

Features

- ✧ UL Recognized File # E-326243
- ✧ Ideal for printed circuit board
- ✧ Reliable low cost construction utilizing molded plastic technique
- ✧ High surge current capability
- ✧ High temperature soldering guaranteed:
260°C/10 seconds at 5 lbs., (2.3kg) tension
- ✧ Small size, simple installation
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode



Mechanical Data

- ✧ Case: Molded plastic body
- ✧ Terminal: Leads solderable per MIL-STD-202 Method 208
- ✧ Weight: 0.123 grams

Ordering Information (example)

Part No.	Package	Packing	Packing code	Green Compound Packing code
MBS2	MBS	3 K / 13" REEL	RC	RCG

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	MBS2	MBS4	MBS6	MBS8	MBS10	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	200	400	600	800	1000	V
Maximum Average Forward Rectified Current On glass-epoxy P.C.B. On aluminum substrate	$I_{F(AV)}$	0.5 0.8					A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	35					A
Maximum Instantaneous Forward Voltage (Note 1) @ 0.4A	V_F	1.0					V
Maximum DC Reverse Current $T_A=25\text{ }^{\circ}\text{C}$ at Rated DC Blocking Voltage $T_A=125\text{ }^{\circ}\text{C}$	I_R	5 100					uA
Rating of fusing ($t<8.3\text{ms}$)	I^2T	5.08					A ² S
Typical Junction Capacitance Per Leg (Note 2)	C_j	13					pF
(Note 3) Typical Thermal Resistance (Note 4) (Note 3)	$R_{\theta JA}$ $R_{\theta JA}$ $R_{\theta JL}$	85 70 20					°C/W
Operating Temperature Range	T_J	- 55 to + 150					°C
Storage Temperature Range	T_{STG}	- 55 to + 150					°C

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

Note 2: Measure at 1.0MHz and Applied Reverse Voltage of 4.0 Volts D.C.

Note 3: On glass epoxy P.C.B. mounted on 0.05" x 0.05" (1.3mm x 1.3mm) pads

Note 4: On aluminum substrate P.C.B. with an area of 0.8" x 0.8" (20mm x 20mm) mounted on 0.05" x 0.05" (1.3mm x 1.3mm) solder pads

