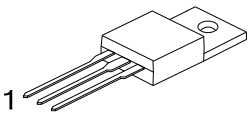
MBR2040C

Preliminary ***DIODE***

SCHOTTKY BARRIER RECTIFIER DIODES

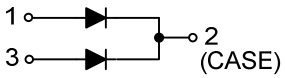


TO-220

■ FEATURES

* Guard Ring for Transient Protection
* Low Power Loss, High Efficiency
* High Surge Capability
* High Current Capability and Low Forward Voltage Drop

■ SYMBOL



■ ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MBR2040CL-TA3-T	MBR2040CG-TA3-T	TO-220	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Cathode

MBR2040CL-TA3-T (1)Packing Type (2)Package Type (3)Lead Free	(1) T: Tube (2) TA3: TO-220 (3) L: Lead Free, G: Halogen Free

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

PARAMETER		SYMBOL	RATINGS	UNIT
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	40	V
Maximum non-repetitive Peak Reverse Voltage		V_{RM}	40	V
Maximum DC Blocking Voltage		V_R	40	V
Maximum PMS Reverse Voltage		$V_{R(RMS)}$	28	V
Average Rectified Output Current (T_C=125°C)	Per Leg	I_O	10	A
	Total		20	
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half-Sine-Wave		I_{FSM}	150	A
Typical Junction Capacitance (Note 2)		C_J	650	pF
Operating Temperature		T_J	-55 ~ +150	°C
Storage Temperature		T_{STG}	-55 ~ +150	°C

Notes: 1. Thermal resistance junction to case mounted heat sink.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	60	°C/W
Junction to Case	θ_{JC}	2	°C/W

■ ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Instantaneous Forward Voltage Drop (Note 3)	V_F	I_F=10A, T_C=25°C			0.70	V
		I_F=10A, T_C=125°C			0.57	
		I_F=20A, T_C=25°C			0.84	
		I_F=20A, T_C=125°C			0.72	
Instantaneous Reverse Current (Note 3)	I_R	Rated DC Voltage, T_C=25°C			0.1	mA
		Rated DC Voltage, T_C=125°C			15	

Notes: 1. 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.
2. 2.0μs Pulse Width, f = 1.0KHz.
3. Pulse Test: Pulse Width=300μs, Duty Cycle≤ 2.0%.
4. Applied V_R = 4.0V and f = 1.0MHz.