

MBR1535CT THRU MBR15200CT

SCHOTTKY BARRIER RECTIFIER



REVERSE VOLTAGE: 35 to 200 VOLTS

FORWARD CURRENT: 15.0 AMPERE

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- Metal silicon junction, majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss, high efficiency
- For use in low voltage, high frequency inverters, free whelling, and polarity protection applications
- High temperature soldering guaranteed:
250°C/10 seconds, 0.25" (6.35mm) from case

MECHANICAL DATA

Case: Molded plastic, TO-220

Epoxy: UL 94V-O rate flame retardant

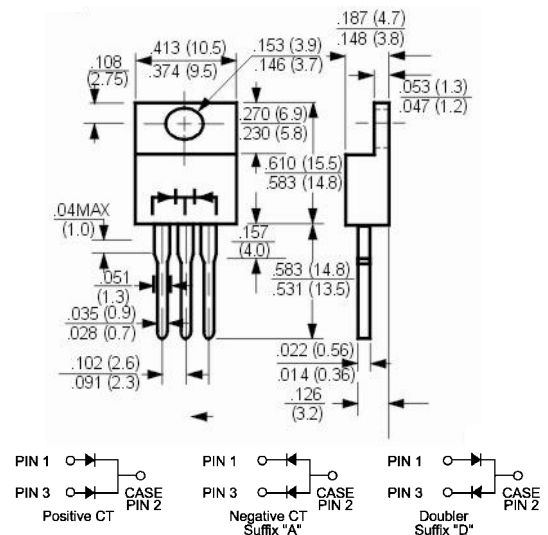
Terminals: Leads solderable per MIL-STD-202 method 208 guaranteed

Polarity: As marked

Mounting position: Any

Weight: 0.08ounce, 2.24gram

TO-220



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

	Symbols	MBR1535CT	MBR1545CT	MBR1550CT	MBR1560CT	MBR1580CT	MBR15100CT	MBR15150CT	MBR15200CT	Units	
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	35	45	50	60	80	100	150	200	Volts	
Maximum RMS Voltage	V _{RMS}	24	31	35	42	56	70	105	140	Volts	
Maximum DC Blocking Voltage	V _{DC}	35	45	50	60	80	100	150	200	Volts	
Maximum Average Forward Rectified Current at T _C = 105°C	I _(AV)	15.0								Amp	
Peak repetitive forward current at T _C = 105°C (rated VR, sq. wave, 20 KHz)	I _{FRM}	15.0								Amp	
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	150								Amp	
Peak repetitive reverse current at tp = 2.0μs, 1KHz	I _{RRM}	1.0		0.5						Amp	
Maximum Forward Voltage (Note 1)	V _F	-		0.75		0.85		0.95		Volts	
at I _F = 7.5A, T _C = 25°C		0.57		0.65		0.75		0.85			
at I _F = 7.5A, T _C = 125°C		0.84		0.90		-		-			
at I _F = 15A, T _C = 25°C		0.72		-		-		-			
Maximum Reverse Current at T _C =25°C	I _R	0.1		1.0		0.1					mAmp
at Rated DC Blocking Voltage T _C =125°C		15		30		15					
Typical Thermal Resistance	R _{0JA}	10								°C/W	
Typical Thermal Resistance	R _{0JC}	1.5								°C/W	
Operating Temperature Range	T _J	-55 to +150								°C	
Storage Temperature Range	T _{stg}	-55 to +150								°C	

NOTES:

1- Pulse test: 300 μs pulse width, 1% duty cycle

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RATINGS AND CHARACTERISTIC CURVES

