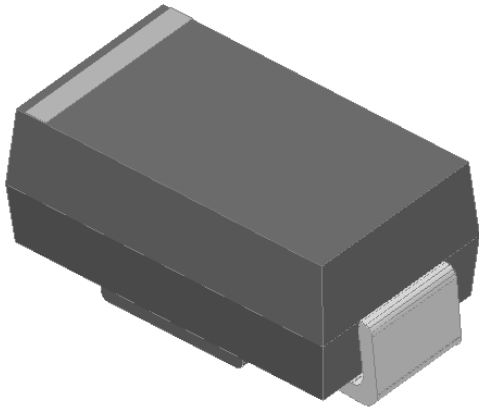


Surface Mount General Purpose Rectifier

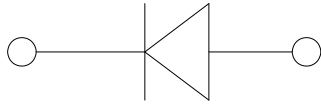


Features

- 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 (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GS1AVQ	GS1BVQ	GS1DVQ	GS1GVQ	GS1JVQ	GS1KVQ	GS1MVQ
Device marking code			GS1AV	GS1BV	GS1DV	GS1GV	GS1JV	GS1KV	GS1MV
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 (Fig.1)	I _O	A	1.0						
Surge(non-repetitive)forward current @ 8.3ms single half sine-wave,1 cycle, T _J =25°C	I _{FSM}	A	35						
Current squared time @1ms≤t≤8.3ms T _J =25°C, Rating of per diode	I ² t	A ² S	5.08						
Storage temperature	T _{stg}	°C	-55~ +175					-55~ +150	
Junction temperature	T _J	°C	-55 ~ +175					-55 ~ +150	

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	GS1AVQ	GS1BVQ	GS1DVQ	GS1GVQ	GS1JVQ	GS1KVQ	GS1MVQ	
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =1.0A	1.1							
Typical junction capacitance	C _J	pF	4V, 1 MHz	10						6	
Maximum DC reverse current at rated DC blocking voltage per diode @ V _{RM} =V _{RRM}	I _{RRM}	μA	T _J =25°C	5							
			T _J =125°C	50							



GS1AVQ THRU GS1MVQ

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

PARAMETER	SYMBOL	UNIT	GS1AVQ	GS1BVQ	GS1DVQ	GS1GVQ	GS1JVQ	GS1KVQ	GS1MVQ
Typical thermal Resistance	$R_{\theta J-A(1)}$	$^{\circ}\text{C/W}$	75 ⁽¹⁾						85 ⁽¹⁾
	$R_{\theta J-L(1)}$	$^{\circ}\text{C/W}$	27 ⁽¹⁾						30 ⁽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

■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GS1AVQ- GS1MVQ	F2	Approximate 0.067	7500	120000	13" reel

■ Characteristics (Typical)

