

Features

- ◇ UL Recognized File #E-326854
- ◇ Plastic material used carries Underwriters Laboratory Classifications 94V-0
- ◇ Metal silicon junction, majority carrier conduction
- ◇ Low power loss, high efficiency
- ◇ High current capability, low forward voltage drop
- ◇ High Surge capability
- ◇ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ◇ Guarding for over voltage protection
- ◇ High temperature soldering guaranteed:
260°C / 10 seconds at terminals



Mechanical Data

- ◇ Case: JEDEC D²PAK molded plastic
- ◇ Terminals: Leads solderable per MIL-STD-750, Method 2026
- ◇ Polarity: As marked
- ◇ Mounting position: Any
- ◇ Weight: 1.41 grams

Ordering Information

Part No.	Package	Packing	Packing code	Green Compound Packing code
MBRS30H45CT	D2PAK	800 / 13" REEL	RN	RNG

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

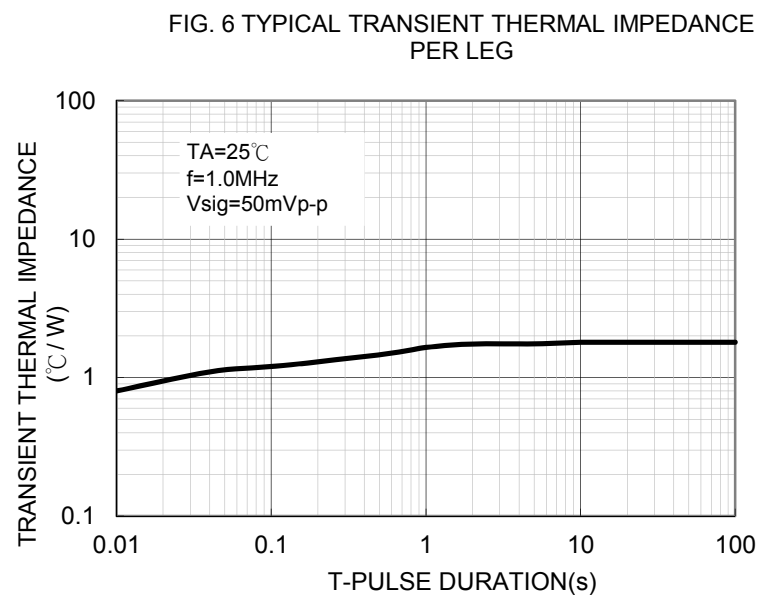
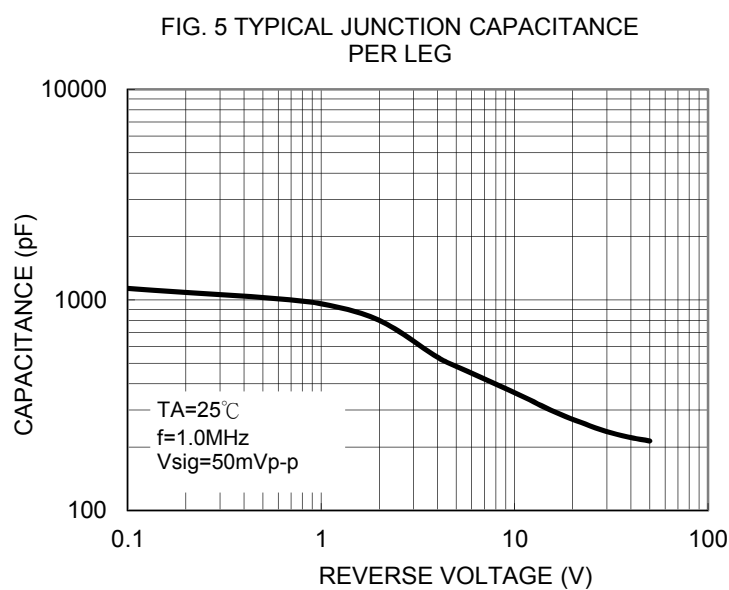
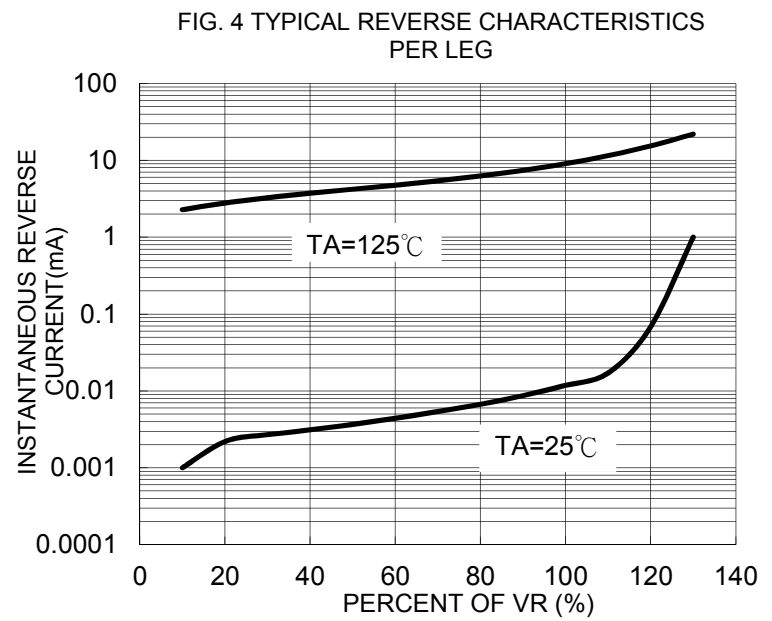
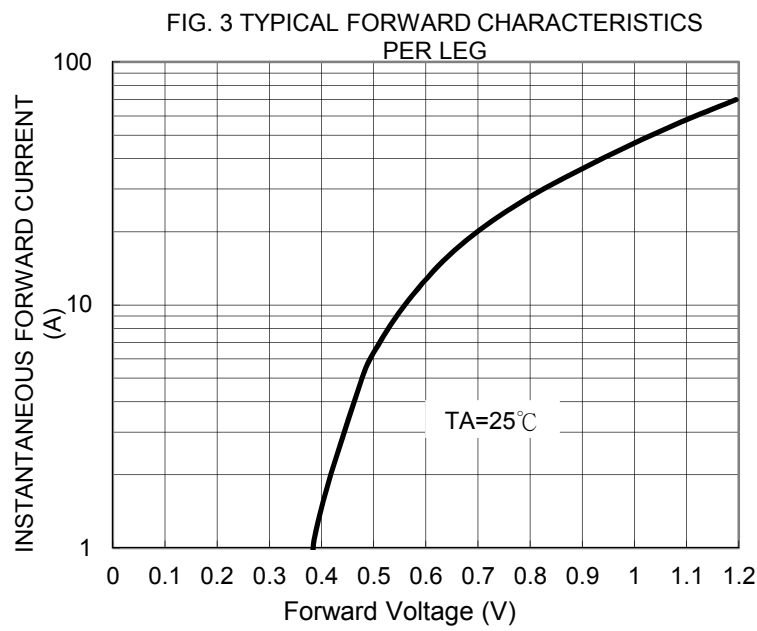
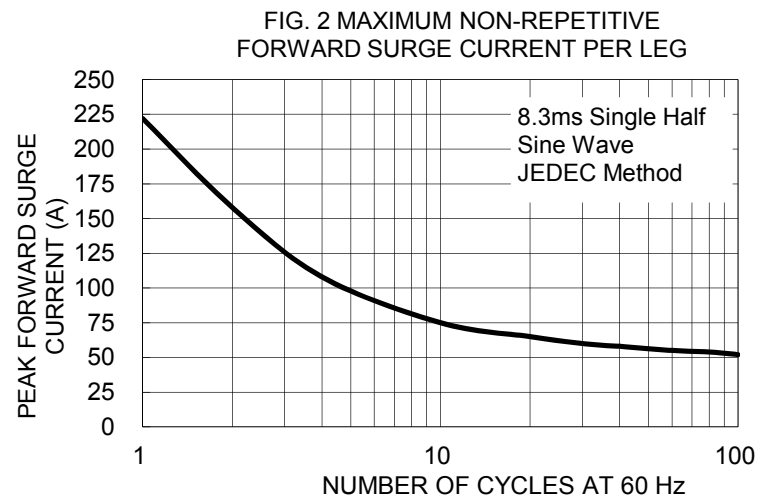
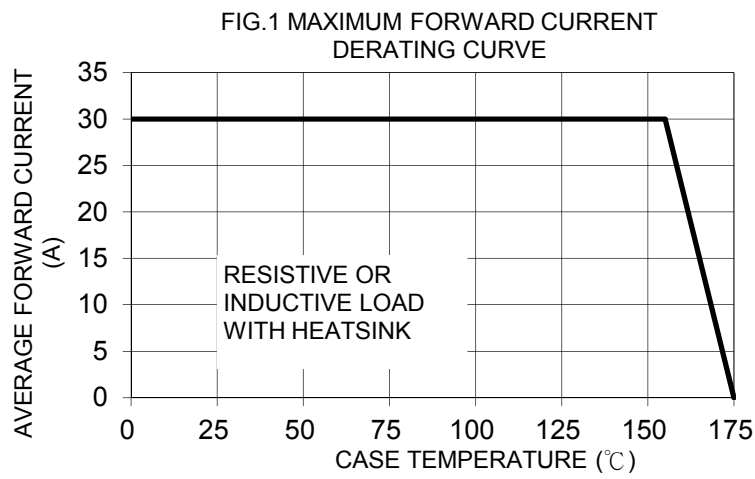
Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

