

GS8M

8.0AMPS. GLASS PASSIVATED SURFACE MOUNT RECTIFIERS

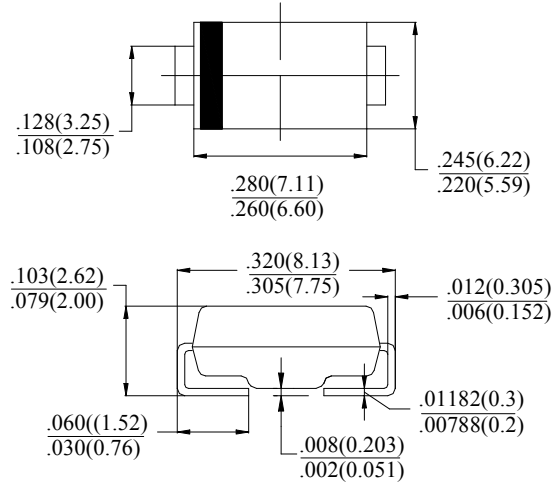
FEATURE

- . High current capability
- . Low forward voltage drop
- . Low power loss, high efficiency
- . High surge capability
- . High temperature soldering guaranteed:
260°C/10 seconds at terminals.
- . For surface mounted application.
- . Easy pick and place.

MECHANICAL DATA

- . Case: Molded plastic
- . Epoxy: UL94V-0 rate flame retardant
- . Lead: MIL-STD- 202E, Method 208 guaranteed
- . Polarity:Color band denotes cathode end
- . Weight: 0.230 grams

SMC (DO-214AB)



Dimensions in inches and (millimeters)

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%

MAXIMUM RATINGS (T_C=25°C unless otherwise noted)

Parameter	Symbol	GS8M	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	1000	V
Maximum RMS Voltage	V_{RMS}	700	V
Maximum DC blocking Voltage	V_{DC}	1000	V
Average Forward Rectified Current at T _C ≤90°C	$I_{F(AV)}$	8.0	A
Non-repetitive forward surge current, 8.3mS half sine-wave	I_{FSM}	200	A
Typical Junction Capacitance (Note1)	C_J	40	pF
Minimum Reverse Recovery Time (Note 2)	t_{rr}	800	nS
Operation Junction Temperature and Storage Temperature	T_J , T_{STG}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (T_C=25°C unless otherwise noted)

Parameter	Symbol	Min	Typ	Max	Units
Instantaneous Forward voltage at 8A @T _J =25°C @T _J =125°C	V_F	----	0.95 0.86	1.1 ----	V
reverse current at rated DC blocking voltage @T _J =25°C @T _J =125°C	I_R	----- -----	----- -----	10.0 100.0	uA

THERMAL CHARACTERISTICS (T_C=25°C unless otherwise noted)

Parameter	Symbol	GS8M	Units
Typical Thermal Resistance (Note3)	$R_{(JA)}$	50	°C/W
	$R_{(JC)}$	19	

Note:

1. T_J=25°C, V_R = 4V_{DC}@1Mhz
2. Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
3. Measured on P.C.Board with 15.0mm*15.0mm*1.6mm Copper Pad Areas

RATING AND CHARACTERISTIC CURVES (GS8M)

