

# MBRS2535CT THRU MBRS2560CT

## 25.0 AMPS. Schottky Barrier Rectifiers



Voltage Range  
35 to 60 Volts  
Current  
25.0 Amperes

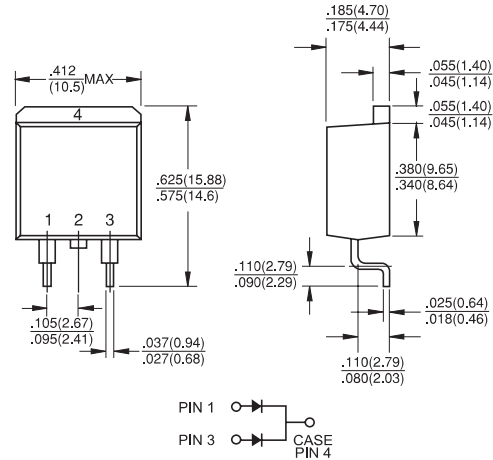
### Features

- ✦ For surface mounted application
- ✦ 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
- ✦ Guardring for overvoltage protection
- ✦ High temperature soldering guaranteed: 260°C/10 seconds at terminals

### Mechanical Data

- ✦ Cases: JEDEC D<sup>2</sup>PAK molded plastic
- ✦ Terminals: Leads solderable per MIL-STD-750, Method 2026
- ✦ Polarity: As marked
- ✦ Mounting position: Any
- ✦ Mounting torque: 5 in. - lbs. max
- ✦ Weight: 0.06 ounce, 1.70 grams

### D<sup>2</sup>PAK



**Dimensions in inches and (millimeters)**

### 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	MBRS 2535CT	MBRS 2545CT	MBRS 2550CT	MBRS 2560CT	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	35	45	50	60	V
Maximum RMS Voltage	$V_{RMS}$	24	31	35	42	V
Maximum DC Blocking Voltage	$V_{DC}$	35	45	50	60	V
Maximum Average Forward Rectified Current at $T_c=130^\circ\text{C}$	$I_{(AV)}$	25				A
Peak Repetitive Forward Current (Rated $V_R$ , Square Wave, 20KHz) at $T_c=130^\circ\text{C}$	$I_{FRM}$	25.0				A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	200				A
Peak Repetitive Reverse Surge Current (Note 1)	$I_{RRM}$	1.0		0.5		A
Maximum Instantaneous Forward Voltage at (Note 2) $I_F=12.5\text{A}, T_c=25^\circ\text{C}$ $I_F=12.5\text{A}, T_c=125^\circ\text{C}$ $I_F=25\text{A}, T_c=25^\circ\text{C}$ $I_F=25\text{A}, T_c=125^\circ\text{C}$	$V_F$	-	-	0.75	0.65	V
Maximum Instantaneous Reverse Current @ $T_c=25^\circ\text{C}$ at Rated DC Blocking Voltage Per Leg @ $T_c=125^\circ\text{C}$ (Note 2)	$I_R$	0.2	40.0	1.0	50.0	mA mA
Maximum Rate of Change, (Rated $V_R$ )	$dV/dt$	1,000				V/uS
Maximum Thermal Resistance Per Leg (Note 3)	$R_{\theta JC}$	1.0				$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	$T_J$	-65 to +150				$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +175				$^\circ\text{C}$

## RATINGS AND CHARACTERISTIC CURVES (MBRS2535CT THRU MBRS2560CT)

FIG.1- FORWARD CURRENT DERATING CURVE

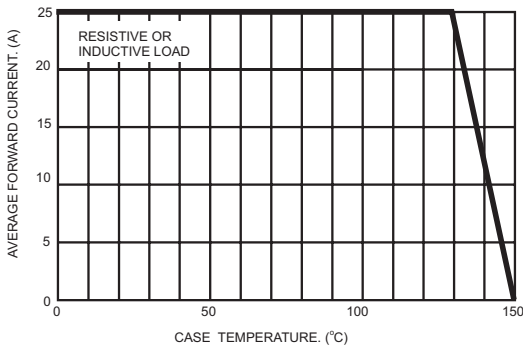


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

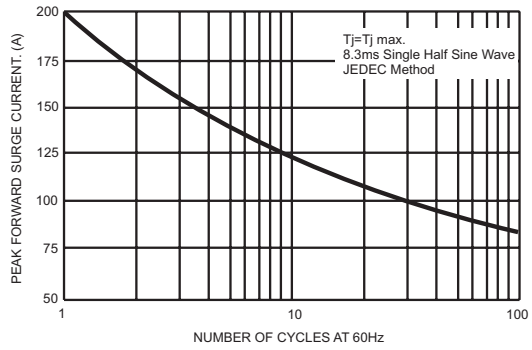


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

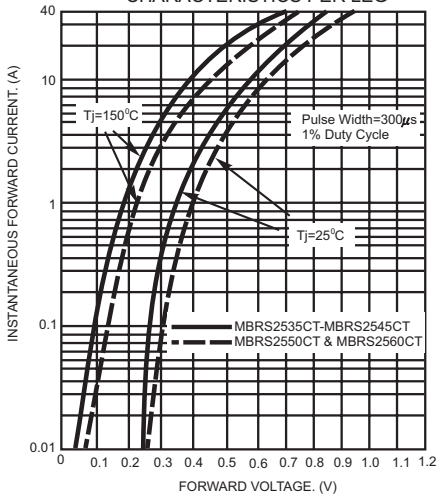


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

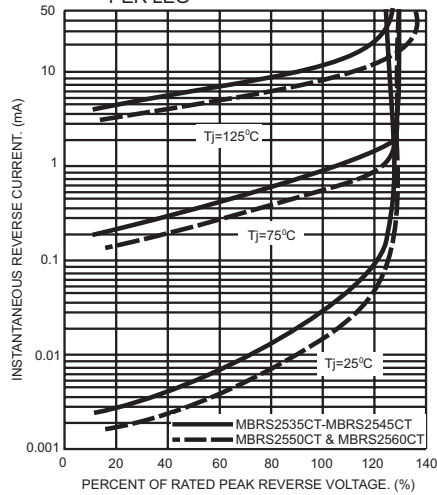


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

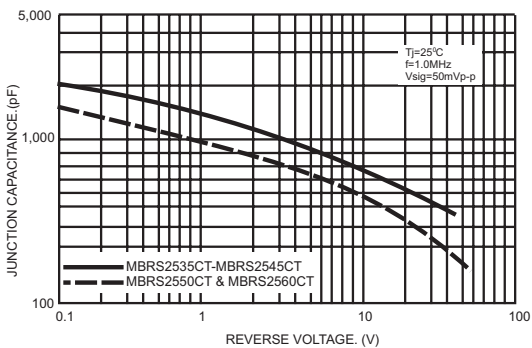


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

