GN6A thru GN6M

Surface Mount Glass Passivated Rectifier

Reverse Voltage 50 to 1000V Forward Current 6A

Features

- Glass passivated chip junction
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0

RoHS COMPLIANT

DO-214AB（SMC）

Typical Applications

For use of general purpose rectification in lighting, cellular phone, portable device, power supplies and other consumer applications.

Maximum Ratings (TA = 25 °C unless otherwise noted)

Parameter	Symbol	GN6A	GN6B	GN6D	GN6G	GN6J	GN6K	GN6M	Unit
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	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average output rectified current	$I_{F(AV)}$	6.0							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	180							A
Rating for fusing(t<8.3ms)	I^2t	135.0							A^2sec
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							°C

Electrical Characteristics (TA = 25 °C unless otherwise noted)

Parameter	Test Conditions	Symbol	GN6A	GN6B	GN6D	GN6G	GN6J	GN6K	GN6M	Unit
Maximum instantaneous forward voltage	I_F=6.0A T_A=25℃	V_F	1.10							Volts
Maximum DC reverse current at rated DC blocking voltage	T_A=25℃	I_R	5.0							μA
	T_A=125℃		200							
Typical junction capacitance	4.0 V, 1 MHz	C_J	33							pF

Thermal Characteristics

Parameter	Symbol	GN6A	GN6B	GN6D	GN6G	GN6J	GN6K	GN6M	Unit
Typical thermal resistance(1)	$R_{\theta JA}$	29							℃/W
	$R_{\theta JI}$	8							

Notes:1. The thermal resistance from junction to ambient,case or mount,mounted on P.C.B with 30×30mm copper pads,2 OZ,FR4 PCB

Ratings and Characteristics Curves

(TA = 25℃ unless otherwise noted)