FIG.1-TYPICAL FORWARD CURRENT BERATING CURVE

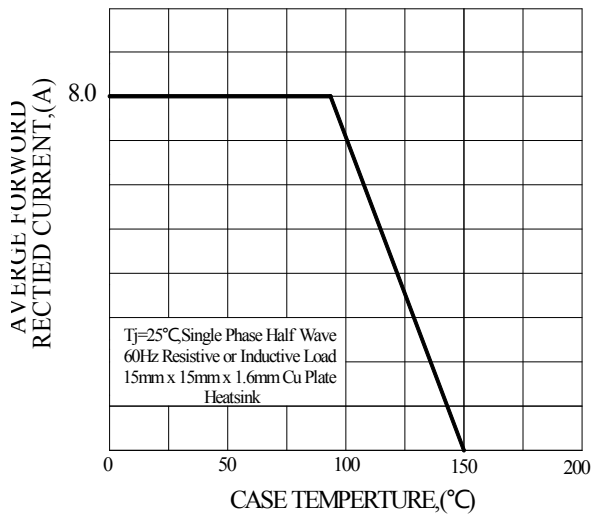


FIG.2-TYPICAL INSTANTENOUS FORWARD CHATACTERISTICS

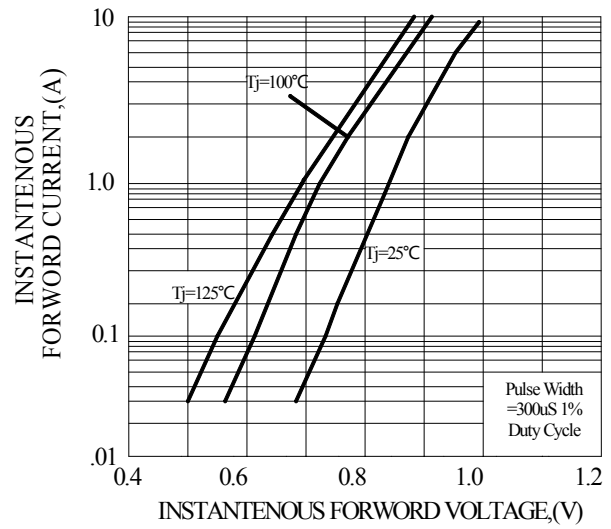


FIG.3-MAXIMUN NON-REPEITIVE FORWARD SURGE CURRENT

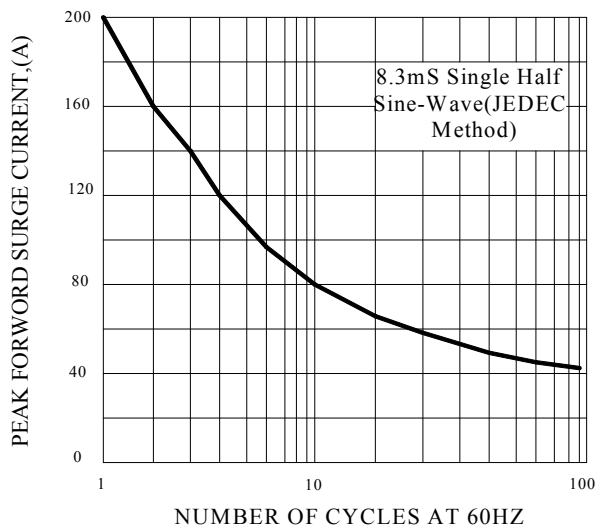


FIG.4-TYPICAL REVERSE CHATACTERISTICS

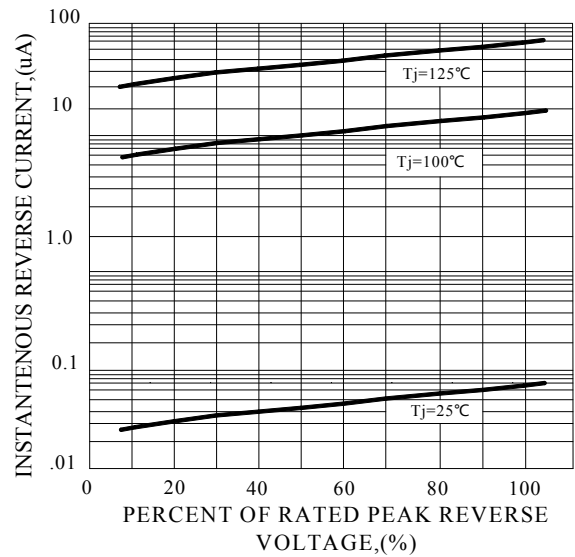
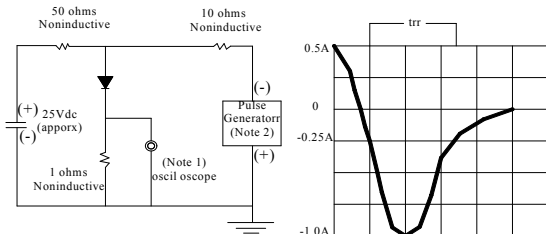
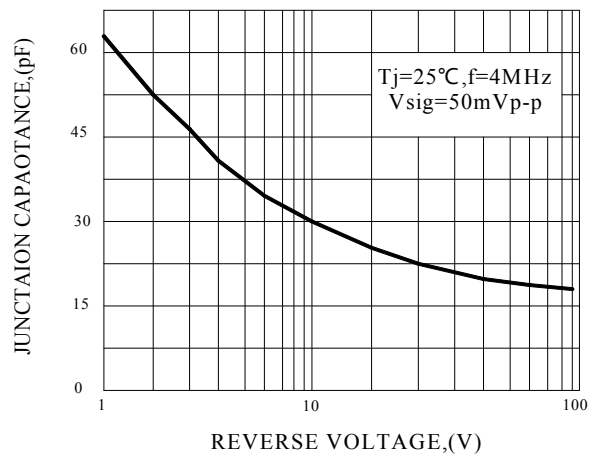


