

FEATURES

- Low profile package
Ideal for automated placement
- Glass passivated chip junction
- High forward surge capacity
- 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, 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	GS1A	GS1B	GS1D	GS1G	GS1J	GS1K	GS1M
Device marking code			GS1A	GS1B	GS1D	GS1G	GS1J	GS1K	GS1M
Repetitive peak reverse voltage	VRRM	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, Resistance load, T _a (FIG.1)	I _O	A	1.0						
Surge(non-repetitive)forward current @ 60Hz Half-sine wave,1 cycle, T _a =25°C	I _{FSM}	A	30						
Current squared time @1ms≤t≤8.3ms T _j =25°C, Rating of per diode	I ² t	A ² S	3.7						
Storage temperature	T _{stg}	°C	-55~+150						
Junction temperature	T _j	°C	-55 ~ +150						

ELECTRICAL CHARACTERISTICS (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	GS1A	GS1B	GS1D	GS1G	GS1J	GS1K	GS1M
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 @ V _{RM} =VRRM	IRRM	μA	T _a =25°C	5						
			T _a =125°C	100						

THERMAL CHARACTERISTICS (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GS1A	GS1B	GS1D	GS1G	GS1J	GS1K	GS1M
Thermal Resistance	R _{θJ-A} (1)	°C/W	70 ¹⁾						
	R _{θJ-L} (1)	°C/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

PACKAGING INFORMATION

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GS1A- GS1M	Omit for Standard	Approximate 0.059	5000	10000	80000	13" reel
GS1A- GS1M	X07	Approximate 0.059	2000	8000	64000	7" reel

CHARACTERISTICS (TYPICAL)

