NextGen Components,Inc.

PART CODE: TO220ABMBRF200

SPECIFICATION SHEET

SPECIFICATION SHEET NO.	N0729-TO220ABMBRF200
DATE	July 29, 2021
REVISION	A0
DESCRIPITION	Thru Hole Schottky Barrier Rectifier, TO-220AB Series, MBRF20200CT Type, 3 Pins, Reverse Voltage 200V Max. Forward Current 20.0A Max. Operating Temp. Range -55°C ~+150°C, Package in Bulk, 1000pcs/Box RoHS/RoHS III compliant
CUSTOMER	
CUSTOMER PART NUMBER	
CROSS REF. PART NUMBER	
ORIGINAL PART NUMBER	MDD MBRF20200CT
PART CODE	TO220ABMBRF200

VENDOR APPROVE
Issued/Checked/Approved   
DATE: July 29, 2021

CUSTOMER APPROVE
DATE:

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THRU HOLE SCHOTTKY BRRIER RECTIFIER TO-220AB SERIES

MAIN FEATURE

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Construction utilizes void-free
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed: 250 °C, 0.25" (6.35mm) from case for 10 seconds

APPLICATION

- For printed circuit board

RFQ
Request For Quotation

PART CODE GUIDE

TO220AB	MBMRF200
1	2

1) **TO220AB:** Thru hole Schottky Barrier Rectifier, TO-220AB Series code

2) **MBMFRF200**: Type Code for original part number MBRF20200CT, Reverse Voltage 200V Max. Forward Current 20.0A Max.

MORE ITEMS AVAILABLE

TO220ABMBRF020	TO220ABMBRF030	TO220ABMBRF040	TO220ABMBRF045	TO220ABMBRF050
TO220ABMBRF060	TO220ABMBRF070	TO220ABMBRF080	TO220ABMBRF090	TO220ABMBRF100
TO220ABMBRF150	**TO220ABMBRF200**			

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THRU HOLE SCHOTTKY BRRIER RECTIFIER TO-220AB SERIES

DIMENSION (Unit: Inch/mm)

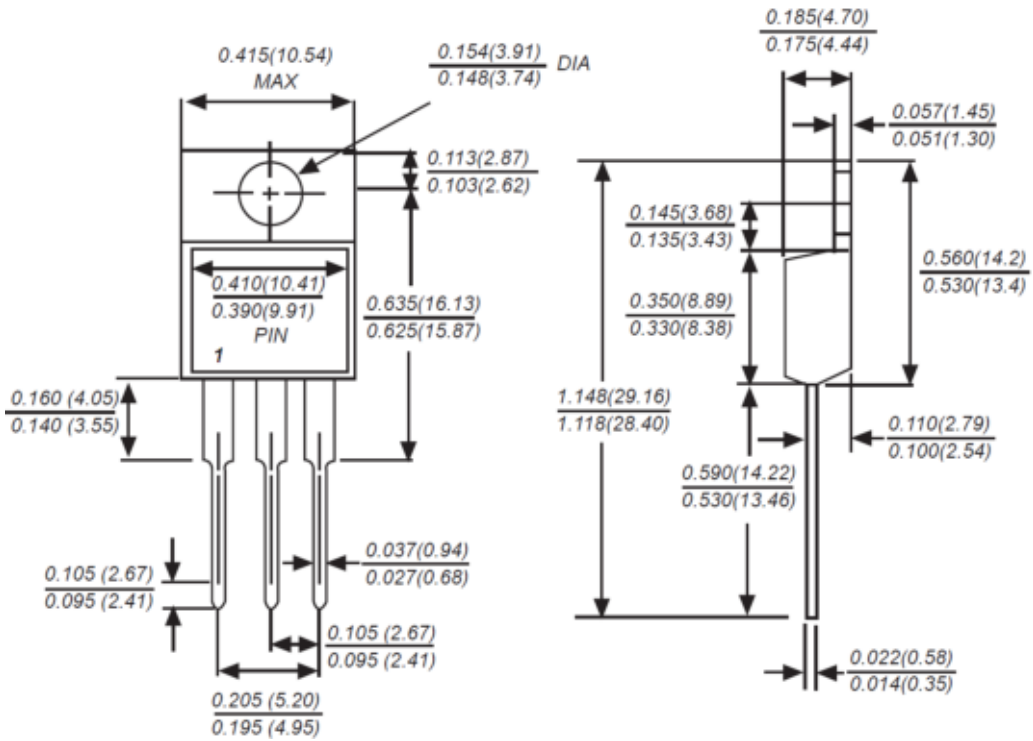
Image for reference



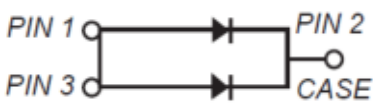
Marking:

MBRF
20200CT

TO-220AB



Recommend Pad Layout



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THRU HOLE SCHOTTKY BRRIER RECTIFIER TO-220AB SERIES

MECHANICAL DATA

Case	Terminals	Polarity	Mounting Position	Weight per piece
JEDEC TO-220AB molded plastic body	Solder plated, Solderable per MIL-STD-750, Method 2026	Polarity symbol marking on case	Any	0.080 Ounce, 2.24 grams

MAX. RATING & CHARACTERISTICS

Parameter		SYMBOLS	VALUE			UNITS
			Min.	Typical	Max.	
Repetitive peak reverse voltage		V_{RRM}			200	Volts
RMS voltage		V_{RMS}			140	Volts
DC blocking voltage		V_{DC}			200	Volts
Average forward output rectified current at TL= 110°C		I_{AV}			20.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)		I_{FSM}		150		A
Instantaneous forward voltage at 15.0A		V_F			0.95	Volts
DC reverse current at rated DC blocking voltage	**TA=25℃**	I_R			0.2	mA
	TA=100℃				50.0	
Junction capacitance (Note 2)		C_J		n/a		pF
Thermal resistance (Note 3)		R_{QJA}		1.5		°C/W
Operating junction temperature range		T_J	-55		+150	°C
Storage temperature range		T_{STG}	-55		+150	°C

Note

1. Ratings at 25 C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.
2. Measured at 1.0MHz and applied reverse voltage of 4.0Voltage
3. Thermal resistance from junction to case

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RELIABILITY

Number	Experiment Items	Experiment Method And Conditions	Reference Documents
1	Solder Resistance Test	Test 260°C± 5°C for 10 ± 2 sec. Immerse body into solder 1/16" ± 1/32"	MIL-STD-750D METHOD-2031.2
2	Solderability Test	230°C ±5°C for 5 sec.	MIL-STD-750D METHOD-2026.1 0
3	Pull Test	1 kg in axial lead direction for 10 sec.	MIL-STD-750D METHOD-2036.4
4	Bend Test	0.5Kg Weight Applied To Each Lead, Bending Arcs 90 °C ± 5 °C For 3 Times	MIL-STD-750D METHOD-2036.4
5	High Temperature Reverse Bias Test	T_A=100°C for 1000 Hours at V_R=80% Rated V_R	MIL-STD-750D METHOD-1038.4
6	Forward Operation Life Test	TA=25°C Rated Average Rectified Current	MIL-STD-750D METHOD-1027.3
7	Intermittent Operation Life Test	On state: 5 min with rated IRMS Power Off state: 5 min with Cool Forced Air. On and off for 1000 cycles.	MIL-STD-750D METHOD-1036.3
8	Pressure Cooker Test	15 PSIG, T_A=121°C, 4 hours	MIL-S-19500 APPENOIXC
9	Temperature Cycling Test	-55°C~+125°C; 30 Minutes For Dwelled Time 5 minutes for transferred time. Total: 10 cycles.	MIL-STD-750D METHOD-1051.7
10	Thermal Shock Test	0°C for 5 minutes., 100°C for 5minutes, Total: 10 cycles	MIL-STD-750D METHOD-1056.7
11	Forward Surge Test	8.3ms Single Sale Sine-wave One Surge.	MIL-STD-750D METHOD-4066.4
12	Humidity Test	T_A=65°C, RH=98% for 1000 hours.	MIL-STD-750D METHOD-1021.3
13	High Temperature Storage life Test	150°C for 1000 Hours	MIL-STD-750D METHOD-1031.5

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THRU HOLE SCHOTTKY BRRIER RECTIFIER TO-220AB SERIES

RATINGS AND CHARACTERISTIC CURVES (For Reference Only)

