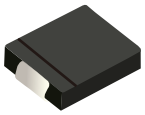
GS3AC-GS3MC

Surface Mount General Purpose Rectifier

FEATURES

- Low profile package
- Idea for printed circuit board
- Glass passivated Junction chip
- High forward surge current capability



DO-214AB(SMC)

Schematic Symbol

MECHANICAL DATA

- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Polarity: Cathode line denotes the cathode end

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS AND CHARACTERISTICS (T_A=25°C)

Parameter		Symbol	GS3AC	GS3BC	GS3DC	GS3GC	GS3JC	GS3KC	GS3MC	Unit
Marking			GS3A	GS3B	GS3D	GS3G	GS3J	GS3K	GS3M	
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage		V_{RMS}	35	70	140	280	420	560	700	
Maximum DC Blocking Voltage		V_{DC}	50	100	200	400	600	800	1000	
Average Rectified Output Current @60hz Sine Wave, Resistance Load, TL (Fig.1)		I_O	3.0							A
Forward Surge Current (Non-repetitive) @60hz Half-sine Wave,1 Cycle, Tj=25°C		I_{FSM}	100							
Forward Surge Current (Non-Repetitive) @1ms, Square Wave, 1 Cycle, Tj=25°C			200							
Maximum Instantaneous Forward Voltage I_{FM}=3.0A		V_F	1.1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T_J=25°C	I_R	5							μA
	T_J=125°C		100							
Typical Junction Capacitance Measured at 1MHz And Applied Reverse Voltage Of 4.0 V.D.C		C_J	25							pF
Current Squared Time @1ms≤t≤8.3ms Tj=25°C		I^2t	41.5							A^2s
Typical Thermal Resistance (1)		$R_{\theta J-A}$	48							°C/W
		$R_{\theta J-L}$	15							
		$R_{\theta J-C}$	12							
Operating Junction And Storage Temperature Range		T_J,T_{STG}	-55 to +150							°C