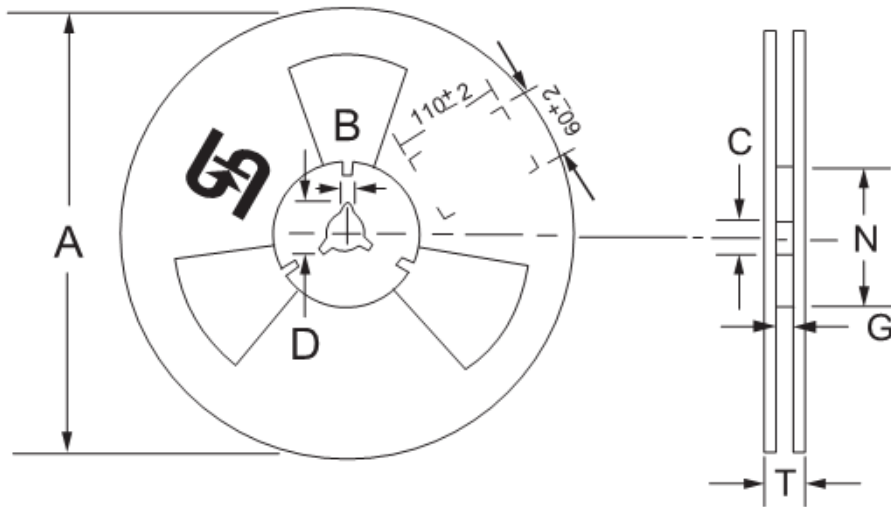
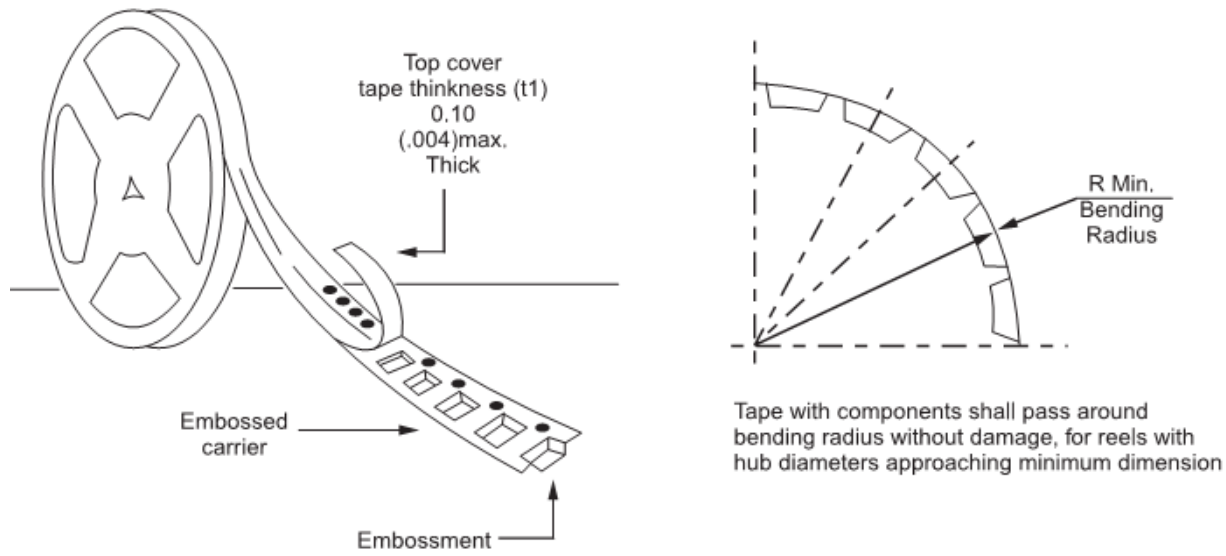
Type Number	Symbol	MBRS30H45CT	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	45	V
Maximum RMS Voltage	V_{RMS}	31	V
Maximum DC blocking voltage	V_{DC}	45	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	30	A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	220	A
Maximum Instantaneous Forward Voltage at (Note 1) IF = 15A, TA=25°C IF = 15A, TA=125°C IF = 30A, TA=25°C IF = 30A, TA=125°C	V_F	0.70 0.60 0.90 0.75	V
Maximum DC Reverse Current at Rated DC Blocking Voltage TA=25 °C TA=125 °C	I_R	0.2 15	mA mA
Voltage rate of change (Rated V_R)	dV/dt	10,000	V/uS
Maximum Thermal Resistance Per Leg	$R_{\theta JC}$ $R_{\theta JA}$	1.5 50	°C/W
Operating Temperature Range	T_J	-65 to + 175	°C
Storage Temperature Range	T_{STG}	-65 to + 175	°C