FIG.1: I_o - T_L Curve

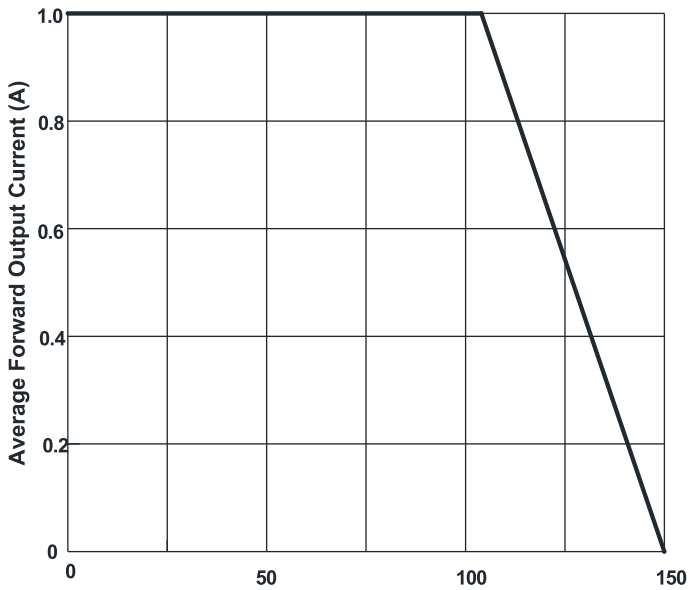


FIG.2: Forward Surge Current Capability

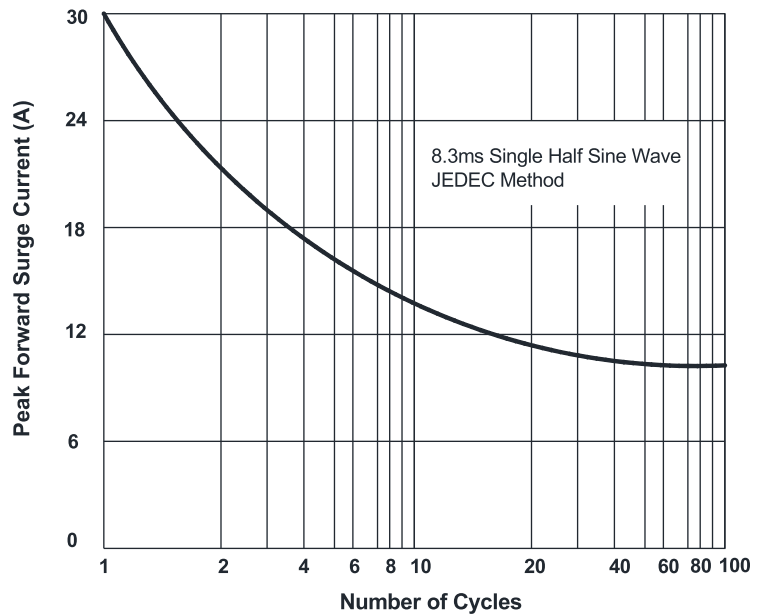


FIG.3: Typical Forward Voltage

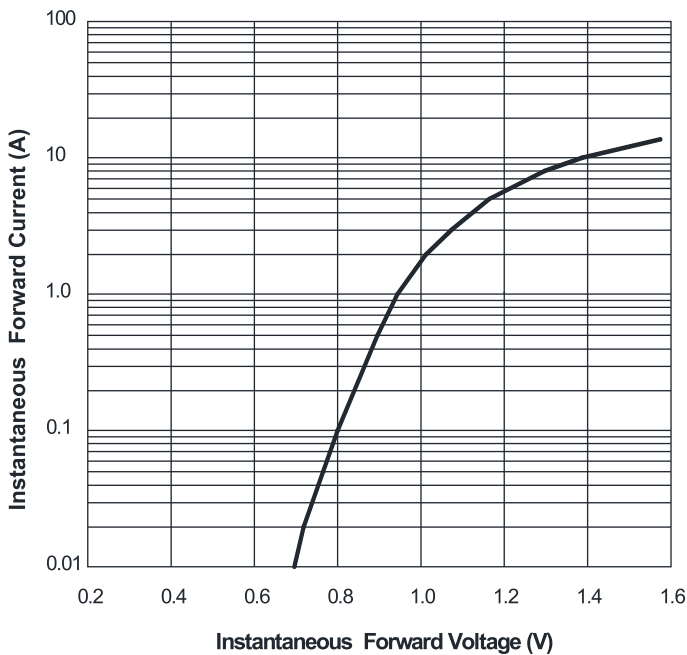
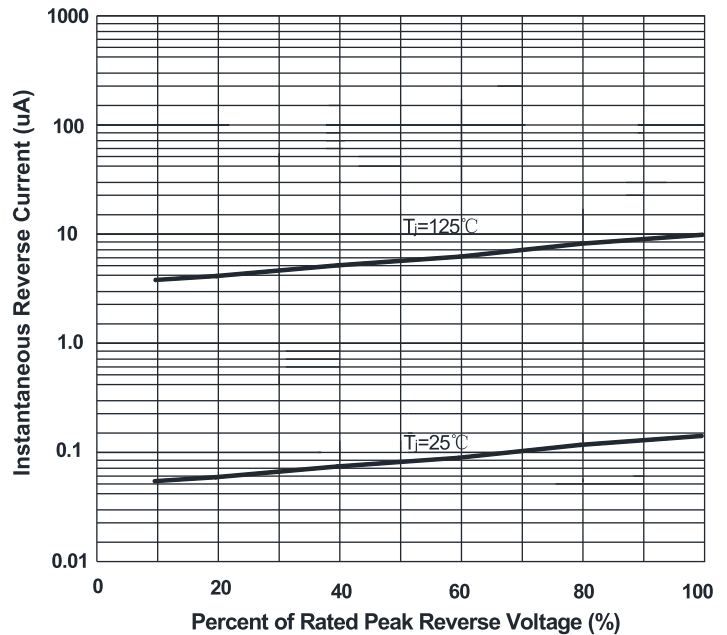
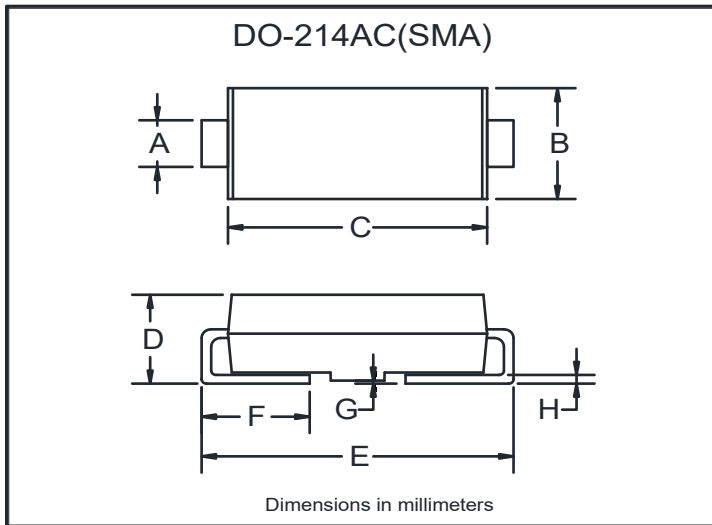


FIG.4: Typical Reverse Characteristics

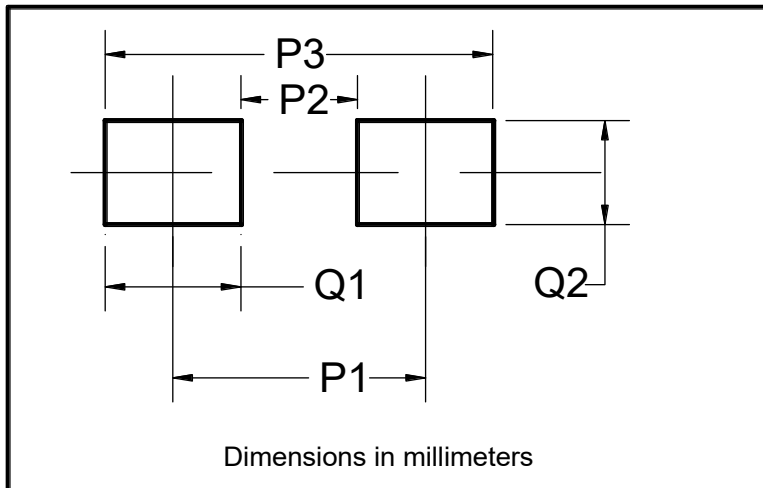


OUTLINE DIMENSIONS



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 CONTROL PAD LAYOUT



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