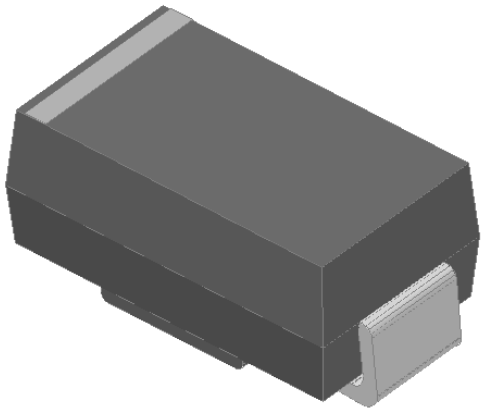
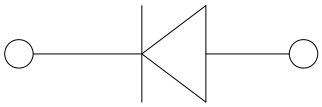
Surface Mount General Purpose Rectifier





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, 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	GS1A	GS1B	GS1D	GS1G	GS1J	GS1K	GS1M
Device marking code			GS1A	GS1B	GS1D	GS1G	GS1J	GS1K	GS1M
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	1.0						
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25℃	I_{FSM}	A	30						
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃			60						
Current squared time @1ms≤t8.3≤ms Tj=25℃，Rating of per diode	I^2t	A^2s	3.735						
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	Cj	pF	8						
Storage temperature	T_{stg}	℃	-55 ~ +150						
Junction temperature	T_j	℃	-55 ~ +150						

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	GS1A	GS1B	GS1D	GS1G	GS1J	GS1K	GS1M
Maximum instantaneous forward voltage drop per diode	VF	V	IFM=1.0A	1.1						
Maximum DC reverse current at rated DC blocking voltage per diode	IR	μA	T_j=25℃	5						
			T_j=125℃	100						

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

PARAMETER	SYMBOL	UNIT	GS1A	GS1B	GS1D	GS1G	GS1J	GS1K	GS1M
Typical Thermal Resistance	RθJ-A(1)	℃/W	70						
	RθJ-L(1)	℃/W	22						
	RθJ-C(1)	℃/W	20						

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

■Ordering Information (Example)

PREFERED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GS1A- GS1M	F1	Approximate 0.059	5000	10000	80000	13” reel
GS1A- GS1M	F2	Approximate 0.059	7500	15000	120000	13” reel
GS1A- GS1M	F3	Approximate 0.059	7500	15000	60000	13” reel
GS1A- GS1M	F4	Approximate 0.059	1800	14400	57600	7” reel
GS1A- GS1M	F5	Approximate 0.059	2000	16000	64000	7” reel
GS1A- GS1M	F6	Approximate 0.059	5000	10000	100000	13” reel

■ Characteristics (Typical)

