

**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
- High surge & current capability, low  $V_F$
- Qualified according to JEDEC

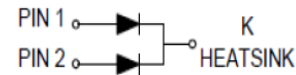
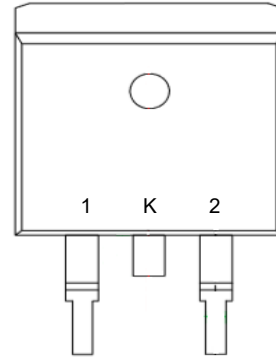
**APPLICATION**

- For use in high frequency switched mode power supplies

**MECHANICAL DATA**

- Case Material: "Green" Molding compound, UL flammability classification 94V- 0, (No Br. Sb. Cl.) "Halogen-free"
- Case: TO-263 molded plastic
- Lead Free Finish, RoHS Compliant
- Moisture Sensitivity Level 3 per J-STD-020
- Marking : MBR20200CG
- Weight: 1.6 grams (Approximate)

**D<sup>2</sup>PAK**



**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 forward current	$I_F$	20	A
Peak forward surge 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	200	A
Operating and Storage temperature range	$T_J, T_{STG}$	-55 ~ +175	°C

**STATIC ELECTRICAL CHARACTERISTICS**

PARAMETER	TEST CONDITION	SYMBOL	TYP	MAX	UNIT
Forward voltage(Note 1)	$I_F=10A$	$T_J = 25^\circ C$ $T_J = 125^\circ C$	$V_F$	--	0.93
				0.72	0.75
Reverse leakage current	$V_R=200V$	$T_J = 25^\circ C$ $T_J = 125^\circ C$	$I_R$	--	10
				0.32	6
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	

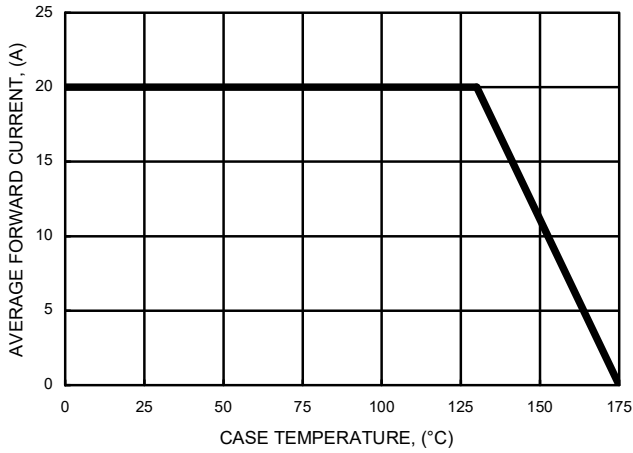
**Note :**

- (1) 300uS pulse width 2% duty cycle
- (2) Measured at 1.0MHz and reverse voltage of 4.0V DC.
- (3) Thermal resistance test performed in accordance with JESD-51.
- (4) The unit mounted on fin-type heatsink 40mm x 23mm x 15.8mm

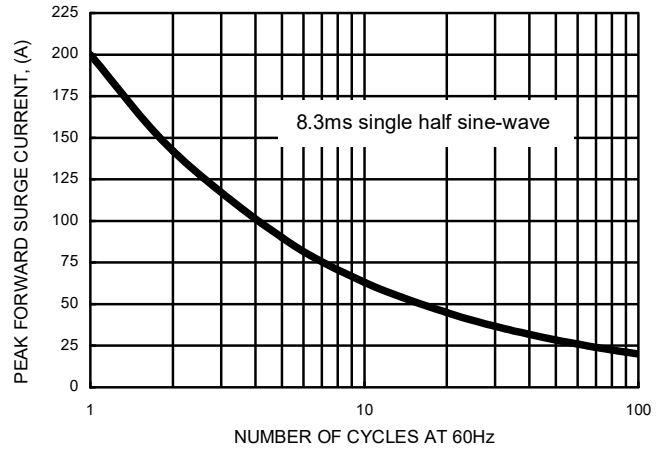
# RATING AND CHARACTERISTIC CURVES MBR20200CG



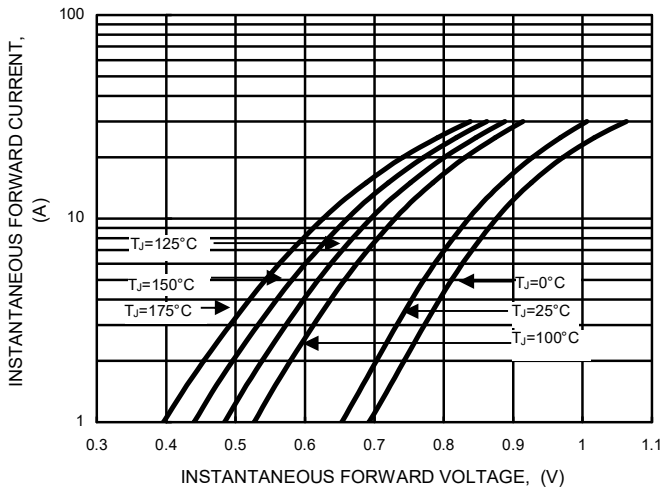
**FIG.1- FORWARD CURRENT DERATING CURVE**



