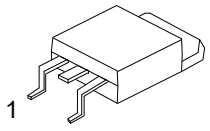
PHOTOVOLTAIC BYPASS SCHOTTKY BARRIER RECTIFIER

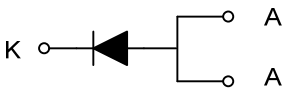


TO-263

■ FEATURES

* High frequency operation
* Low forward voltage drop
* High purity, high temperature epoxy encapsulation forenhanced mechanical strength and moisture resistance
* Guard ring for enhanced ruggedness and long term reliability

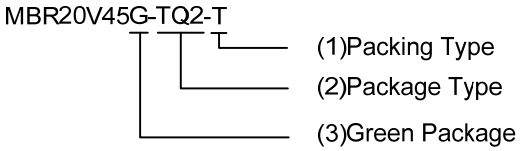
■ SYMBOL



■ ORDERING INFORMATION

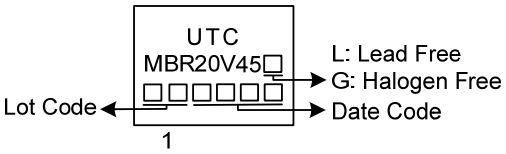
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MBR20V45L-TQ2-T	MBR20V45G-TQ2-T	TO-263	A	K	A	Tube
MBR20V45L-TQ2-R	MBR20V45G-TQ2-R	TO-263	A	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode



(1) T: Tube, R: Tape Reel
(2) TQ2: TO-263
(3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitance load, derate current by 20%.

PARAMETER	SYMBOL	RATINGS	UNIT
DC Blocking Voltage	V_{RM}	45	V
Working Peak Reverse Voltage	V_{RWM}	45	V
Peak Repetitive Reverse Voltage	V_{RRM}	45	V
Average Rectified Output Current @ 60Hz Haif Sine Wave, 1 Cycle, T_A=25°C	I_O	20	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	300	A
Operating Junction Temperature	T_J	-55 ~ +125	°C
Storage Temperature	T_{STG}	-55 ~ +125	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL CHARACTERISTICS (PER LEG)

PARAMETER	SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	θ_{JC}	2	°C/W

■ ELECTRICAL CHARACTERISTICS (PER LEG) (T_A=25°C unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	I_R=0.50mA	45			V
Maximum Instantaneous Forward Voltage Drop per Diode (T_J=25°C)	V_F	I_F=20A			0.53	V
Leakage Current	I_R	V_R=45V, T_J=25°C			100	μA
		V_R=45V, T_J=100°C			10	mA

Note: Pulse Test: Pulse width ≤ 300μs, Duty cycle ≤ 2%.