Fig.1:Forward Current Derating Curve

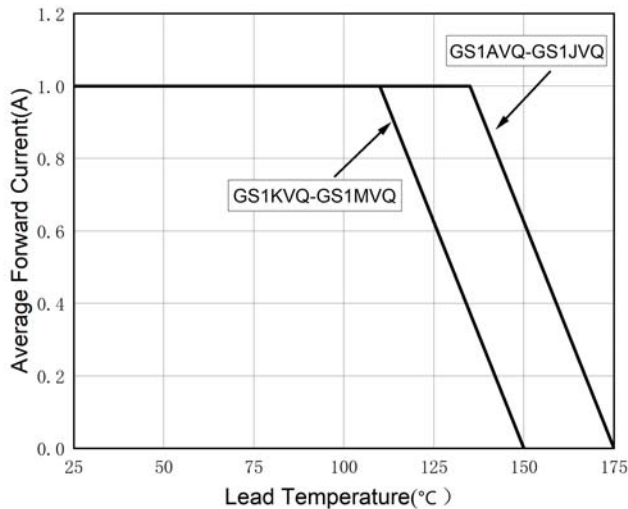


Fig.2: Forward Surge Current Capability

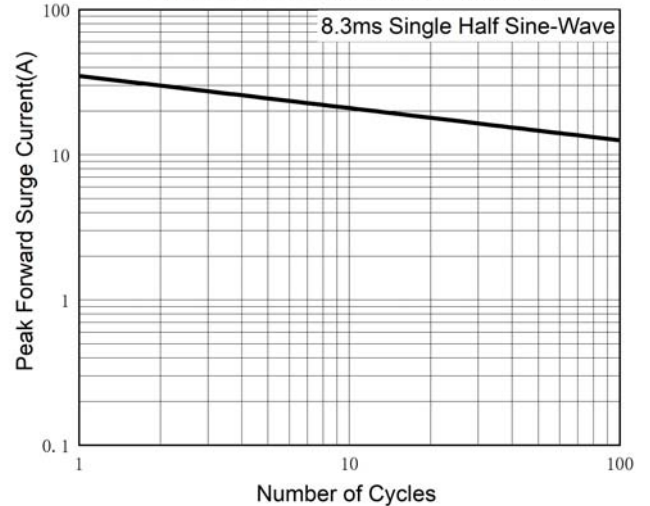


Fig.3:Typical Instantaneous Forward Characteristics

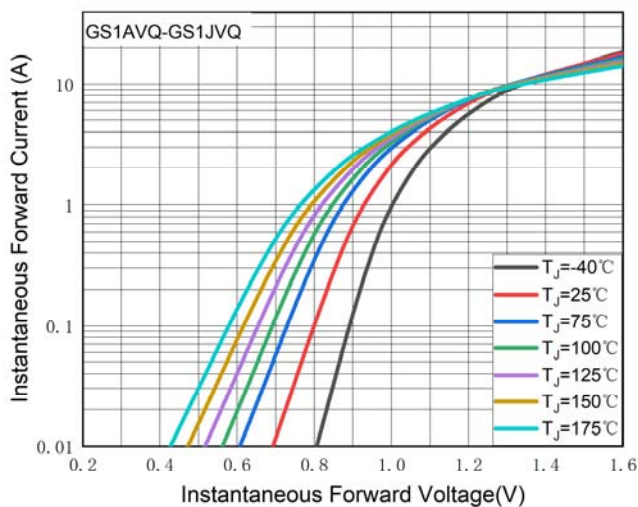
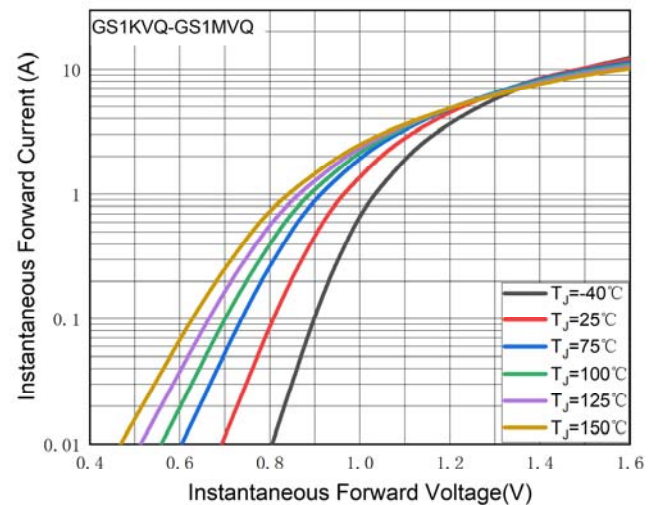


Fig.4:Typical Instantaneous Forward Characteristics





GS1AVQ THRU GS1MVQ

Fig.5: Typical Reverse Leakage Characteristics

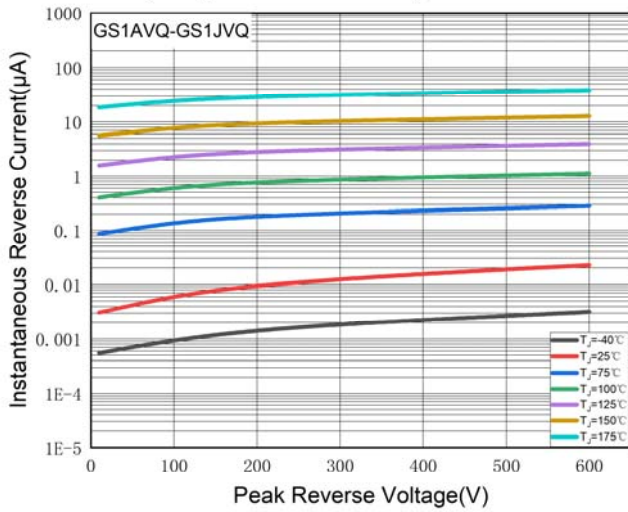


Fig.6: Typical Reverse Leakage Characteristics

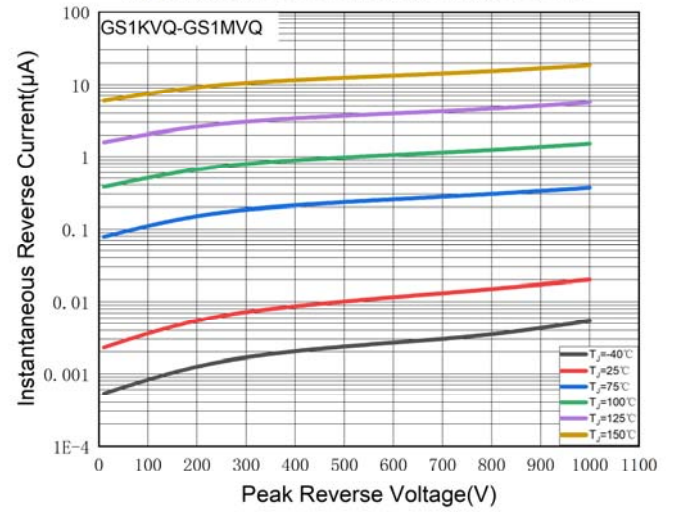
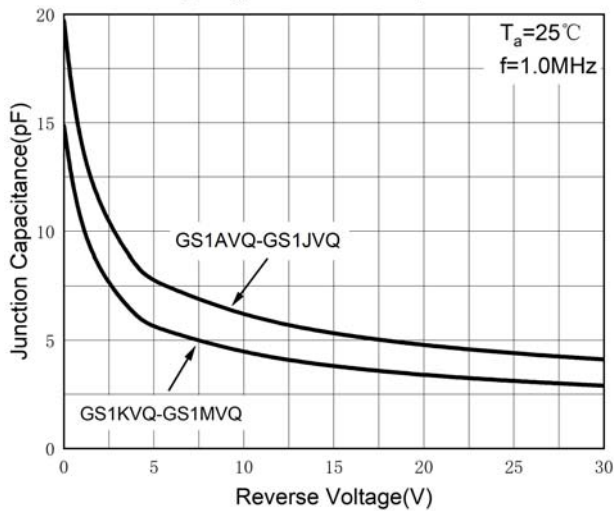


