

MBR2545CT(LS)

SCHOTTKY BARRIER RECTIFIER

REVERSE VOLTAGE – 45 Volts
FORWARD CURRENT – 25 Amperes

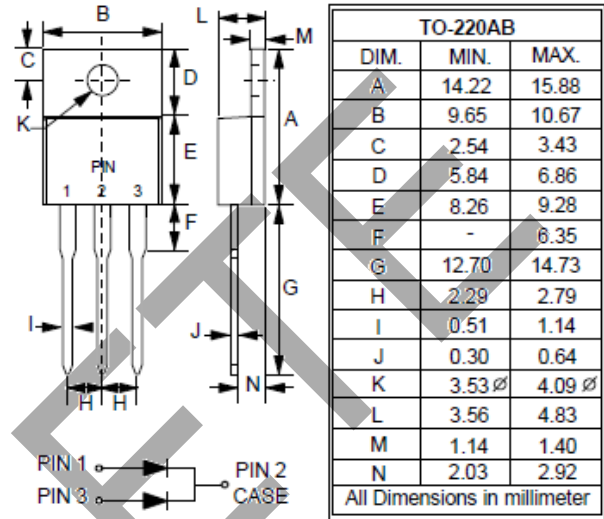
FEATURES

- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss, high efficiency
- Low leakage current, low V_F
- High surge capacity
- Plastic package has UL flammability classification 94V-0
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**

MECHANICAL DATA

- Package: TO-220AB molded plastic
- Package Material: "Green" Molding compound, UL flammability classification 94V-0, "Halogen-free"
- Terminals: Finish – Matte Tin Plated Leads Ⓢ
- Polarity: AS marked on the body
- Weight: 0.08 ounces, 2.24 grams (Approximate)
- Mounting position: Any
- Max. mounting torque = 0.5N.m (5.1Kgf.cm)

TO-220AB



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOL	MBR2545CT	UNIT	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	45	V	
Maximum RMS Voltage	V_{RMS}	31.5	V	
Maximum DC Blocking Voltage	VDC	45	V	
Maximum Average Forward Rectified Current @ $T_c=130^\circ\text{C}$	I_{AV}	25	A	
Peak Forward Surge Current 8.3ms sine-wave superimposed on rated load	I_{FSM}	150	A	
Voltage Rate of Change (Rated VR)	dv/dt	10000	V/us	
Maximum forward Voltage (Note 3)	V_F	@ $I_F=15\text{A}, T_J=125^\circ\text{C}$ @ $I_F=15\text{A}, T_J=25^\circ\text{C}$	0.75 0.65	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	@ $T_J=25^\circ\text{C}$ @ $T_J=125^\circ\text{C}$	1.0 50.0	mA
Typical Junction Capacitance (Note 4)	C_j	450	pF	
Typical Thermal Resistance (Note 5)	$R_{\theta JC}$	1.5	$^\circ\text{C/W}$	
Operating Temperature Range	T_J	-55 to +150	$^\circ\text{C}$	
Storage Temperature Range	T_{STG}	-55 to +175	$^\circ\text{C}$	

- Notes:**
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
 2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 3. 300us pulse width, 2% duty cycle.
 4. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 5. Thermal Resistance Junction to Case.

RATING AND CHARACTERISTIC CURVES
MBR2545CT

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FIG.1- FORWARD CURRENT DERATING CURVE

