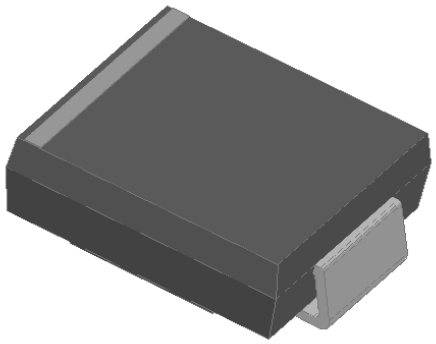
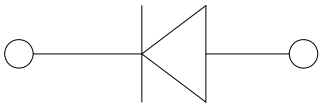
Surface Mount General Purpose Rectifier





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

- **P**ackage: DO-214AB (SMC)

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: Color band denotes the cathode end

■Maximum Ratings (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GS12M
Device marking code			GS12M
Maximum Repetitive peak reverse voltage	V_{RRM}	V	1000
Maximum RMS Voltage	V_{RMS}	V	700
Maximum DC Blocking Voltage	V_{DC}	V	1000
Average Rectified Output Current @60Hz sine wave, Resistance load, TL (FIG.1)	I_O	A	12
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25℃	I_{FSM}	A	200
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃			400
Current squared time @1ms≤t≤8.3ms Tj=25℃	I^2t	A^2s	166
Storage Temperature	Tstg	℃	-55 ~ +150
Junction Temperature	T_j	℃	-55 ~ +150

■Electrical Characteristics (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	GS12M
Maximum instantaneous forward voltage	V_F	V	I_{FM}=12A	1.1
Maximum DC reverse current at rated DC blocking voltage	I_R	μA	T_j=25℃	5
			T_j=125℃	100
Typical junction capacitance	Cj	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	55

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

PARAMETER	SYMBOL	UNIT	GS12M
Typical Thermal resistance	$R_{\theta J-A}$(1)	℃/W	50
	$R_{\theta J-L}$(1)		10
	$R_{\theta J-C}$(1)		8

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

■Ordering Information (Example)

PREFERED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GS12M	F1	Approximate 0.261	3000	/	42000	13” reel

■ Characteristics(Typical)