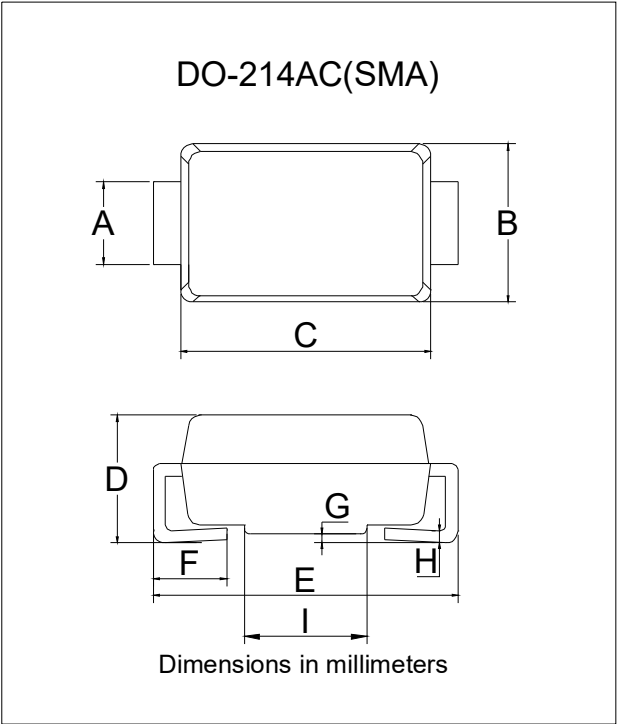
Fig.7: Typical Junction Capacitance





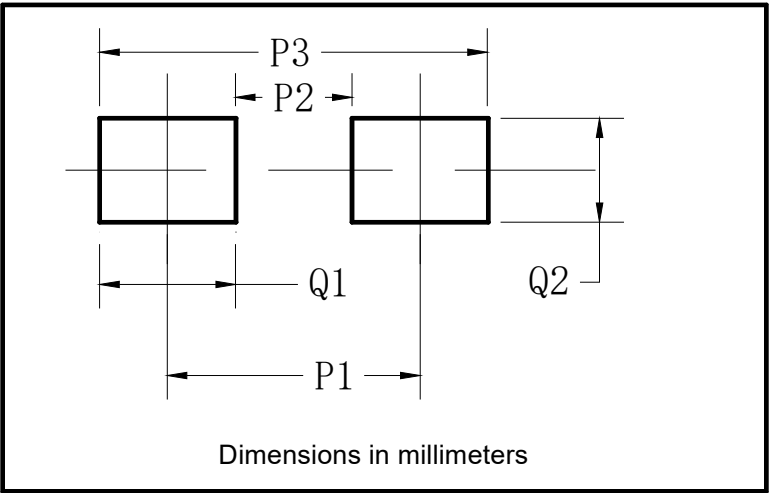
GS1AVQ THRU GS1MVQ

■ 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

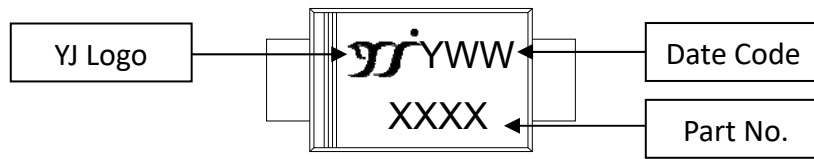


DO-214AC(SMA)	
Dim	Millimeters
P1	4.00
P2	1.50
P3	6.50
Q1	2.50
Q2	1.70



GS1AVQ THRU GS1MVQ

■ Marking Information



Note:

1. All marking is at middle of the product body
2. All marking is in laser printing
3. XXXX is marking code, like GS1MVQ marking code is GS1MV.
4. Body color: Black
5. YWW is date code, "Y" is year. "WW" is week.

For instance:

The 17th week of 2019, date code is 917

The 17th week of 2020, date code is 017



GS1AVQ THRU GS1MVQ

Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with automotive electronics, are not designed for use in medical, lifesaving, lifesustaining, or military. Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.