Note1: Pulse Test : 300us Pulse Width, 1% Duty cycle

RATINGS AND CHARACTERISTIC CURVES (MBSR30H45CT)



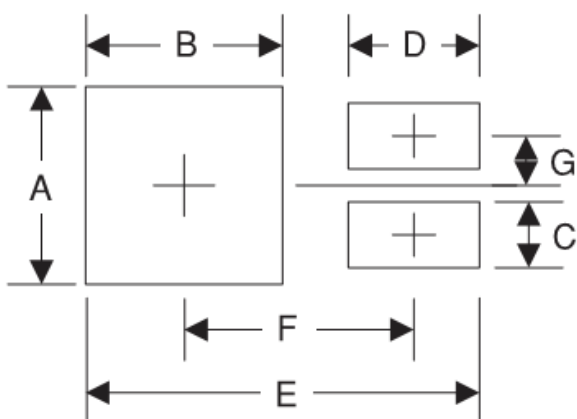
Tape & Reel specification



Reel Size	Tape Size	A	B	C	D	N	G	T
		max	±0.5	±0.5	min	±0.5	+2.0;-0	max
13"	24mm	330	2	13	20.2	75	24.4	30.4

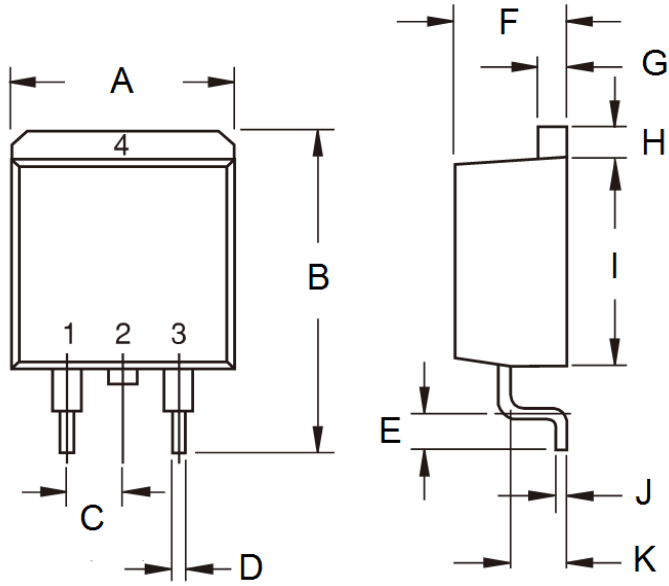
Unit (mm)

Suggested PAD Layout

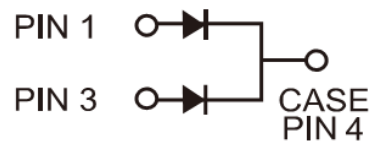


Symbol	Unit(mm)
A	10.8
B	7
C	1.1
D	3.5
E	16.9
F	9.5
G	2.5

Dimensions



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	-	10.5	-	0.413
B	14.60	15.88	0.575	0.625
C	2.41	2.67	0.095	0.105
D	0.68	0.94	0.027	0.037
E	2.29	2.79	0.090	0.110
F	4.44	4.70	0.175	0.185
G	1.14	1.40	0.045	0.055
H	1.14	1.40	0.045	0.055
I	8.25	9.25	0.325	0.364
J	0.36	0.53	0.014	0.021
K	2.03	2.79	0.080	0.110



Marking Diagram



P/N = Specific Device Code
 G = Green Compound
 YWW = Date Code