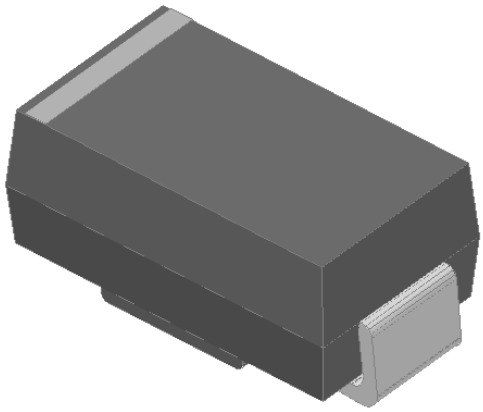
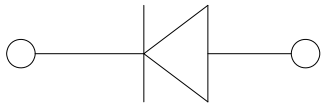
Surface Mount General Purpose Rectifier





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℃ 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℃	I_{FSM}	A	50						
Storage temperature	T_{stg}	℃	-55~+150						
Junction temperature	T_J	℃	-55 ~ +150						

■ Electrical Characteristics (Ta=25℃ 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 MHz	18						
Maximum DC reverse current at rated DC blocking voltage per diode @ $V_{RM}=V_{RRM}$	I_{RRM}	μA	Ta=25℃	5						
			Ta=125℃	100						

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

PARAMETER	SYMBOL	UNIT	GS2AAQ	GS2BAQ	GS2DAQ	GS2GAQ	GS2JAQ	GS2KAQ	GS2MAQ
Thermal Resistance	$R_{\theta J-A}$	℃/W	55[1)]						
	$R_{\theta J-L}$	℃/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)