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

CHARACTERISTIC CURVES

Fig. 1- Io-TL Curve

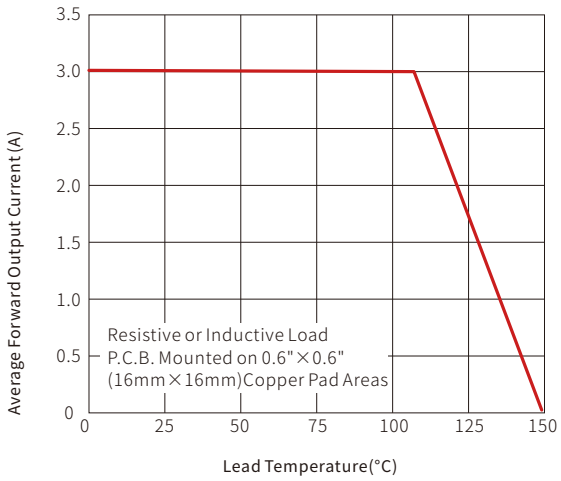


Fig. 2-Forward Surge Current Capability

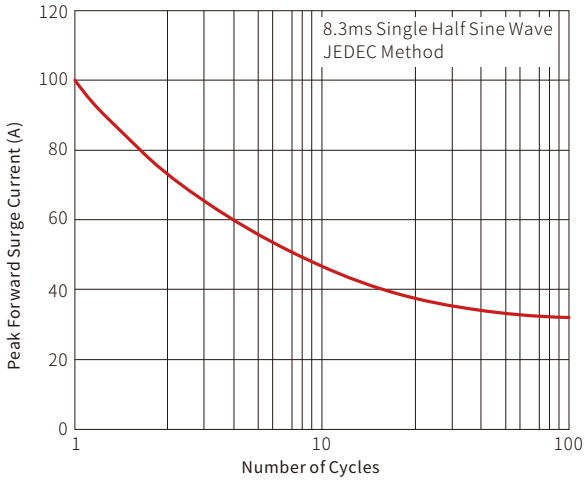


Fig. 3-Typical Forward Voltage

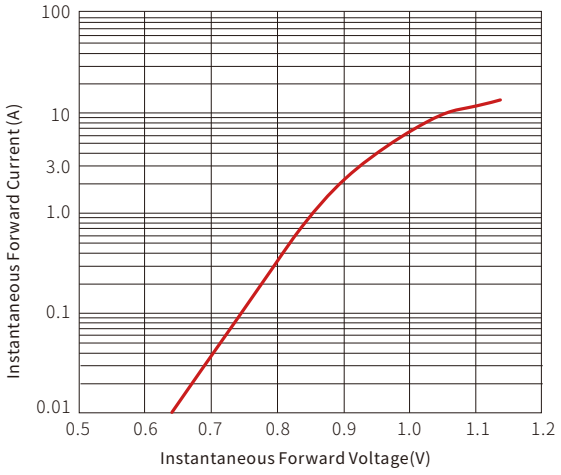
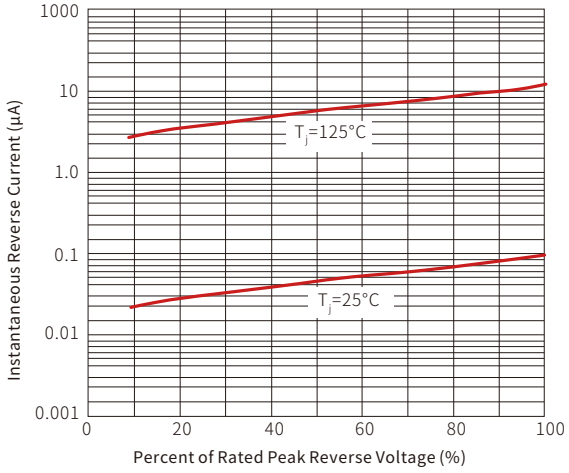
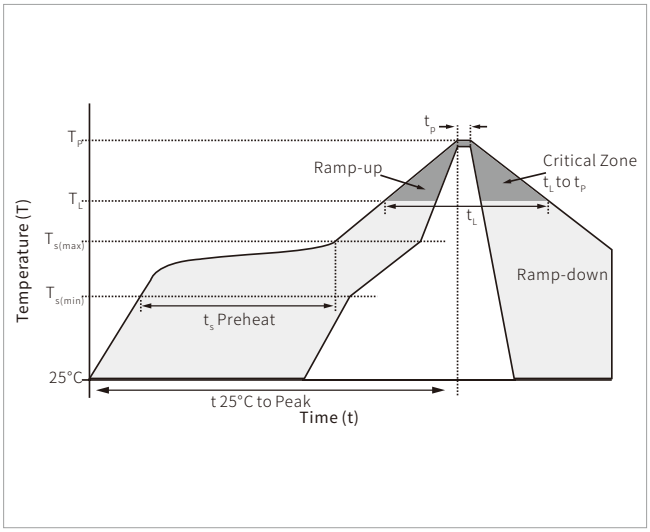


Fig. 4-Typical Reverse Characteristics

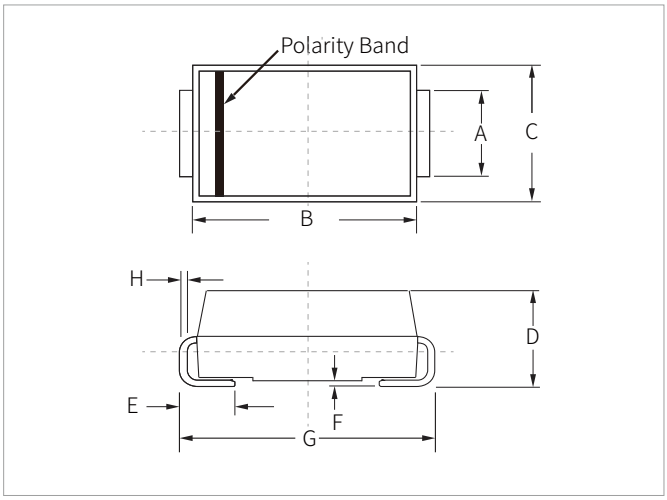


SOLDERING PARAMETERS

Reflow Condition		Lead–free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak		3°C/second max
	$T_{S(max)}$ to T_L - Ramp-up Rate	3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_P)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_P)		8 minutes max.
Do not exceed		260°C

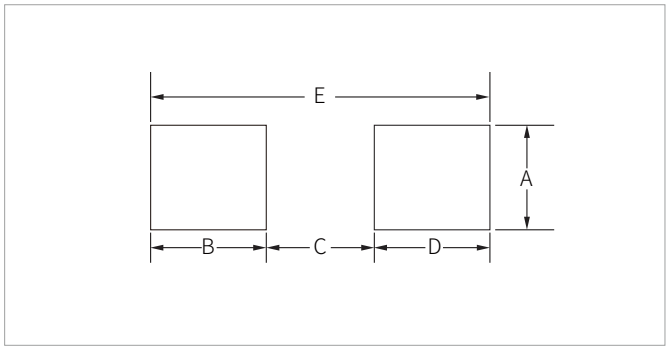


DO-214AB(SMC) PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.80	3.20	0.110	0.126
B	6.60	7.20	0.260	0.283
C	5.70	6.10	0.224	0.240
D	2.15	2.75	0.085	0.108
E	1.00	1.60	0.039	0.063
F	0.02	0.20	0.000	0.008
G	7.60	8.00	0.299	0.315
H	0.15	0.30	0.006	0.012

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.30	-	0.129	-
B	2.40	-	0.094	-
C	-	4.20	-	0.165
D	2.40	-	0.094	-
E	8.20REF		0.323REF	

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
GS3AC-GS3MC	DO-214AB(SMC)	3000PCS	13"

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