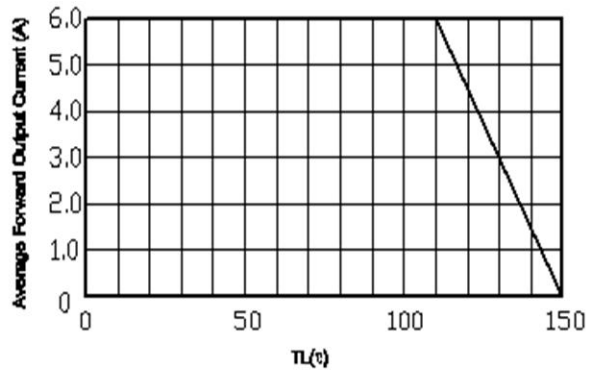


Figure 1.Forward Current Derating Curve

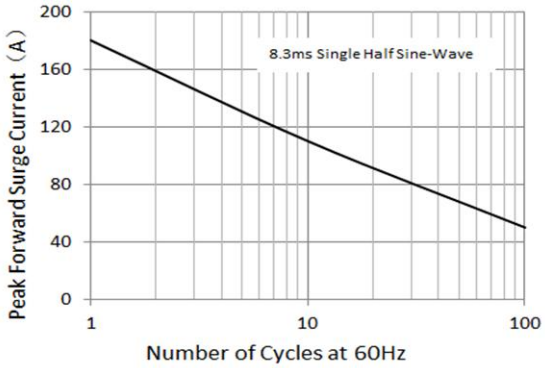


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

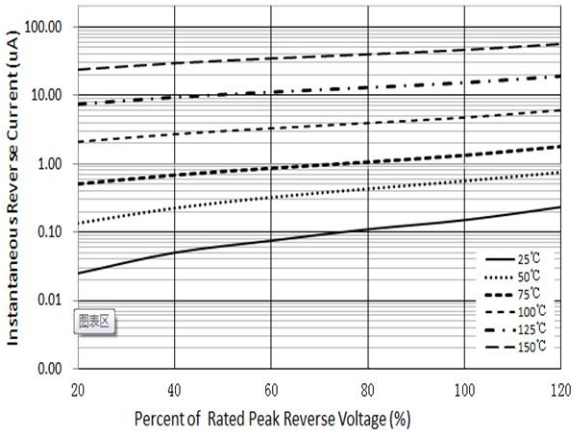


Figure 3. Typical Reverse Characteristics

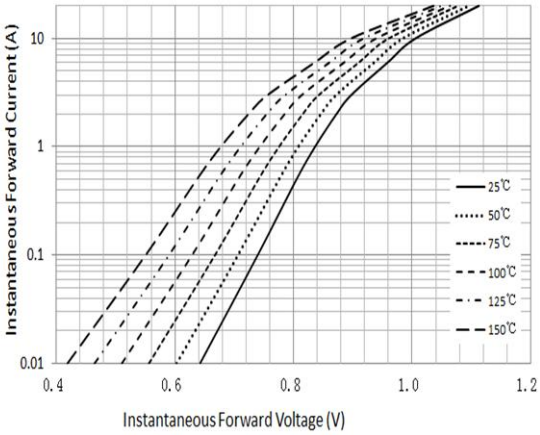


Figure 4. Typical Instantaneous Forward Characteristics

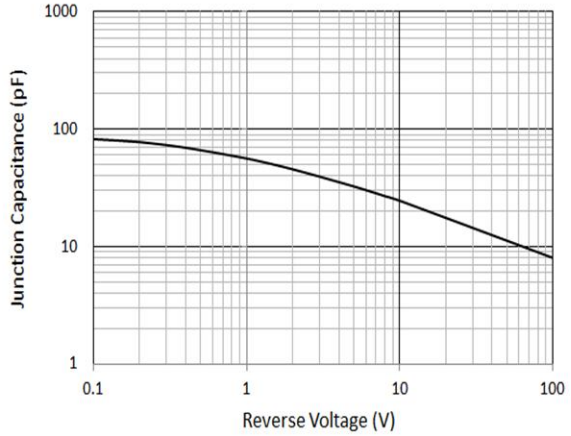
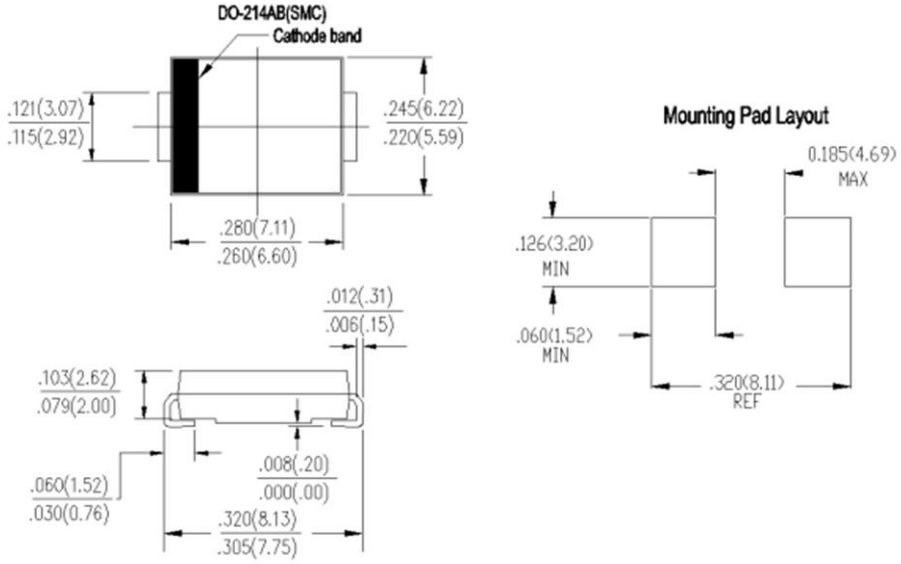


