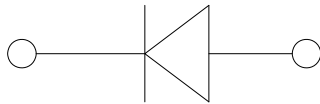
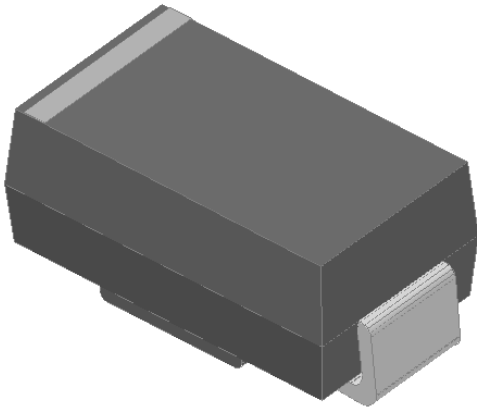


Surface Mount General Purpose Rectifier



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
- Part no. with suffix "Q" means AEC-Q101 qualified

Typical Applications

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer, automotive 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°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GS2AAQ	GS2BAQ	GS2DAQ	GS2GAQ	GS2JAQ	GS2KAQ	GS2MAQ
Device marking code			GS2AA	GS2BA	GS2DA	GS2GA	GS2JA	GS2KA	GS2MA
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
Average rectified output current @60Hz sine wave, Resistance load, TL (Fig.1)	I_O	A	2						
Surge(non-repetitive)forward current @60Hz Half-sine wave,1 cycle, Ta=25°C	I_{FSM}	A	50						
Storage temperature	T_{stg}	°C	-55 ~ +150						
Junction temperature	T_J	°C	-55 ~ +150						

■ Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	GS2AAQ	GS2BAQ	GS2DAQ	GS2GAQ	GS2JAQ	GS2KAQ	GS2MAQ
Maximum instantaneous forward voltage drop per diode	V_F	V	$I_{FM}=2.0A$	1.15						
Typical junction capacitance	C_J	pF	$V_R=4V, 1\text{ MHz}$	18						
Maximum DC reverse current at rated DC blocking voltage per diode @ $V_{RM}=V_{RRM}$	I_{RRM}	μA	$T_a=25^\circ C$	5						
			$T_a=125^\circ C$	100						



GS2AAQ THRU GS2MAQ

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

PARAMETER	SYMBOL	UNIT	GS2AAQ	GS2BAQ	GS2DAQ	GS2GAQ	GS2JAQ	GS2KAQ	GS2MAQ
Thermal Resistance	$R_{\theta J-A}$	$^{\circ}\text{C/W}$	55 ⁽¹⁾						
	$R_{\theta J-c}$	$^{\circ}\text{C/W}$	14 ⁽¹⁾						
	$R_{\theta J-L}$	$^{\circ}\text{C/W}$	20 ⁽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)