FIG.1- FORWARD CURRENT DERATING CURVE

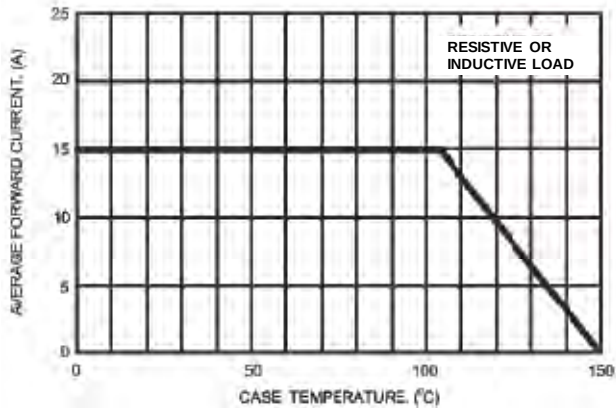


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

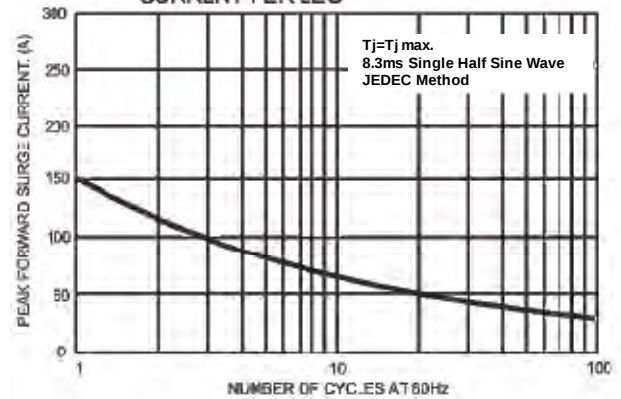


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

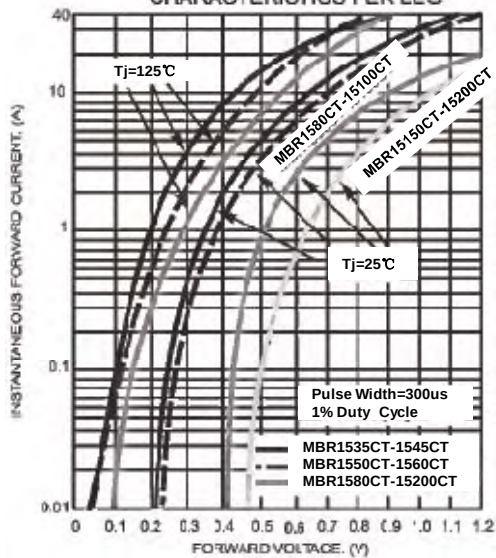


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

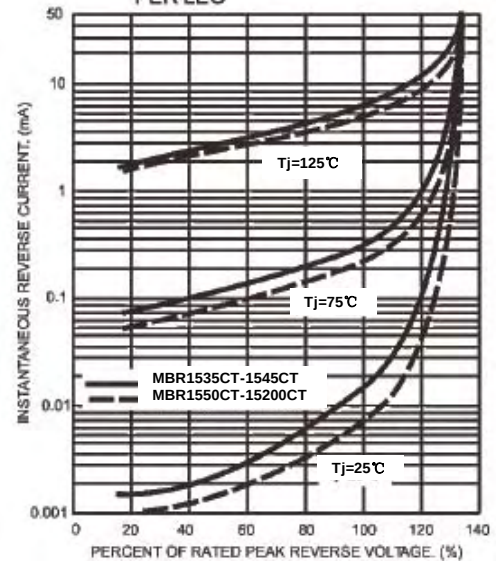


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS PER LEG

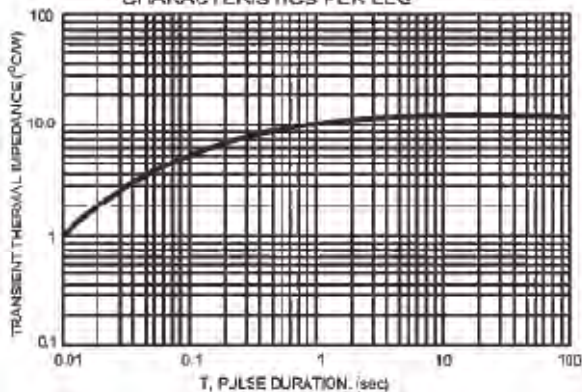


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

