

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE – 200 Volts
FORWARD CURRENT – 20 Amperes

FEATURES

- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss, high efficiency
- Low leakage current
- High current capability, low V_F
- High surge capacity
- Qualified according to AEC-Q101 Rev_C

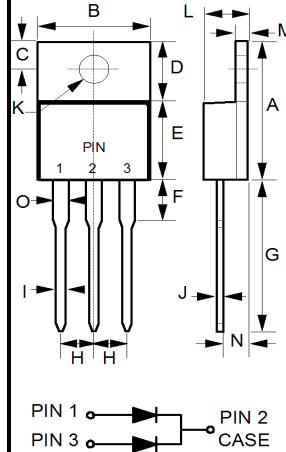
APPLICATION

- DC to DC converter
- AC to DC Adaptors

MECHANICAL DATA

- Case: JEDEC TO-220AB
- Case Material: "Green" molding compound, UL flammability classification 94V-0, "Halogen-free".
- Lead free finish, RoHS compliant
- Weight: 1.927 grams (Approximate)
- Marking code: MBR20200CTW

TO-220AB



TO-220AB		
DIM	MIN	MAX
A	14.40	15.20
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	8.26	9.28
F	--	4.20
G	12.70	14.73
H	2.29	2.79
I	0.51	1.00
J	0.30	0.64
K	3.53Φ	4.09Φ
L	3.56	4.83
M	1.14	1.40
N	2.03	2.92
O	1.14	1.37

All Dimensions in millimeter

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	200	V
Maximum DC blocking voltage	V_{DC}	200	V
Maximum Average rectified output current	$I_{(AV)}$	20	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.	I_{FSM}	180	A
Operating junction and Storage Temperature range	T_J, T_{STG}	-65 ~ +175	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS		SYMBOL	TYP	MAX	UNIT
Forward voltage (Note1)	$I_F=10A$	$T_J=25^{\circ}C$ $T_J=125^{\circ}C$	V_F	-- 0.72	0.92 0.75	V
Leakage current	$V_R=200V$	$T_J=25^{\circ}C$ $T_J=125^{\circ}C$	I_R	-- 0.23	8 5	μA mA
Typical junction capacitance (Note 2)			C_J	140		pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 3,4)	R_{thJC}	3	°C/W
	R_{thJL}	2	

Note :

REV.-1, Sep-2019, KTHC185

- (1) 300us pulse width, 2% duty cycle.
- (2) Measured at 1.0MHz and applied voltage of 4.0VDC.
- (3) Thermal resistance test performed in accordance with JESD-51.
- (4) The unit mounted on finy-type heatsink(24.8mm x 42.1mm x 25mm)

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RATING AND CHARACTERISTIC CURVES
MBR20200CTW