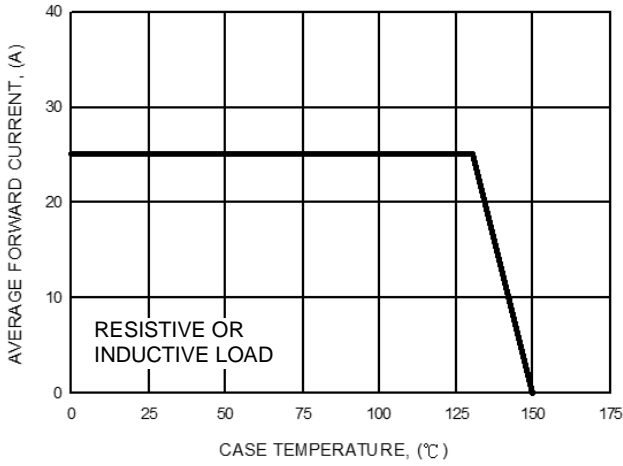


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

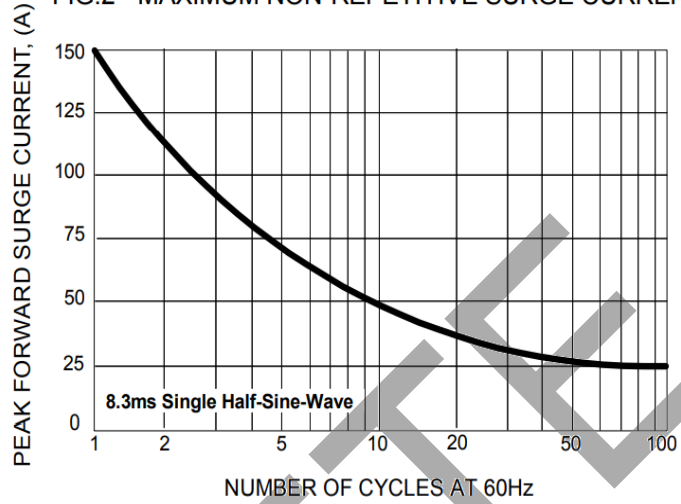


FIG.3 TYPICAL REVERSE CHARACTERISTICS

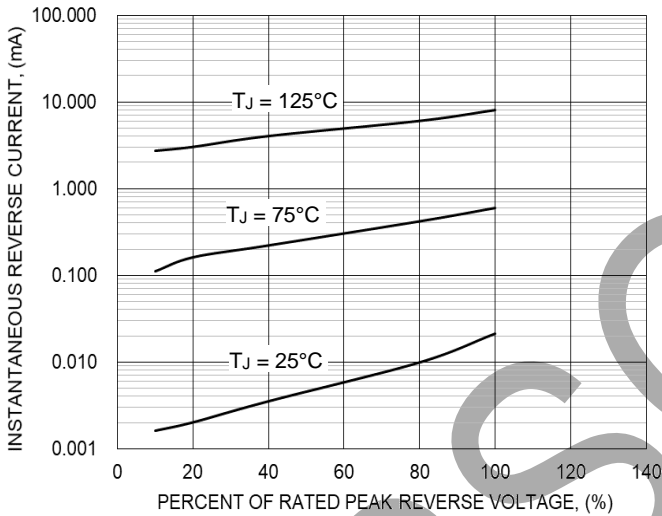


FIG.4 TYPICAL FORWARD CHARACTERISTICS

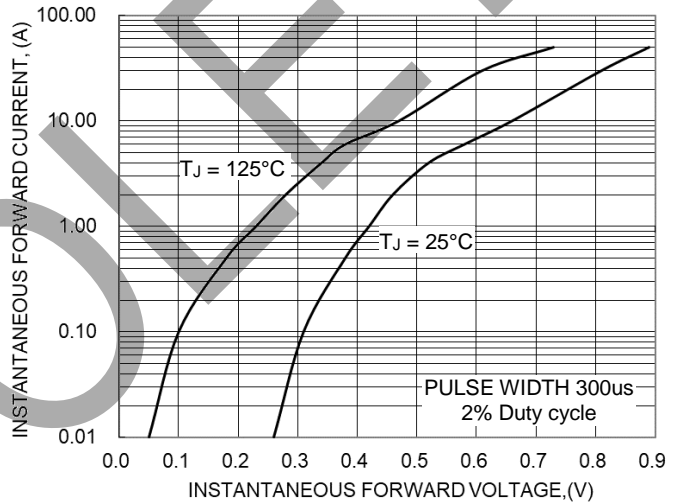
