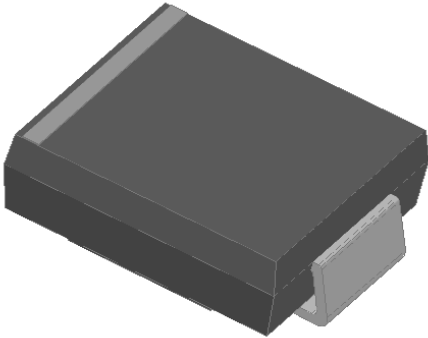


Surface Mount General Purpose Rectifier



Features

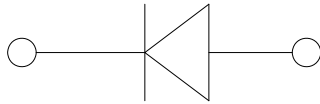
- High efficiency
- High current capability
- High reliability
- High surge current capability
- Low power loss
- Solder dip 260 °C max. 10 s, per JESD 22-B106
- Part no. with suffix "Q" means AEC-Q101 qualified

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-214AB (SMC)
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solder able per J-STD-002 and JESD22-B102
- **Polarity:** Color band denotes cathode end



■ Maximum Ratings (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GS10GQ	GS10JQ	GS10KQ	GS10MQ
Device marking code			GS10G	GS10J	GS10K	GS10M
Repetitive Peak Reverse Voltage	V _{RRM}	V	400	600	800	1000
Maximum RMS voltage	V _{RMS}	V	280	420	560	700
Average Rectified Output Current @60Hz sine wave, Resistance load, T _L (Fig.1)	I _o	A	10.0			
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T _a =25°C	I _{FSM}	A	200			
Storage Temperature	T _{STG}	°C	-55 ~+150			
Junction Temperature	T _J	°C	-55 ~+150			

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	GS10GQ	GS10JQ	GS10KQ	GS10MQ
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =10.0A	1.1			
Maximum DC reverse current at rated DC blocking voltage per diode	I _R	μA	T _a =25°C	10			
			T _a =125°C	250			
Typical junction capacitance	C _J	pF	1MHz, V _R =4V.	60			



GS10GQ THRU GS10MQ

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

PARAMETER		SYMBOL	UNIT	GS10GQ	GS10JQ	GS10KQ	GS10MQ
Thermal Resistance	Junction to ambient	R _{θJ-A}	°C/W	75 ⁽¹⁾			
	Junction to lead	R _{θJ-L}		12 ⁽²⁾			
	Junction to case	R _{θJ-C}		10 ⁽²⁾			

Note
 (1) Thermal resistance from junction to ambient.
 (2) Thermal resistance from junction to lead and case mounted on P.C.B. with 0.6" x 0.6" (16 mm x 16 mm) copper pad areas.

■ Characteristics(Typical)