RATINGS AND CHARACTERISTIC CURVES (MBS2 THRU MBS10)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

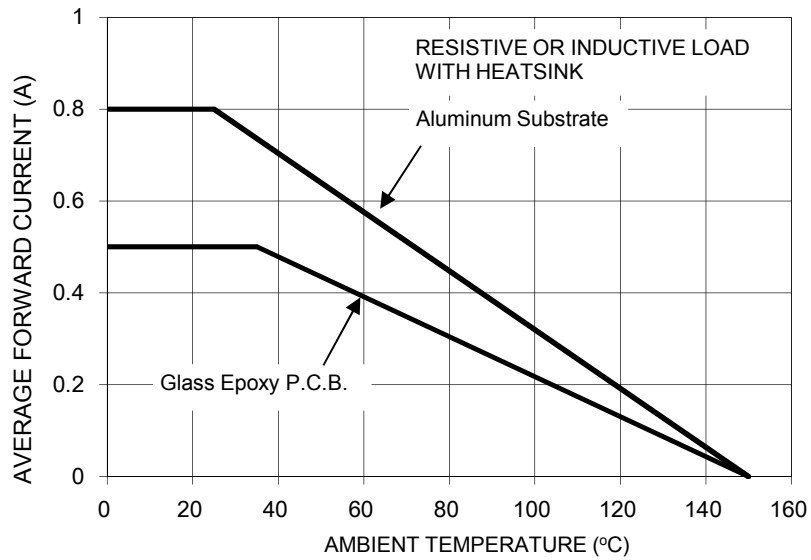


FIG. 2 TYPICAL REVERSE CHARACTERISTICS PER LEG

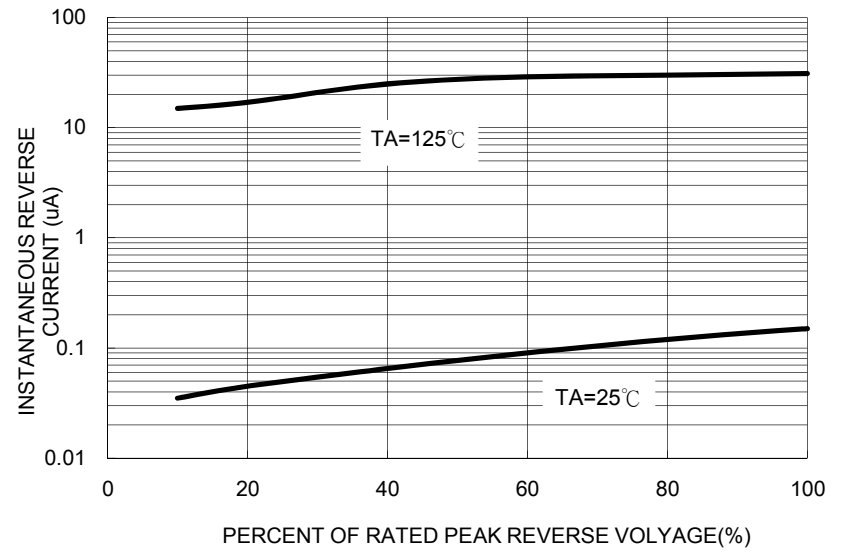