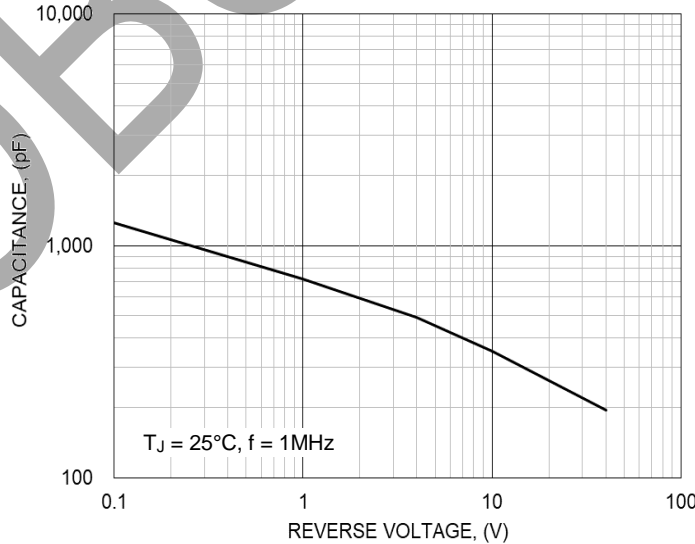


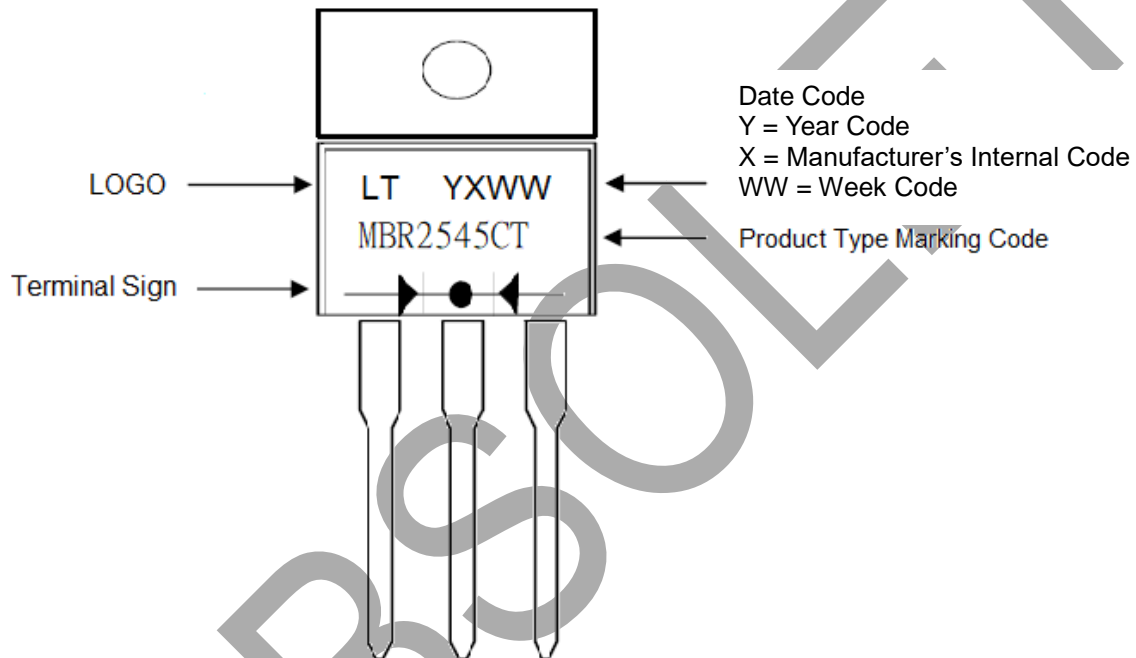
FIG.5 TYPICAL JUNCTION CAPACITANCE



Ordering Information:

Part Number	Package	Packing	
		Qty.	Carrier
MBR2545CT-LS	TO-220AB	50 pcs	Tube

Marking Information:



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