Fig.1:I_O-T_L Curve

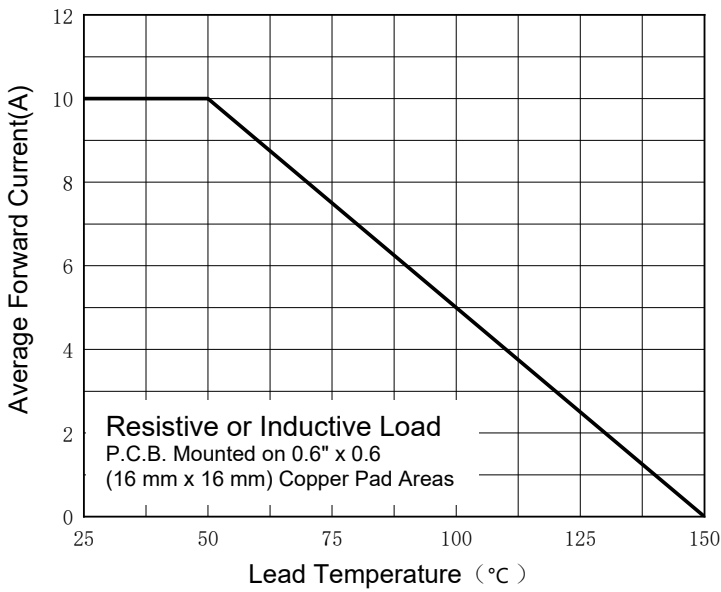


Fig.2: Surge Forward Current Capability

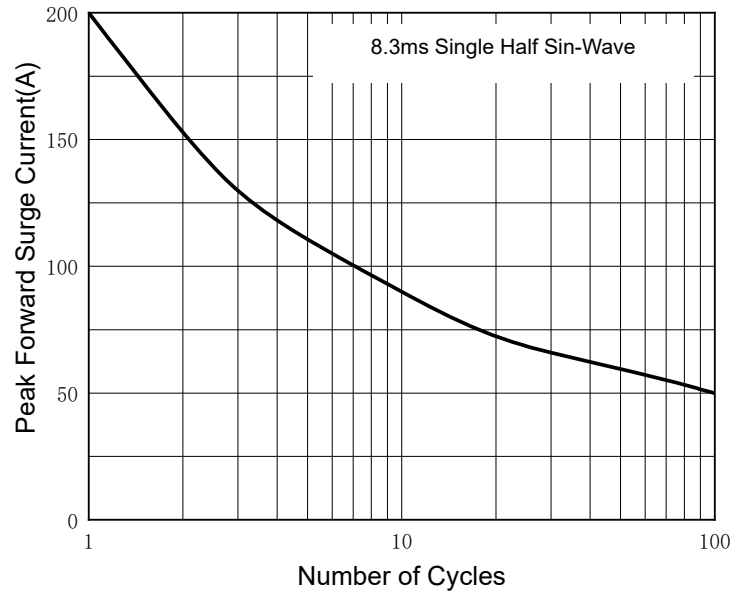


Fig.3: Typical Forward Characteristics

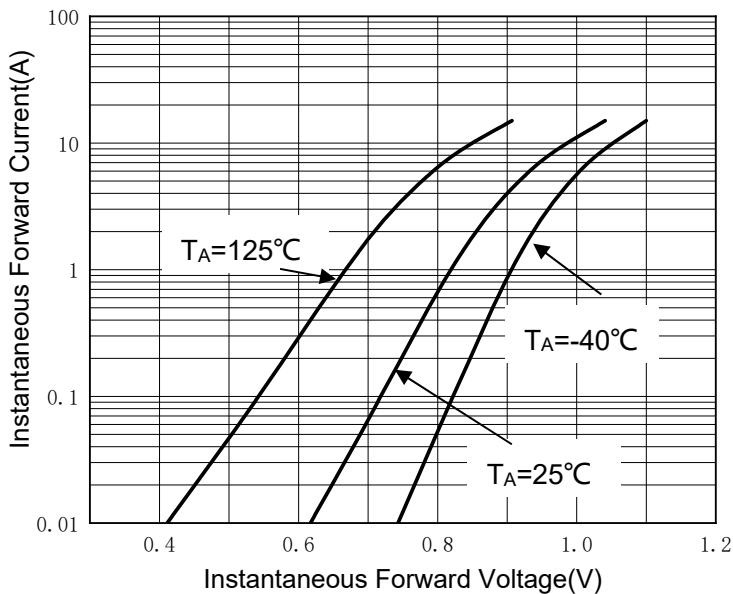
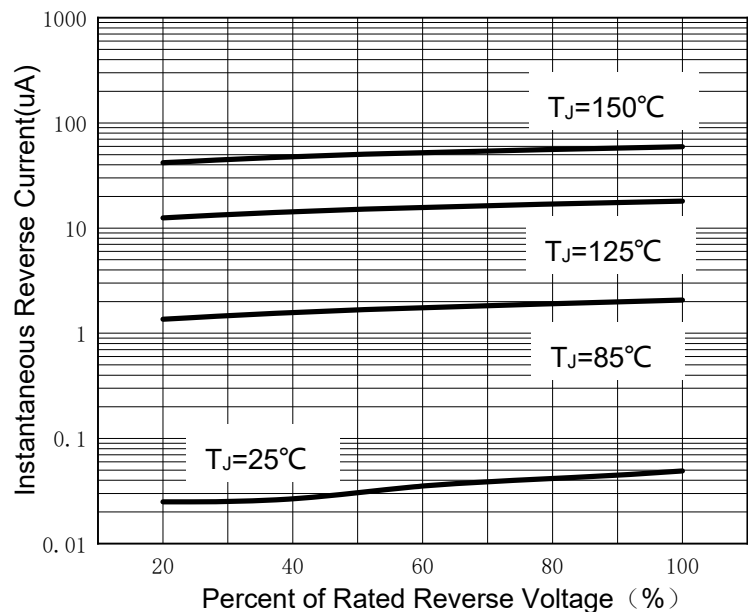