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

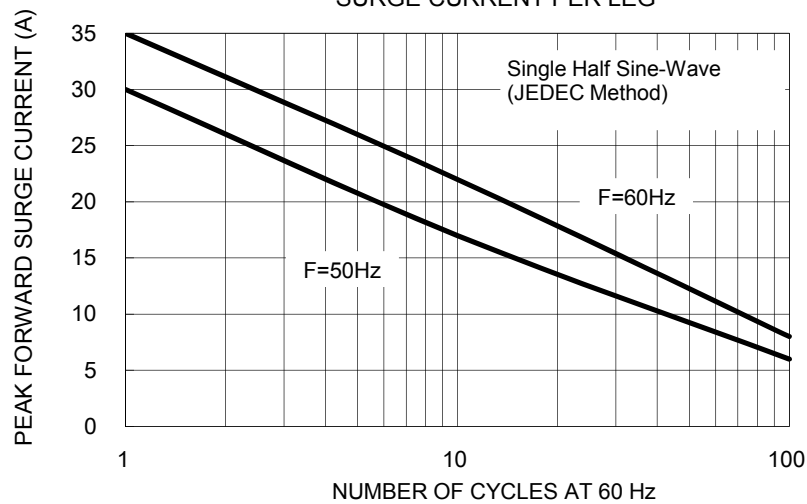


FIG. 4 TYPICAL JUNCTION CAPACITANCE PER LEG

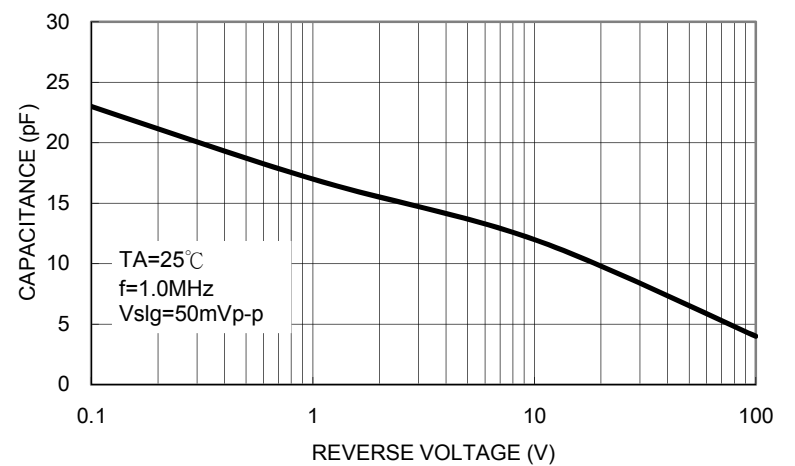
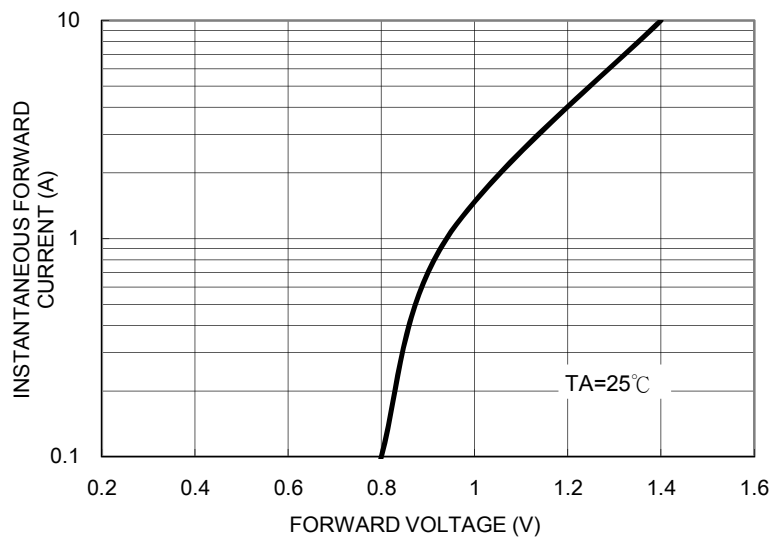