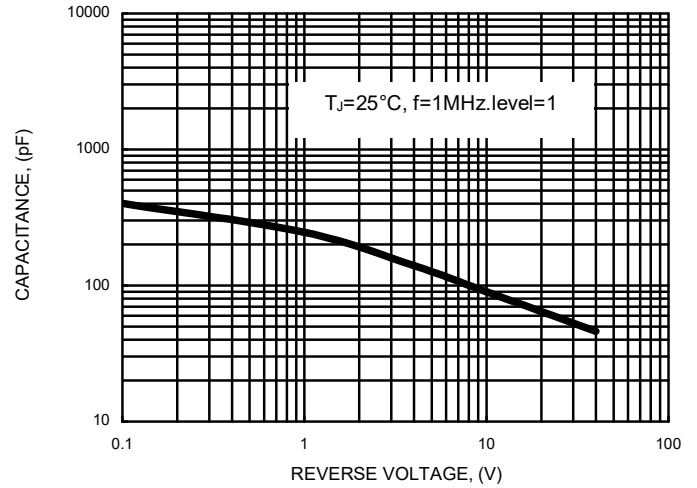
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



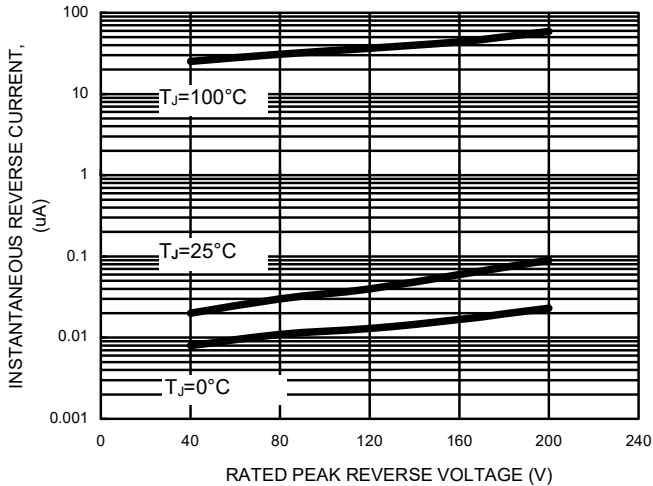
**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



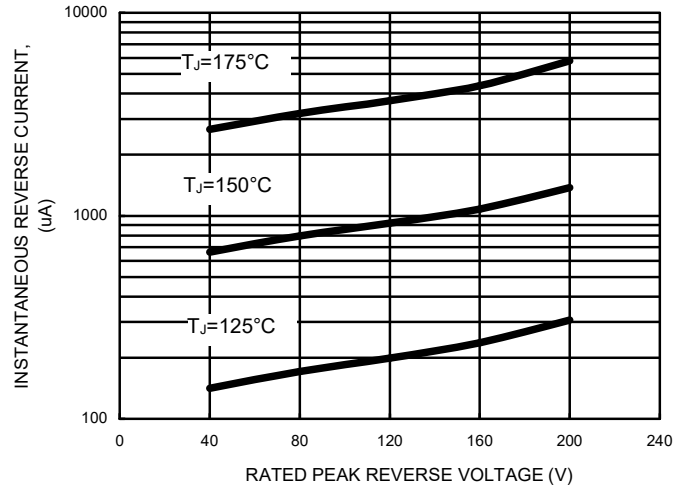
**FIG.4- TYPICAL JUNCTION CAPACITANCE**



**FIG.5- TYPICAL REVERSE CHARACTERISTICS**

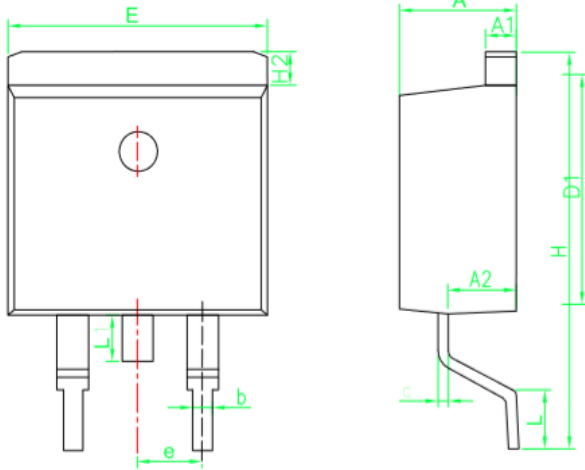


**FIG.6- TYPICAL REVERSE CHARACTERISTICS**



Package Outline Dimension:

**TO-263 (E type)**



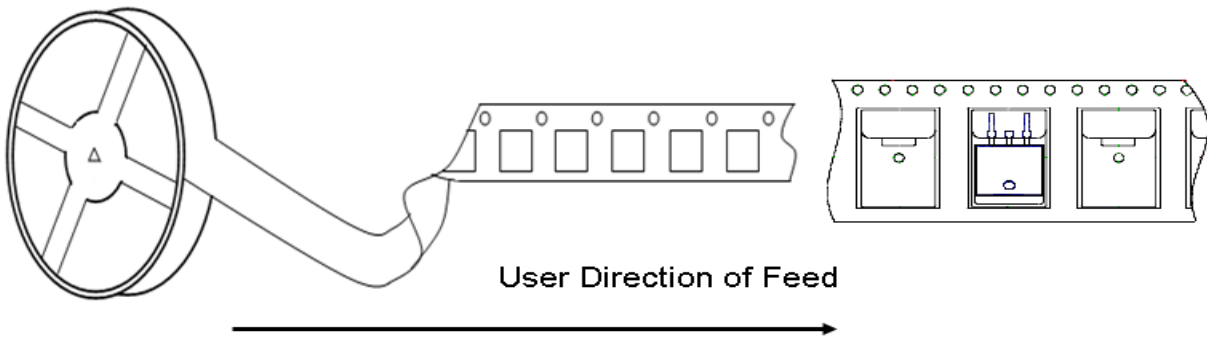
D <sup>2</sup> PAK (E type)		
DIM	MIN	MAX
A	4.30	4.80
A1	1.12	1.42
A2	2.54	2.84
b	0.67	1.00
c	0.29	0.52
D1	8.40	9.00
E	9.80	10.46
e	2.54 BSC	
H	14.00	16.00
H2	1.12	1.45
L	1.50	3.10
L1	1.45	1.70
All Dimensions in millimeter		

Packaging Information:

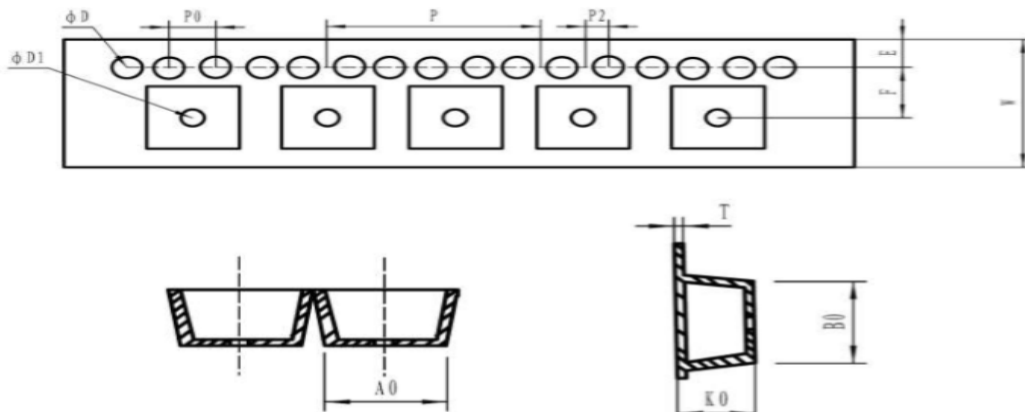
DEVICE	Units / Tape	Tapes / Inner Box	Box size (mm)	Units / Inner Box	Inner Box / Carton Box	Carton size (mm)	Units / Carton Box
TO-263 (E type)	800	1	350X338X50	800	5	385X358X303	4K

**Embossed Carrier Dimensions Information**

Polar Units



**TO – 263 (E type)**



TAPE SIZE	D	D1	P0	P	P2	E	UNIT
24mm	$1.5+0.2/-0.1$	$1.5+0.2/-0.1$	$4.0\pm 0.2$	$16.0\pm 0.2$	$2.0\pm 0.2$	$1.75\pm 0.2$	mm
	A0	T	K0	B0	F	W	
	$10.9\pm 0.2$	$0.35\pm 0.05$	$4.9\pm 0.2$	$16.0\pm 0.2$	$11.5\pm 0.2$	$24.0\pm 0.3$	

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