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



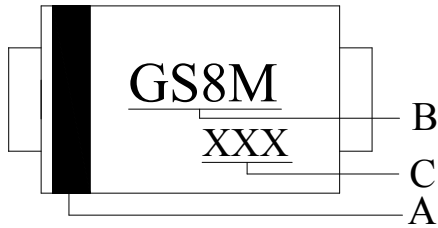
- Notes: 1 Rise Time=7nS max,
 Input Impedance=1mogohm,22pF
 2 Rise Time=10nS max,
 Soule Impedance= 50ohms

FIG.6-TYPIAL JUNCTION CAPACITANCE



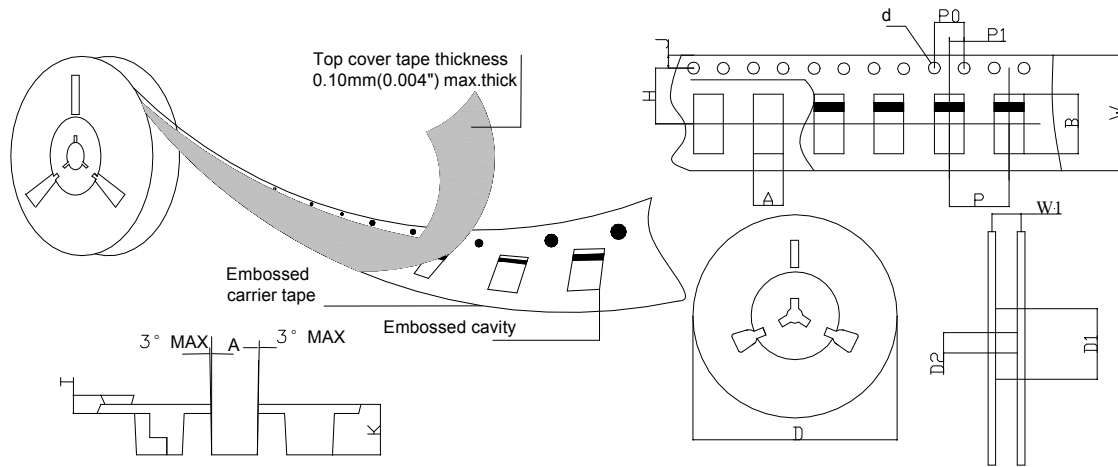
Marking and packaging illustration

1、Marking



SYMBOL	Explanation
A	Color Band Denotes Cathode
B	Product Name
C	Date Code

2、Packaging



SPECIFICATIONS mm(inch)		PACKAGE	SPECIFICATIONS mm(inch)		PACKAGE
ITEM	SYM BOL	SMC (DO-214AB)	ITEM	SYM BOL	SMC (DO-214AB)
Carrier width	A	6.15(0.242)Max	Carrier depth	K	2.54(0.100)Typ
Carrier length	B	8.41(0.331)Max	Punch hole pitch	P	8.00(0.315)Typ
Sprocket hole	d	ø1.55(0.061)Typ	Sprocket hole pitch	P0	4.00(0.157)Typ
Reel outer diameter	D	330.0(13.0)Typ	Embossment center	P1	2.00(0.079)Typ
Reel inner diameter	D1	74.0(2.913)Min	Overall tape thickness	T	0.25(0.010)Typ
Feed hole diameter	D2	13.0(0.512)Typ	Tape width	W	16.0(0.430)Typ
Sprocket hole position	J	1.75(0.069)Typ	Reel width	W1	16.5(0.650)Min
Punch hole position	H	7.50(0.295)Typ			