Figure.1: I_O - T_L Curve

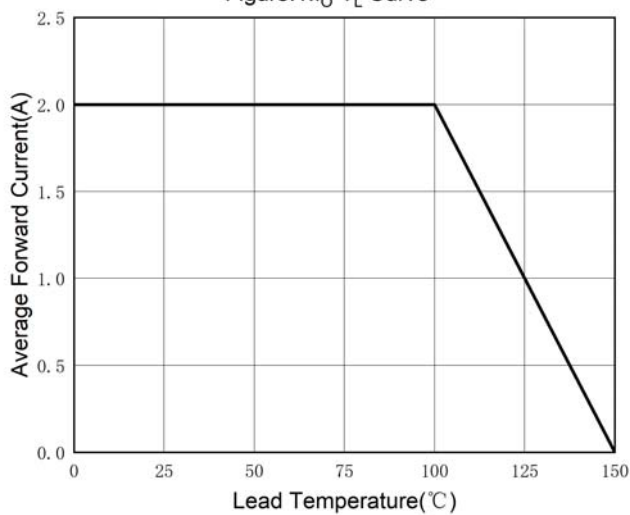


Fig.2: Forward Surge Current Capability

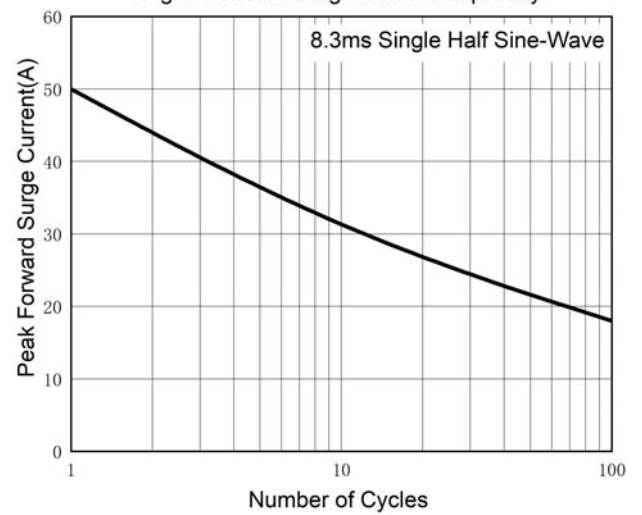


Fig.3: Typical Instantaneous Forward Characteristics

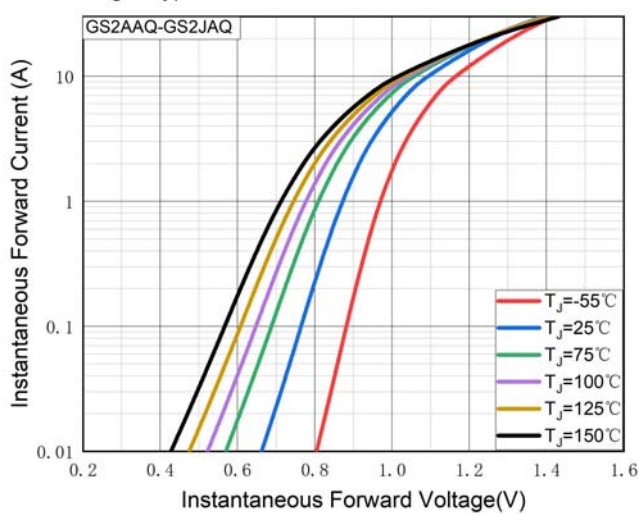
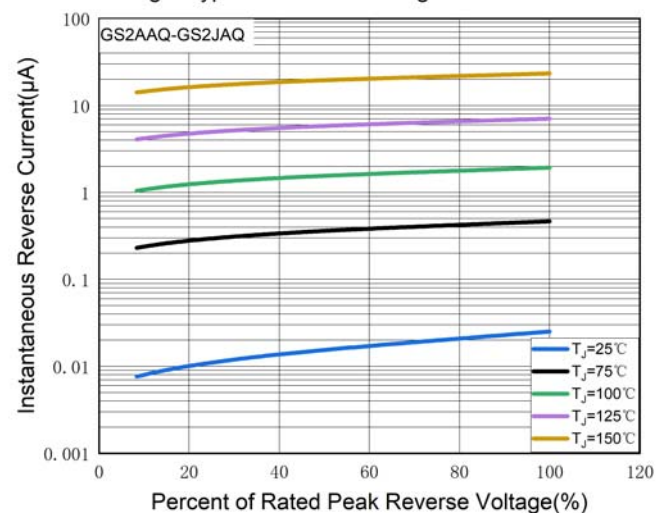