Figure 5. Typical Junction Capacitance

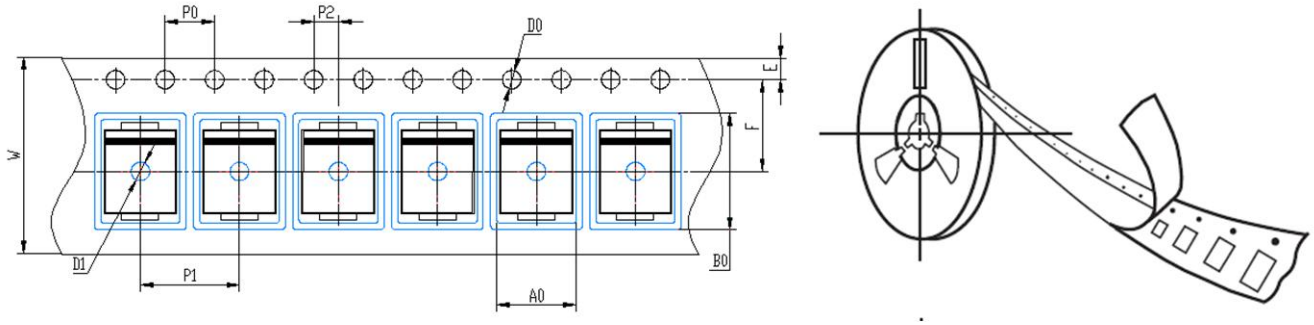
Package Outline Dimensions



Packing Information

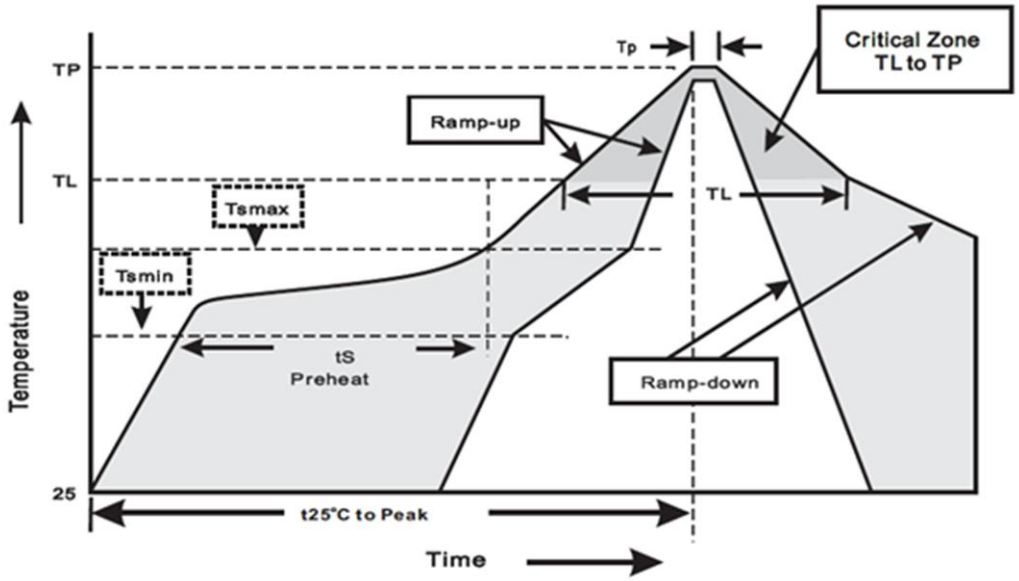
3000 pcs/Reel, 14 Reels/Box; 16mm Tape, 13" Reel

Tape & Reel Specification



Symbo	SMC(mm)
W	16±0.2
E	1.75±0.1
F	7.5±0.05
D0	1.5±0.1
D1	1.50 +0.1/-0
P0	4.0±0.1
P1	8.0±0.1
P2	2.0±0.05
A0	6.22±0.1
B0	8.31±0.1

Soldering Parameters



Reflow Soldering		Sn-Pb Eutectic Assembly	Pb-Free Assembly
Pre Heat	- Temperature Min (Ts(min))	100°C	150°C
	- Temperature Max (Ts(max))	150°C	200°C
	- Time (min to max) (ts)	60 – 120 secs	60 – 180 secs
Average ramp up rate (Liquidus Temp (TL) to peak		3°C/second max	3°C/second max
TS(max) to TL - Ramp-up Rate		3°C/second max	3°C/second max
Reflow	- Temperature (TL) (Liquidus)	183°C	217°C
	- Time (min to max) (ts)	60 – 150 seconds	60 – 150 seconds
Peak Temperature (TP)		240+0/-5 °C	240+0/-5°C
Time within 5°C of actual peak Temperature (tp)		10 –30 seconds	20 – 40 seconds
Ramp-down Rate		6°C/second max	6°C/second max
Time 25°C to peak Temperature (TP)		6 minutes Max.	8 minutes Max.
Do not exceed		260°C	260°C

Wave Soldering	
Peak Temperature :	260+0/-5°C
Dipping Time :	10 seconds
Soldering :	1 time

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