Fig1:I_O-T_L Curve

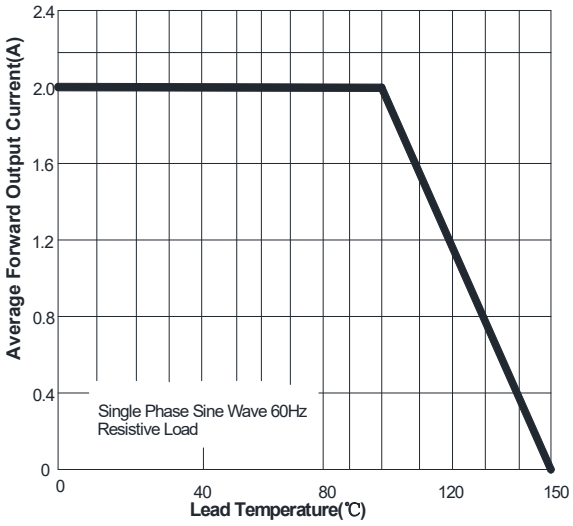


Fig2:Surge Forward Current Capability

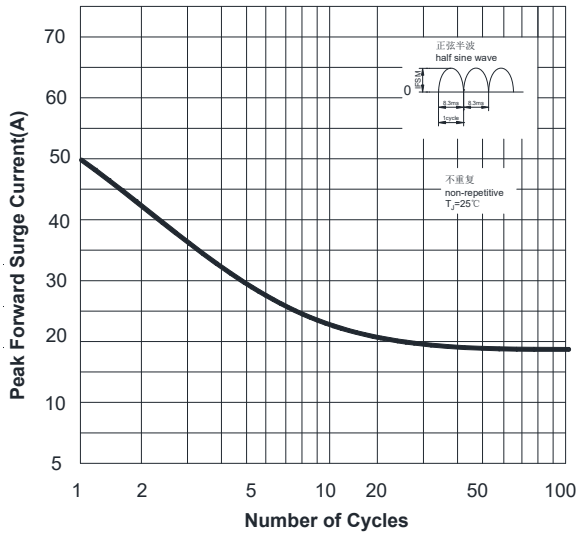


Fig3:Typcial Forward Characteristics

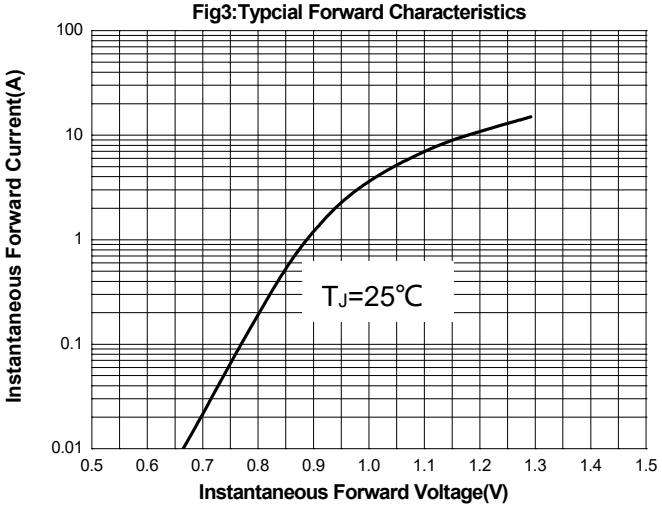


Fig4:Typical Reverse Characteristics

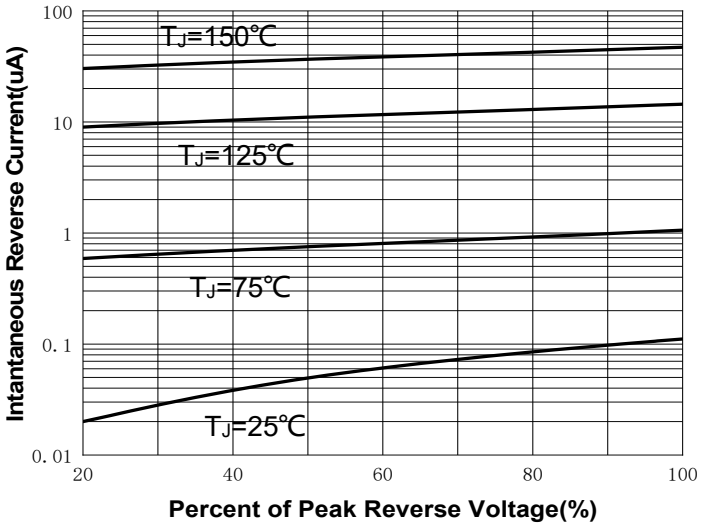
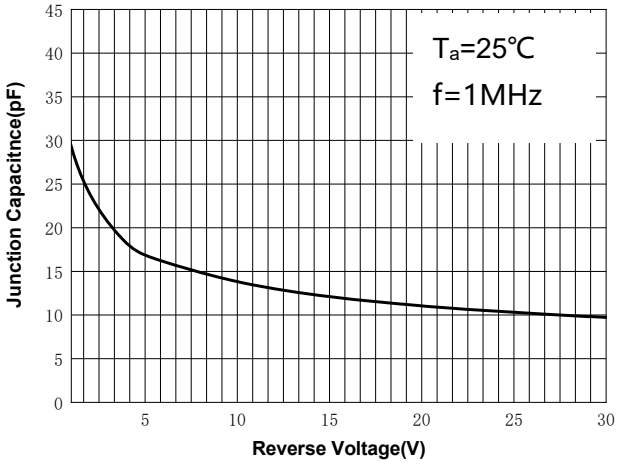


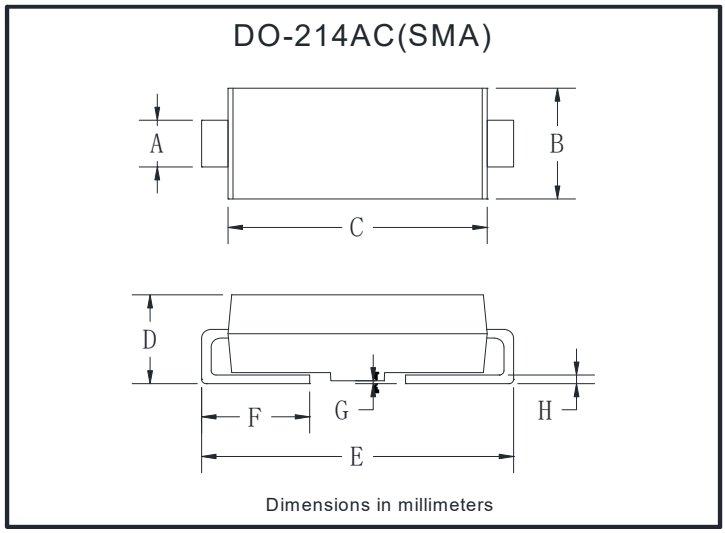
Fig5:Typical Junction Capacitance



■ Ordering Information (Example)

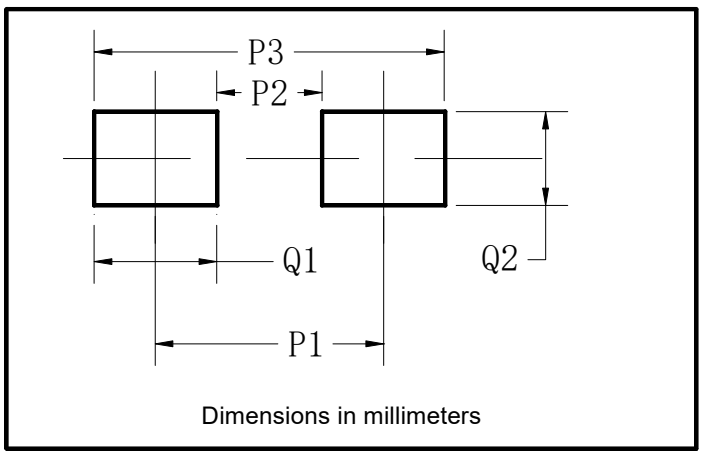
PREFERED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GS2AAQ-GS2MAQ	F2	Approximate 0.067	7500	15000	120000	13” reel

■ 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

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