FIG.1 TYPICAL FORWARD CHARACTERISTICS

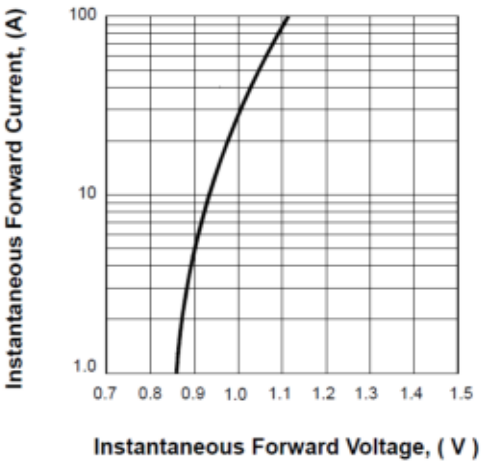


FIG.2 FORWARD DERATING CURVE

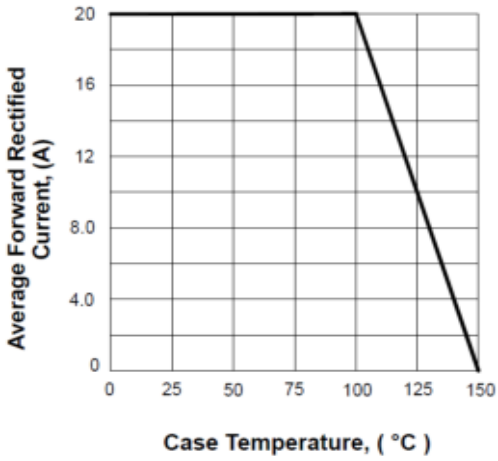


FIG.3 TYPICAL REVERSE CHARACTERISTICS

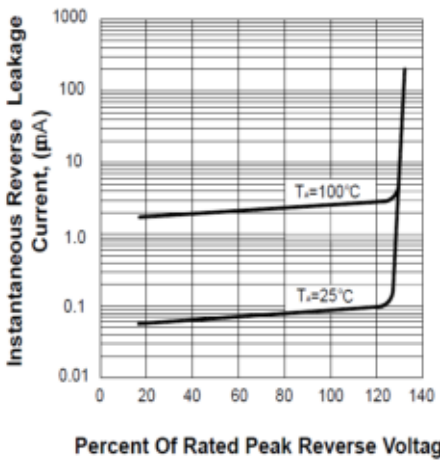
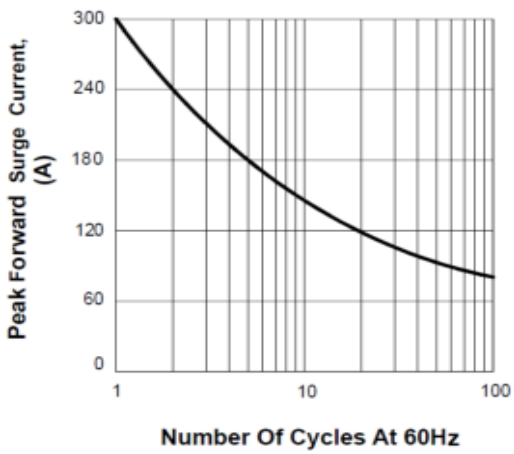


FIG. 4· ·MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



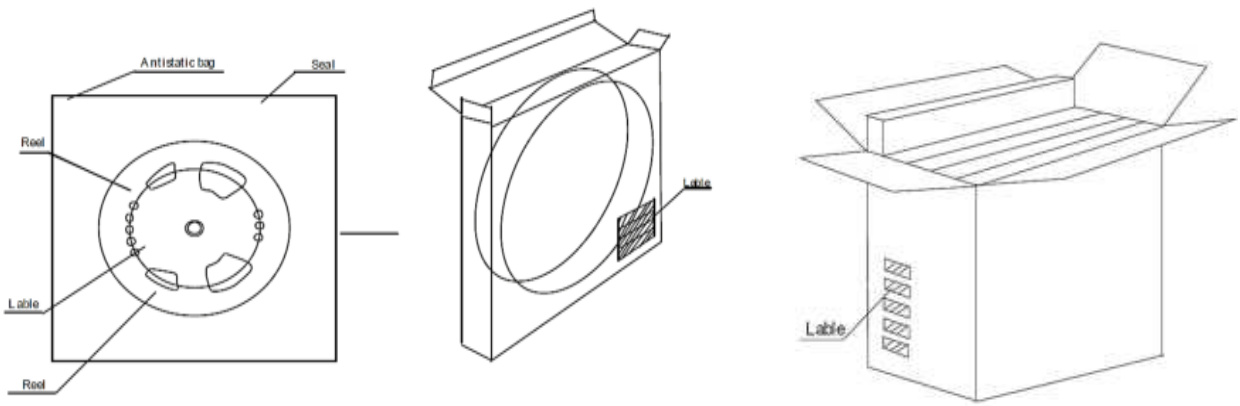
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THRU HOLE SCHOTTKY BRRIER RECTIFIER TO-220AB SERIES

PACKAGE

Case Code	Box	MPQ (pcs)	Component Spacing (mm)	Qty. Per Box (pcs)	Inner Box L*W*H (mm)	Reel Size (mm)	Carton size L*W*H (mm)	Qty. Per Carton (pcs)	G. W (kg)
TO-220AB		1,000		1,000	560*155*40	2.65	580*220*180	5,000	14.0



DISCLAIMER

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