

MBRS30H45CT

30.0AMPS Surface Mount Schottky Barrier Rectifier

D²PAK

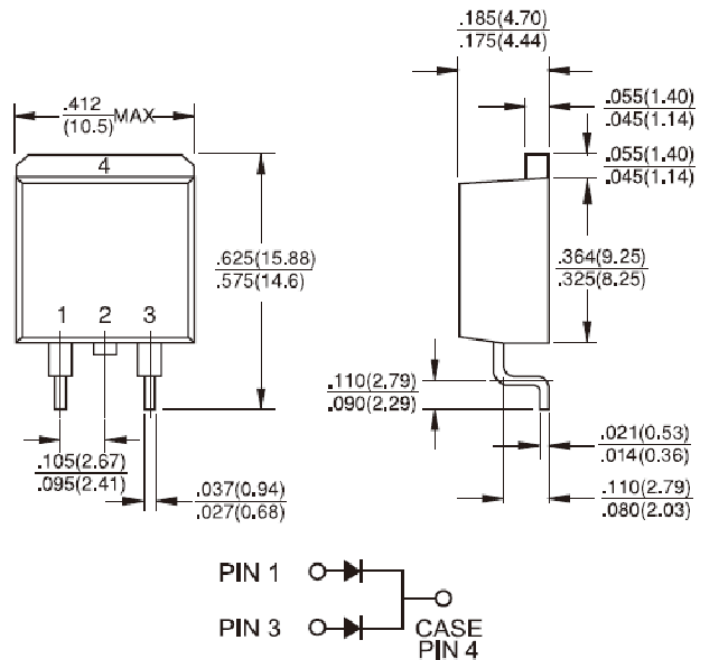


Features

- ✧ 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
- ✧ Qualified as per AEC-Q101
- ✧ 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



Dimensions in inches and (millimeters)

Marking Diagram



- MBRS30H45CT = Specific Device Code
 G = Green Compound
 Y = Year
 WW = Work Week

Maximum Ratings and Electrical Characteristic

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 @ $T_c = 155^\circ C$ (Total Device)	$I_{F(AV)}$	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) $I_F = 15A, T_A = 25^\circ C$ $I_F = 15A, T_A = 125^\circ C$ $I_F = 30A, T_A = 25^\circ C$ $I_F = 30A, T_A = 125^\circ C$	V_F	0.70 0.60 0.90 0.75	V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A = 25^\circ C$ $T_A = 125^\circ C$	I_R	0.2 15	mA mA
Voltage rate of change (Rated V_R)	dV/dt	10,000	V/ μ S
Maximum Thermal Resistance Per Leg (Note 2)	$R_{\theta JC}$ $R_{\theta JA}$	1.5 50	$^\circ C/W$
Operating Temperature Range	T_J	-65 to +175	$^\circ C$
Storage Temperature Range	T_{STG}	-65 to +175	$^\circ C$

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

Note2: Thermal Resistance from Junction to Case Per Leg

RATINGS AND CHARACTERISTIC CURVES (MBRS30H45CT)

