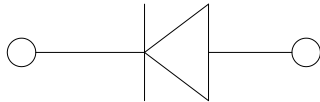
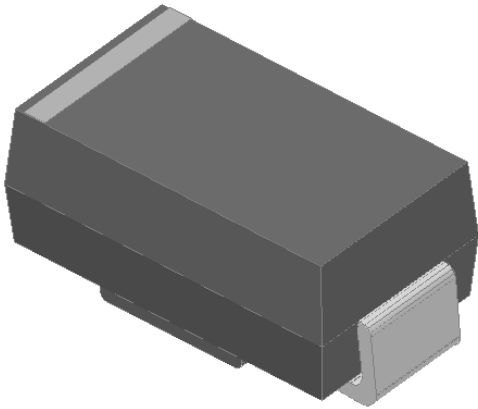


## Surface Mount General Purpose Rectifier



### 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 ( $T_a=25^\circ\text{C}$ 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, $T_a=25^\circ\text{C}$	$I_{FSM}$	A	30						
Current squared time @ $1\text{ms} \leq t \leq 8.3\text{ms}$ $T_j=25^\circ\text{C}$ , Rating of per diode	$I^2t$	$\text{A}^2\text{S}$	3.7						
Storage temperature	$T_{stg}$	$^\circ\text{C}$	-55~+150						
Junction temperature	$T_j$	$^\circ\text{C}$	-55 ~ +150						

### ■ Electrical Characteristics ( $T_a=25^\circ\text{C}$ 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	$I_{FM}=1.0\text{A}$	1.1						
Maximum DC reverse current at rated DC blocking voltage per diode @ $V_{RM}=V_{RRM}$	IRRM	$\mu\text{A}$	$T_a=25^\circ\text{C}$	10						
			$T_a=100^\circ\text{C}$	50						

### ■ Thermal Characteristics ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GS1A	GS1B	GS1D	GS1G	GS1J	GS1K	GS1M
Thermal Resistance	$R_{\theta J-A(1)}$	$^\circ\text{C/W}$	70 <sup>1)</sup>						
	$R_{\theta J-L(1)}$	$^\circ\text{C/W}$	22 <sup>1)</sup>						



# GS1A THRU GS1M

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)

PREFERRED 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	7200	57600	7" reel
GS1A- GS1M	F5	Approximate 0.059	2000	8000	64000	7" reel
GS1A- GS1M	F6	Approximate 0.059	5000	10000	100000	13" reel