FIG.1 FORWARD CURRENT DERATING CURVE

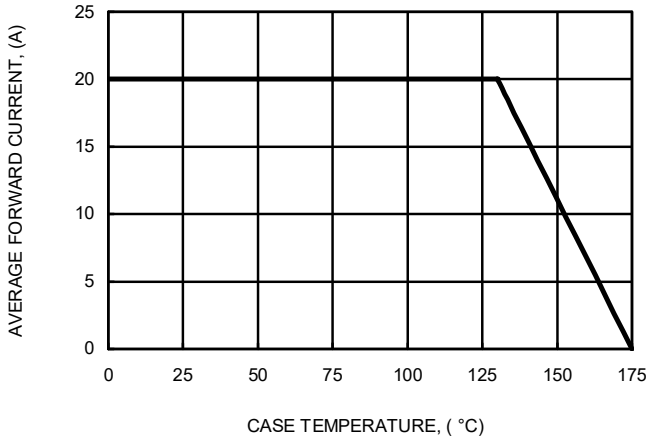


FIG.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

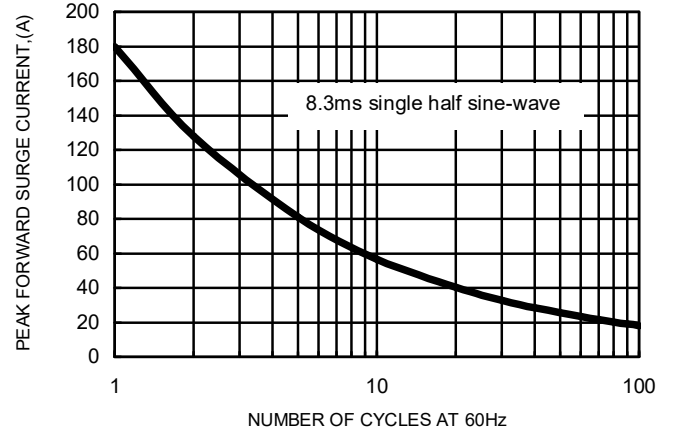


FIG.3 TYPICAL FORWARD CHARACTERISTICS

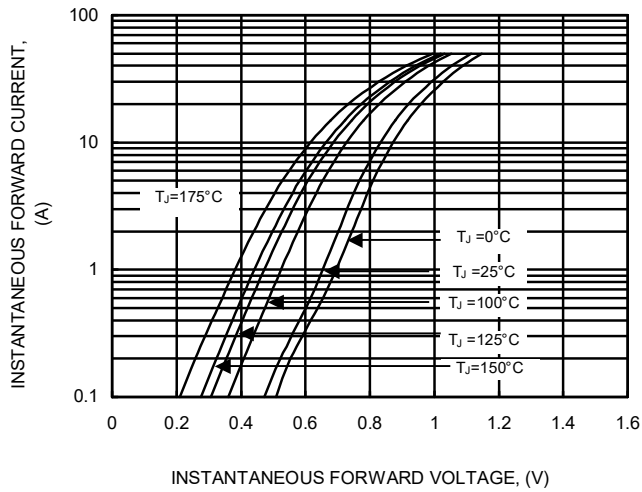


FIG.4 TYPICAL JUNCTION CAPACITANCE

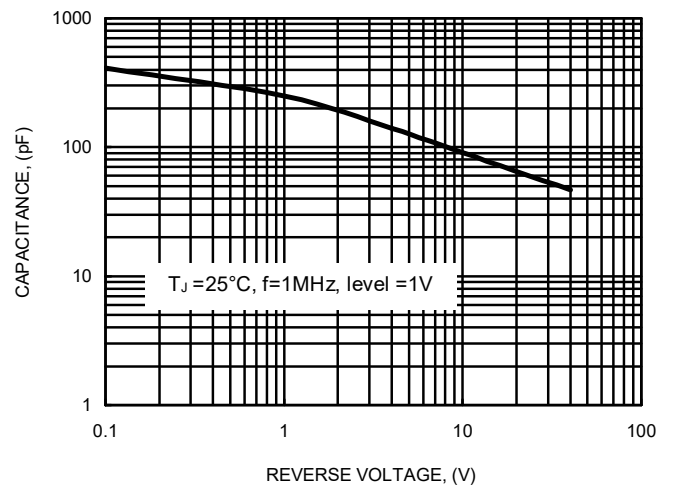


FIG.5 TYPICAL REVERSE CHARACTERISTICS

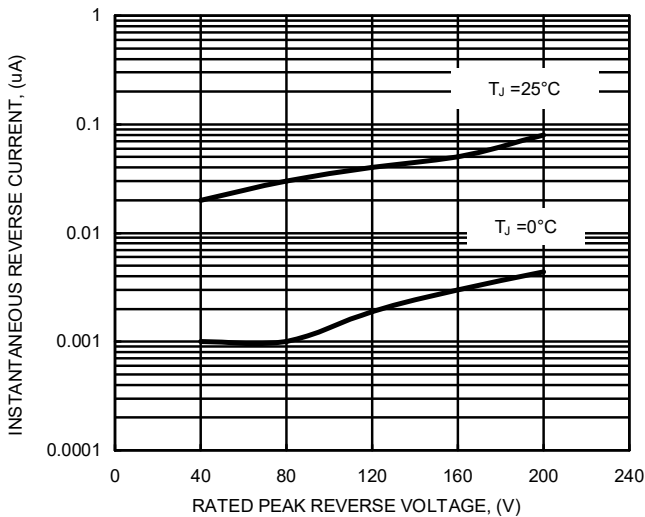
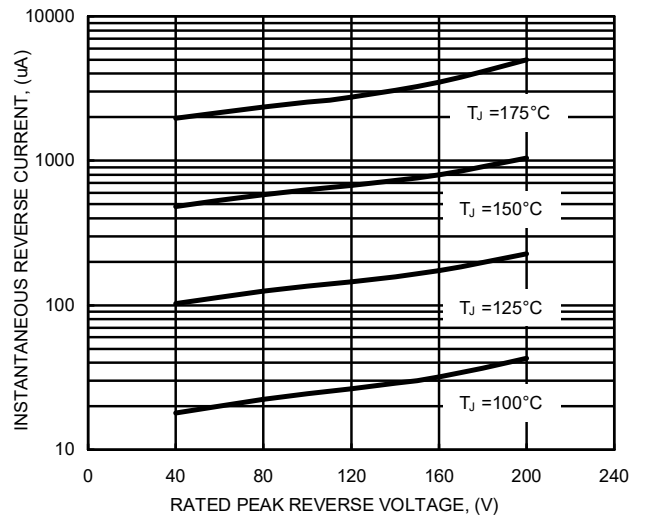


FIG.6 TYPICAL REVERSE CHARACTERISTICS



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