FIG.1: Io-TL Curve

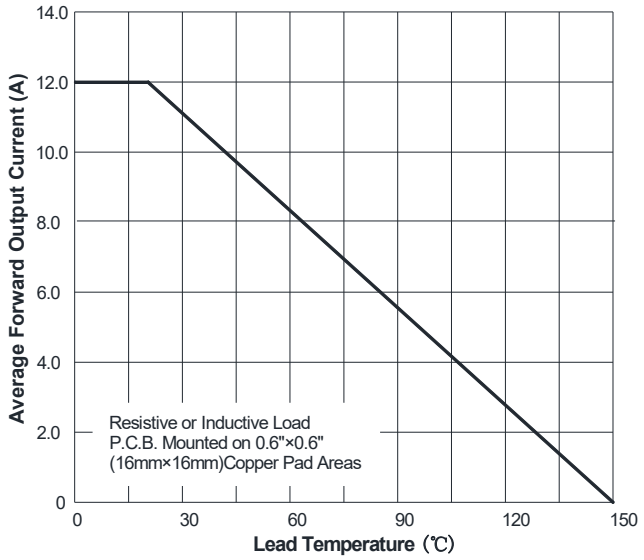


FIG.2: Forward Surge Current Capability

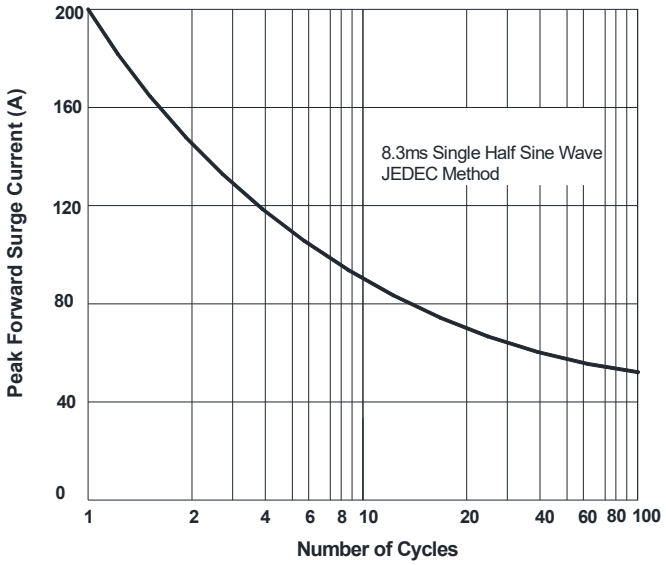


FIG.3: Typical Forward Voltage

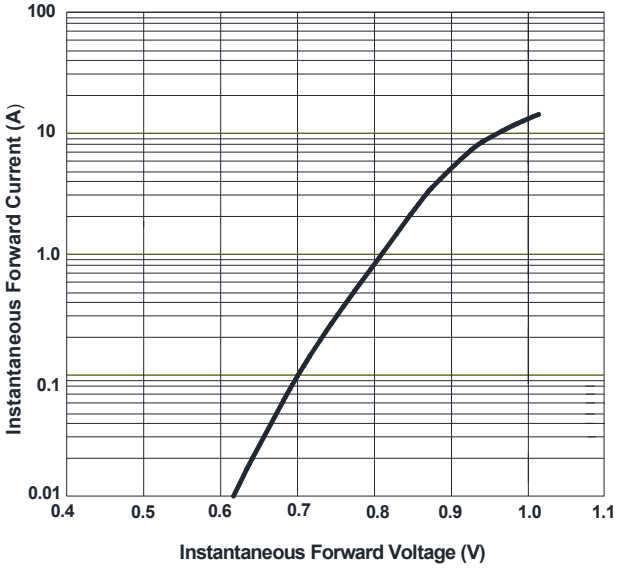
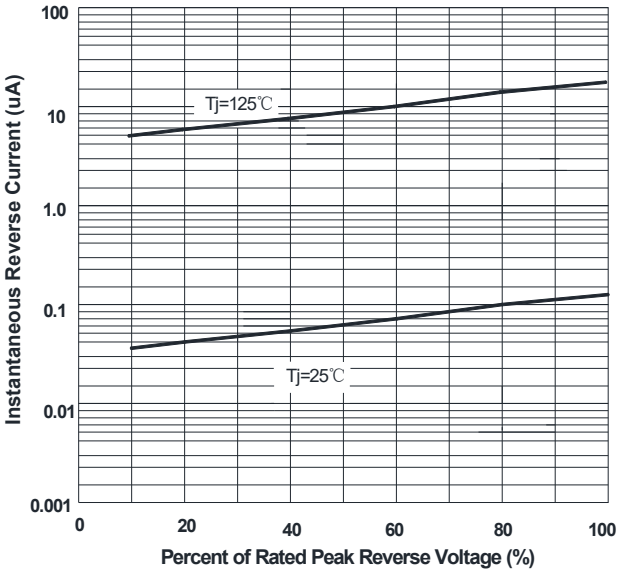
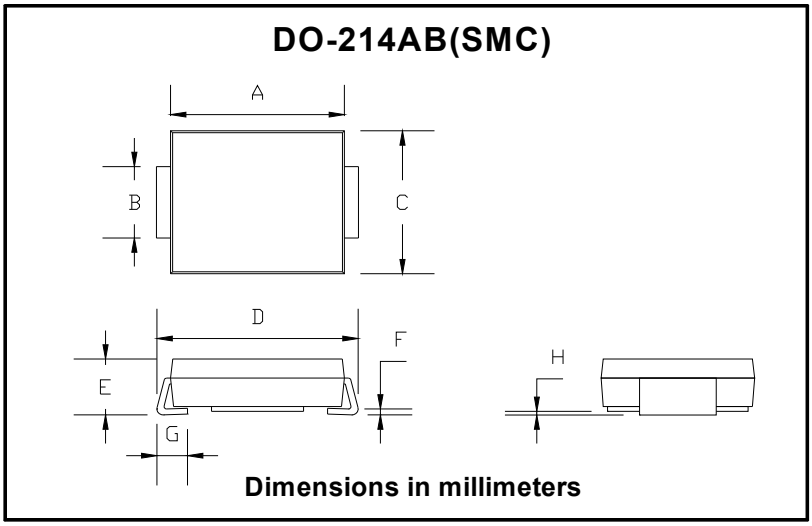


FIG.4: Typical Reverse Characteristics

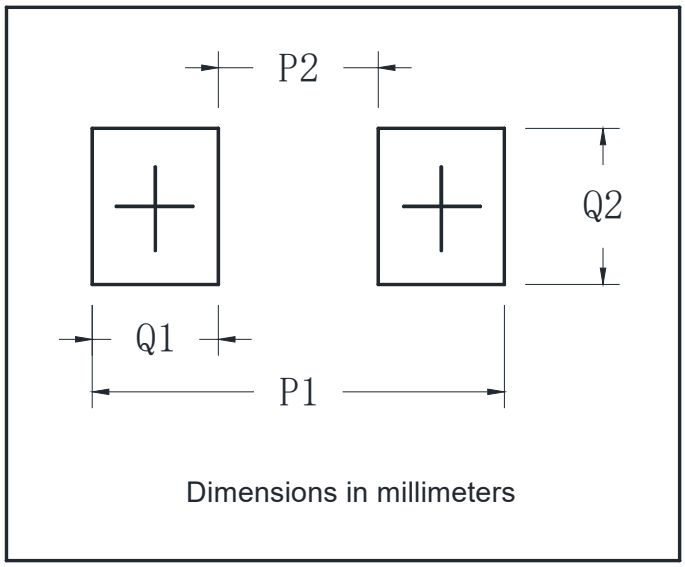


■ Outline Dimensions



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



DO-214AB (SMC)	
Dim	Min
P1	9.9
P2	3.84
Q1	3.03
Q2	3.82

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