FIG.1: Io-TL Curve

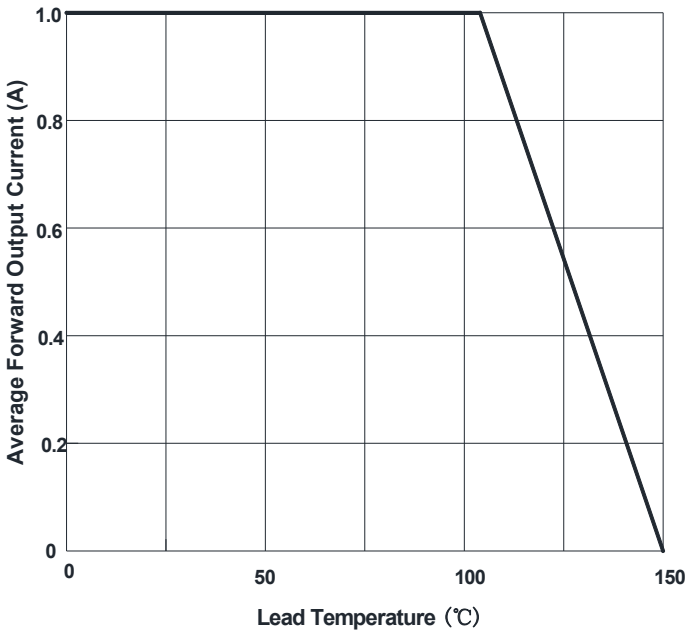


FIG.2: Forward Surge Current Capability

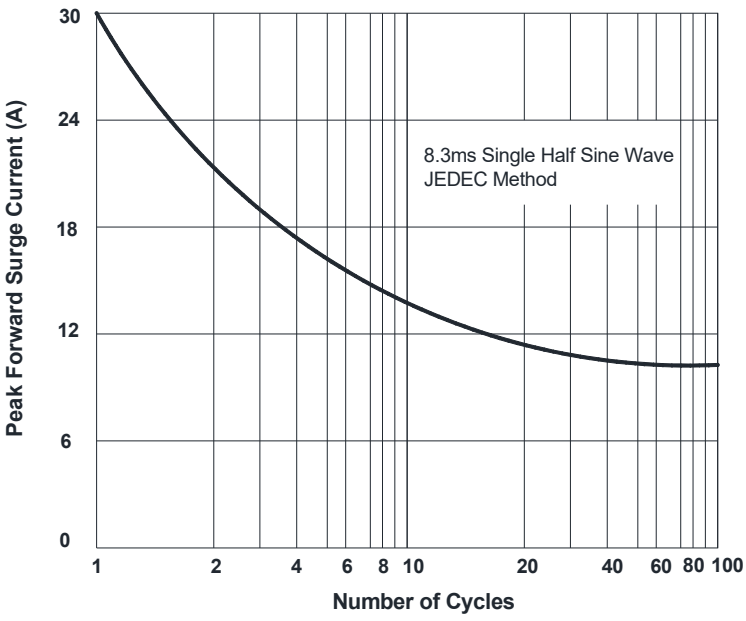


FIG.3: Typical Forward Voltage

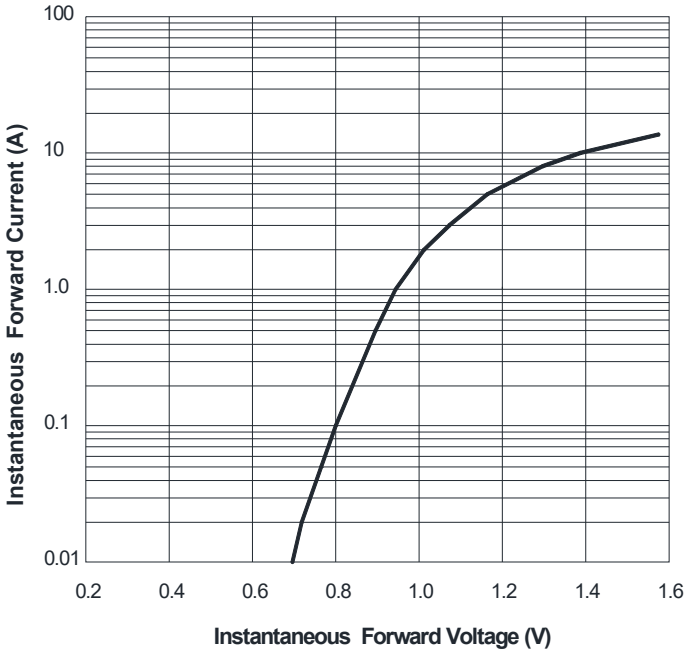
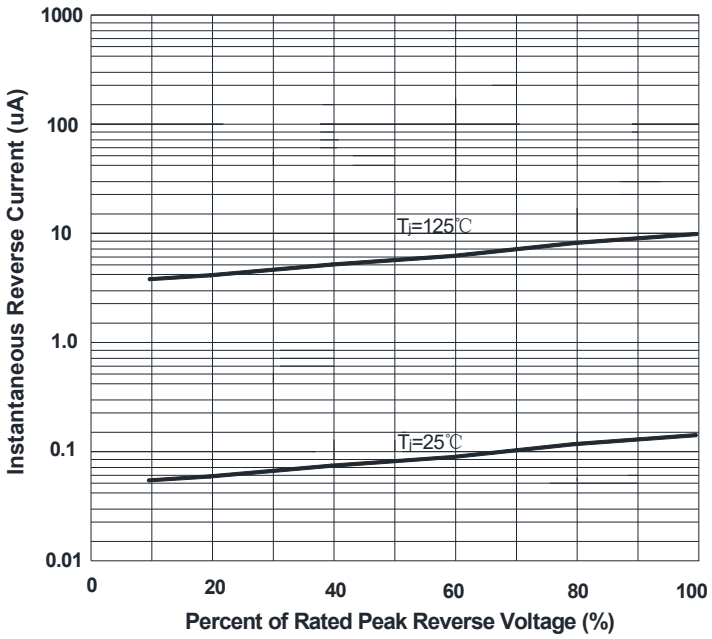
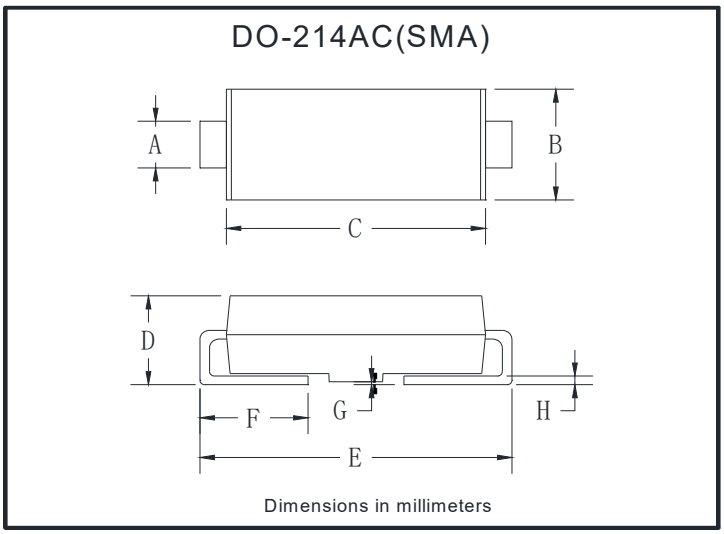


FIG.4: Typical Reverse Characteristics

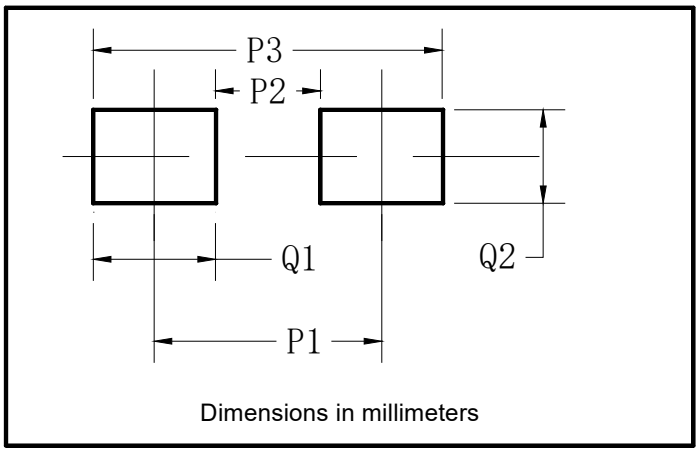


■ Outline Dimensions



DO-214AC(SMA)		
Dim	Min	Max
A	1.25	1.58
B	2.40	2.83
C	4.06	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 Pad Layout



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

Disclaimer

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