## Characteristics (Typical)

FIG1: I<sub>o</sub>-T<sub>L</sub> Curve

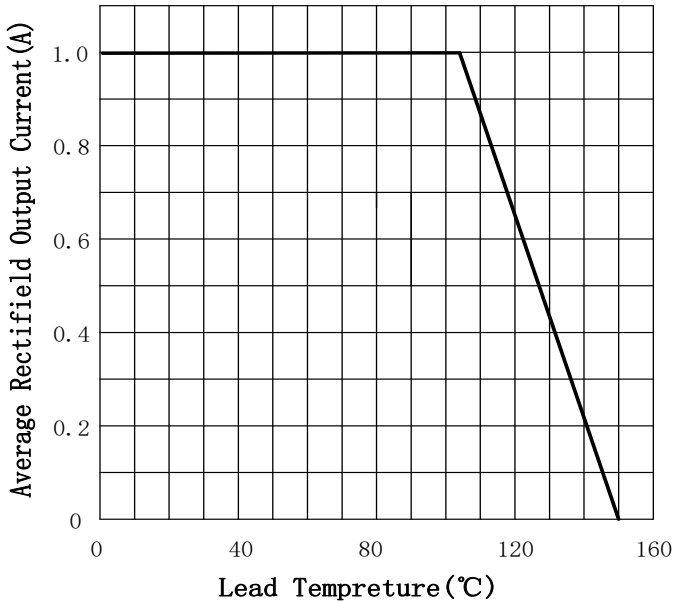


FIG2: Surge Forward Current Capability

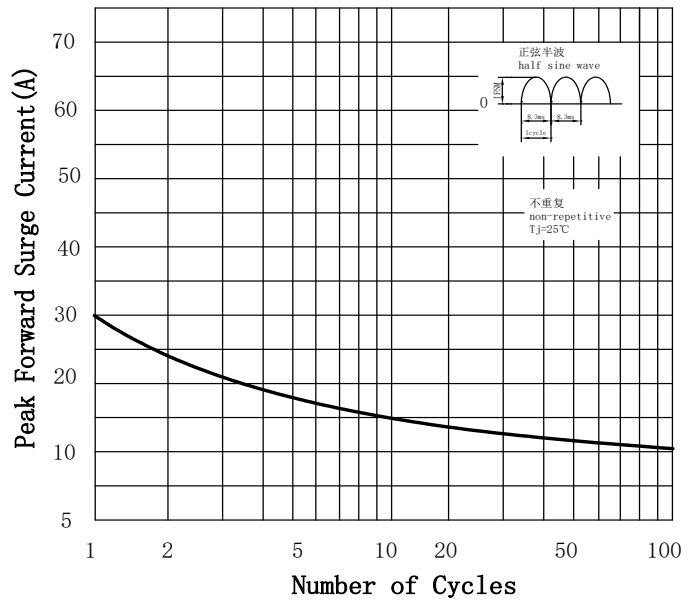


FIG.3: TYPICAL FORWARD CHARACTERISTICS

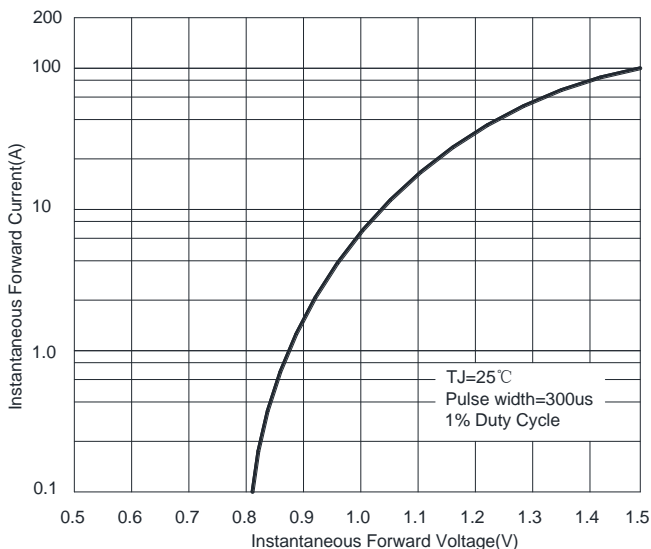
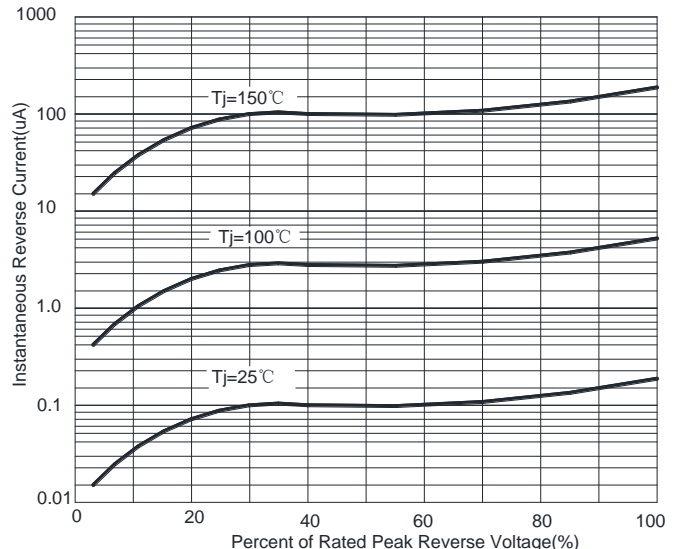


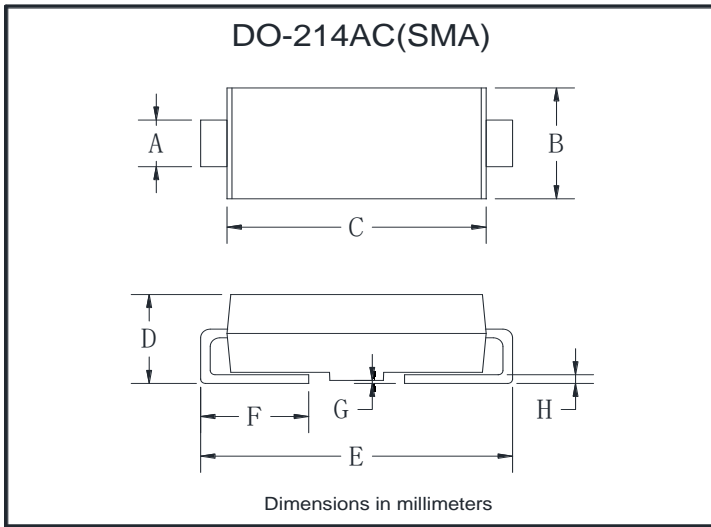
FIG.4: TYPICAL REVERSE CHARACTERISTICS





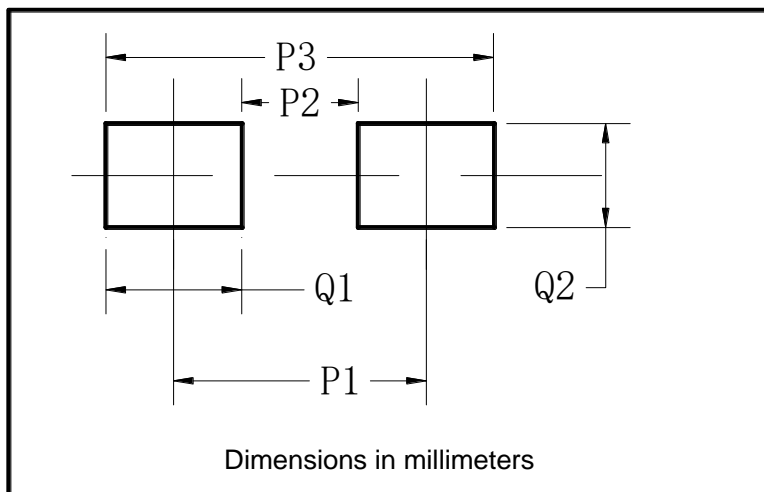
# GS1A THRU GS1M

## ■ 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 Pad Layout



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



## GS1A THRU GS1M

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