FIG. 5 TYPICAL FORWARD CHARACTERISTICS PER LEG

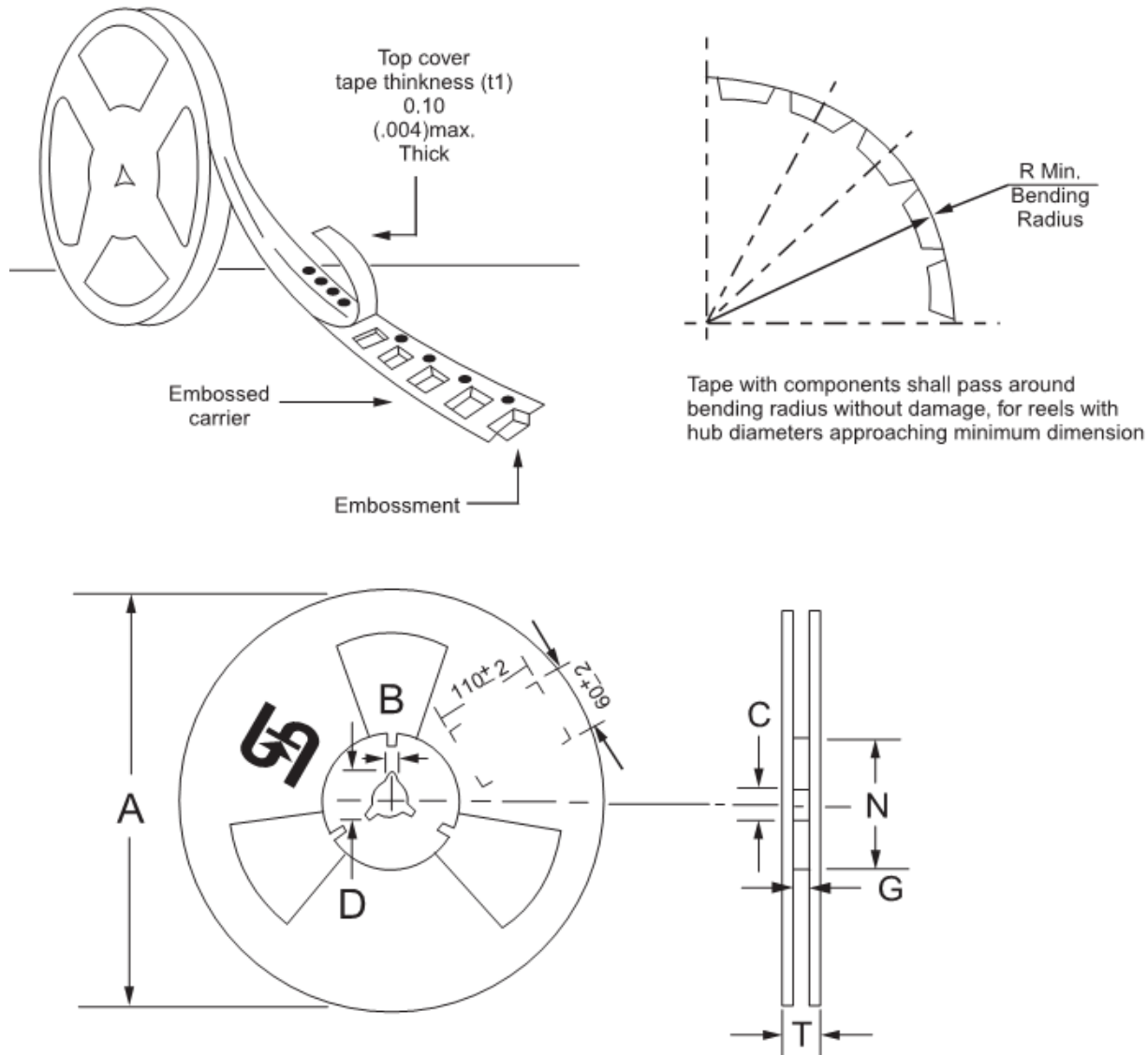


Ordering information

Part No.	Package	Packing	Packing code	Green Compound Packing code
MBSx (Note)	MBS	3K / 13" REEL	RC	RCG

Note: "x" is Device Code from "2" thru "10".

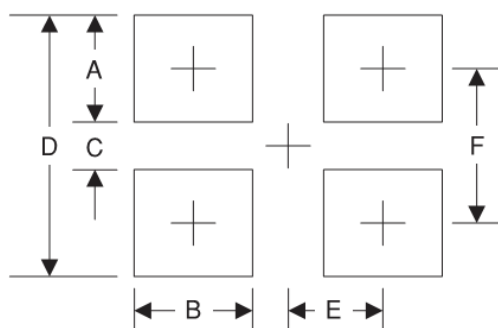
Tape & Reel specification



Reel Size	Tape Size	A	B	C	D	N	G	T
		max	±0.5	±0.5	min	±0.5	+2.0;-0	max
13"	12mm	330	2	13	20.2	75	12.4	18.4

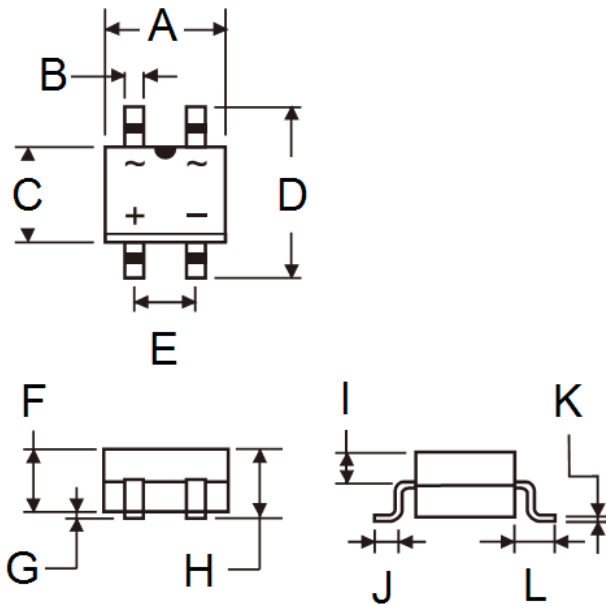
Unit (mm)

Suggested PAD Layout



Symbol	Unit(mm)
A	1.7
B	0.9
C	4.4
D	8.1
E	1.3
F	6.3

Package Outline Dimensions



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	4.50	4.90	0.177	0.193
B	0.56	0.84	0.022	0.033
C	3.60	5.00	0.142	0.197
D	-	6.90	-	0.272
E	2.20	2.60	0.087	0.102
F	2.30	2.70	0.091	0.106
G	-	0.20	-	0.008
H	-	2.90	-	0.114
I	0.95	1.53	0.037	0.060
J	0.70	1.10	0.028	0.043
K	0.15	0.35	0.006	0.014
L	1.10	2.12	0.043	0.083

Marking Diagram



P/N = Specific Device Code
V = Voltage Code
G = Green Compound
YW = Date Code