Fig.4: Typical Reverse Characteristics



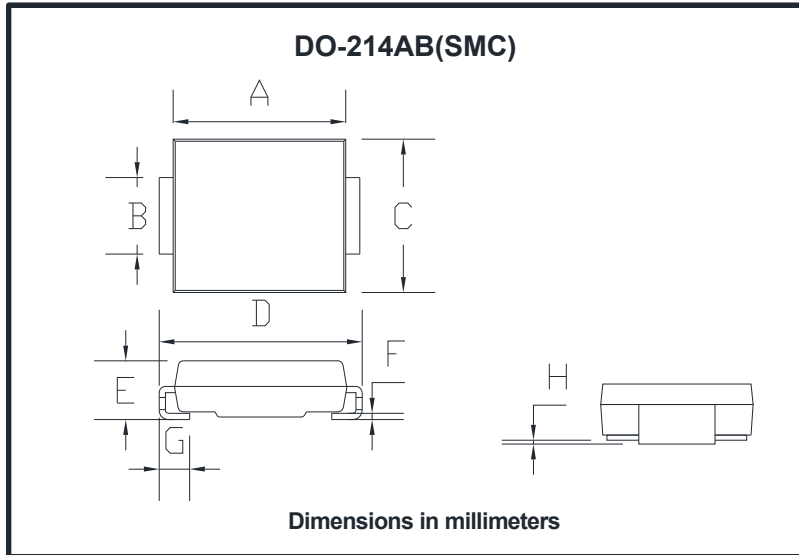


GS10GQ THRU GS10MQ

■ Ordering Information (Example)

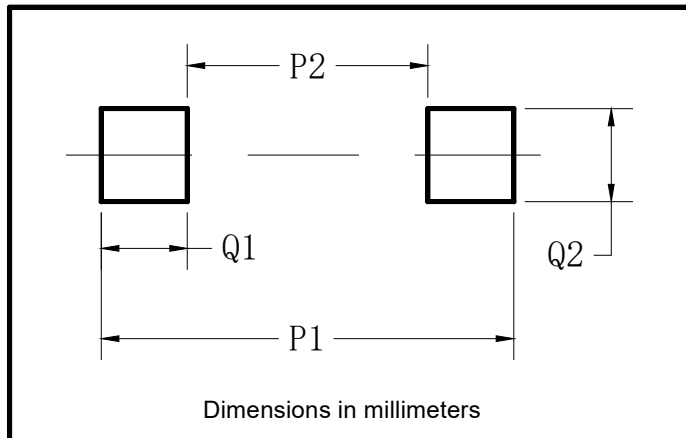
PREFERED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GS10GQ-GS10MQ	F1	Approximate 0.253	3000	6000	42000	13" reel

■ Outline Dimensions



DO-214AB (SMC)		
Dim	Min	Max
A	6.60	7.11
B	2.85	3.27
C	5.59	6.22
D	7.75	8.13
E	1.99	2.61
F	0.15	0.31
G	0.76	1.52
H	0.05	0.20

■ Suggested pad layout



Dim	Typ
P1	9.9
P2	3.84
Q1	3.03
Q2	3.82



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