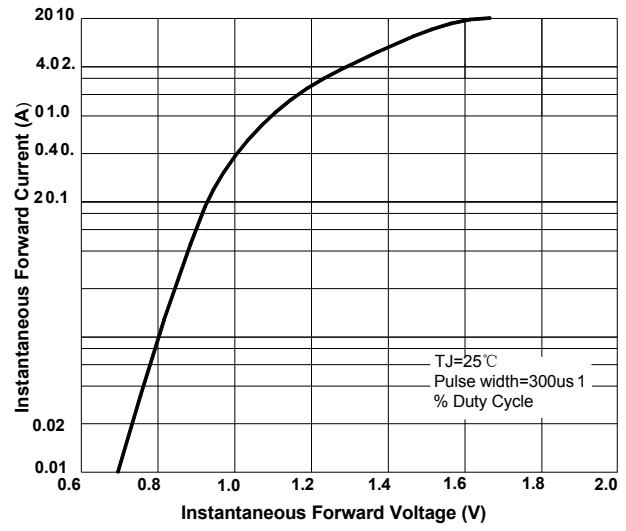
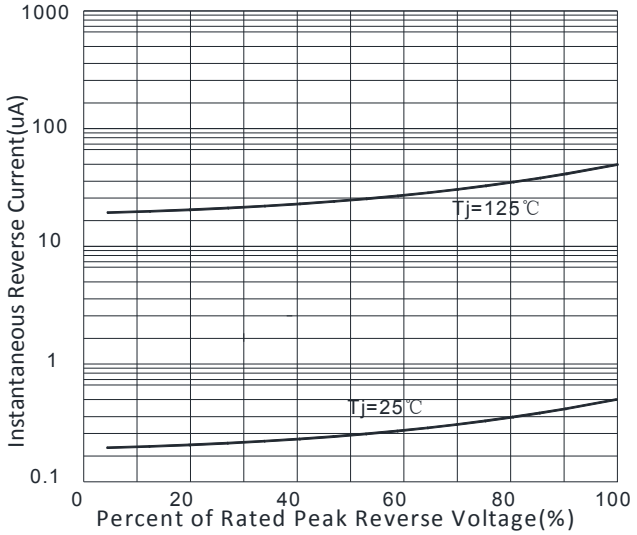


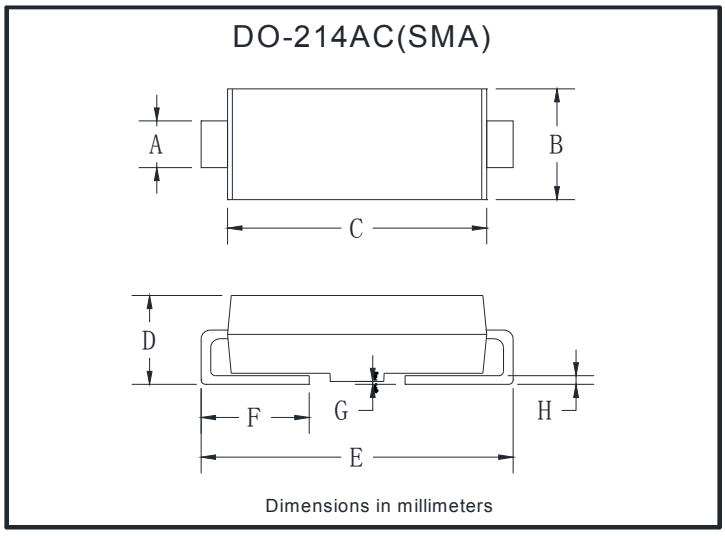
FIG4:Typical Reverse Characteristics



■Ordering Information (Example)

P/N	PKG	QTY
S1A-S1M	SMA(DO-214AC)	2000

■ 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