Fig.4: Typical Reverse Leakage Characteristics





GS2AAQ THRU GS2MAQ

Fig.5: Typical Instantaneous Forward Characteristics

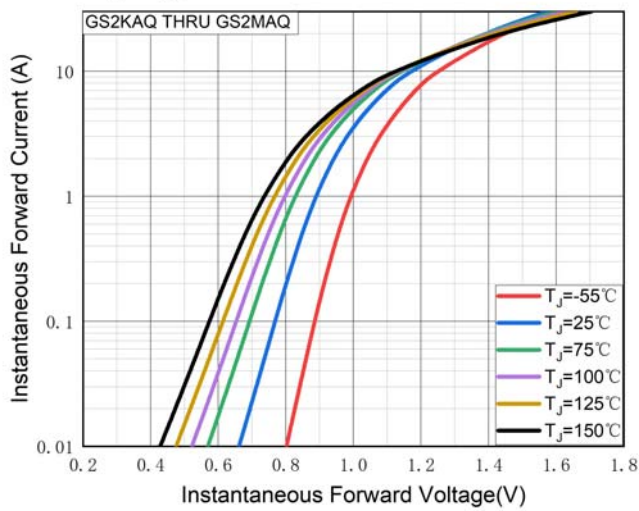


Fig.6: Typical Reverse Leakage Characteristics

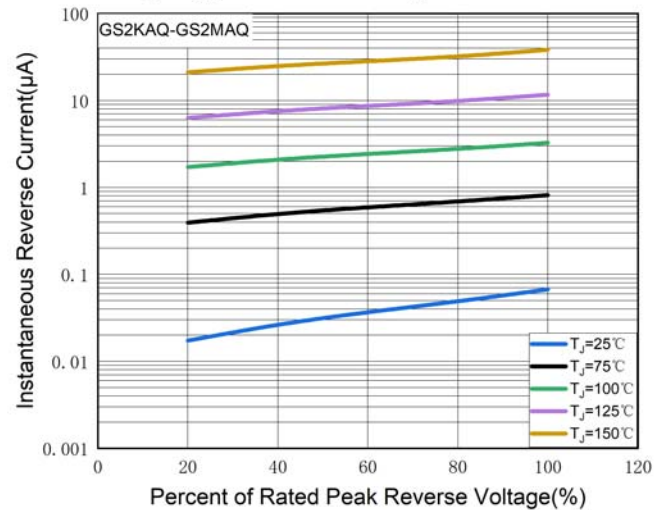
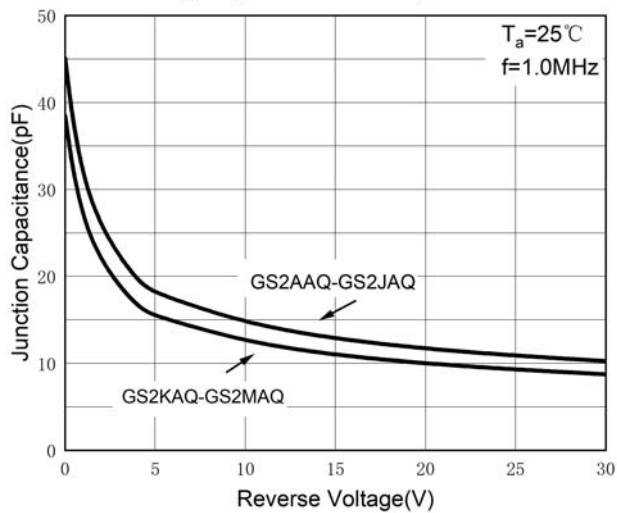


Fig.7: Typical Junction Capacitance



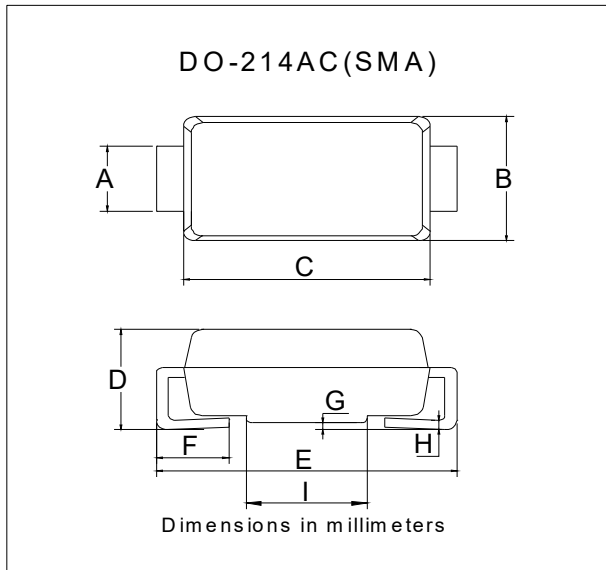
■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GS2AAQ-GS2MAQ	F2	Approximate 0.067	7500	/	120000	13" reel



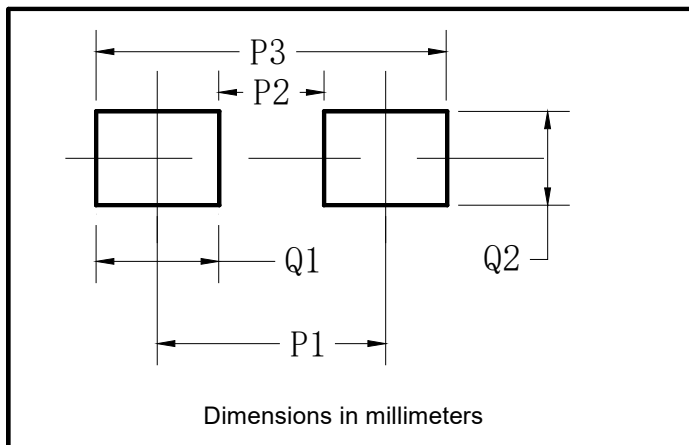
GS2AAQ THRU GS2MAQ

■ Outline Dimensions



DO-214AC(SMA)		
Dim	Min	Max
A	1.25	1.58
B	2.40	2.83
C	4.00	4.75
D	1.90	2.30
E	4.93	5.28
F	0.76	1.41
G	0.05	0.20
H	0.15	0.31
I	1.7	2.1

■ Suggested Pad Layout



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



GS2AAQ THRU GS2MAQ

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