

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

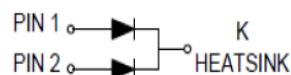
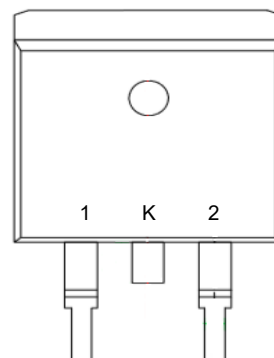
APPLICATION

- 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)

D²PAK



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	-- 0.72	0.93 0.75	V
Reverse leakage current	$V_R=200V$ $T_J = 25^\circ C$ $T_J = 125^\circ C$	I_R	-- 0.32	10 6	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} R_{thJA}	3 2	°C/W

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

REV.-1, Jul-2018, KTHB26

RATING AND CHARACTERISTIC CURVES
MBR20200CG



FIG.1- FORWARD CURRENT DERATING CURVE

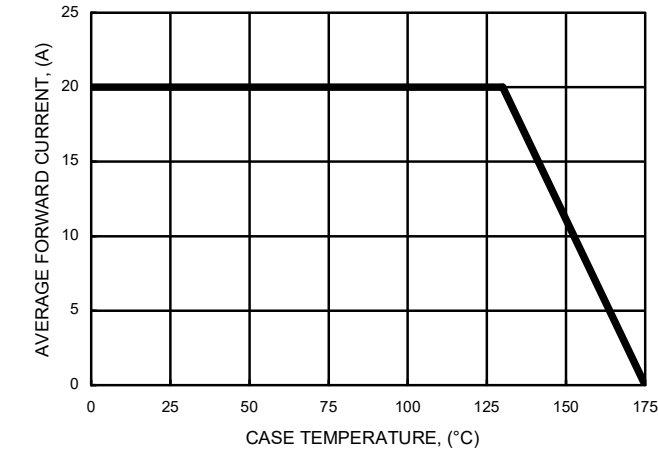


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

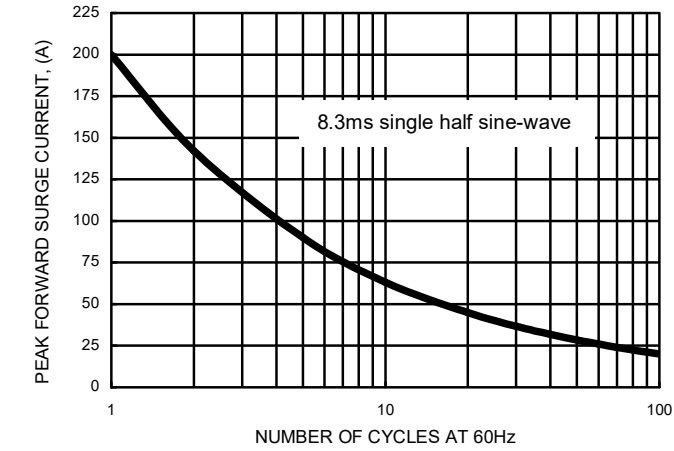


FIG.3- TYPICAL FORWARD CHARACTERISTICS

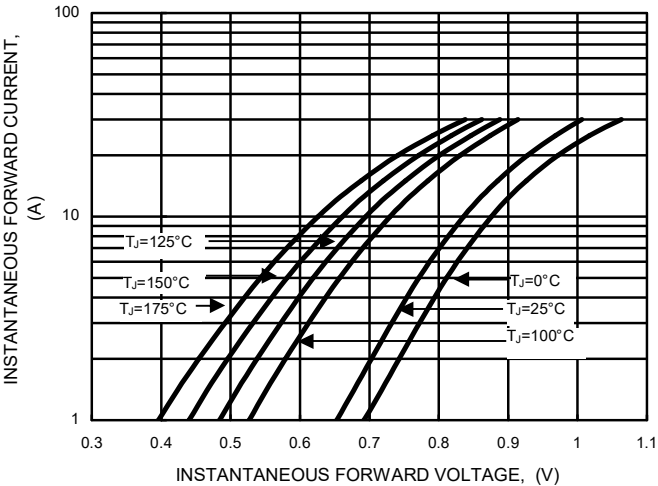


FIG.4- TYPICAL JUNCTION CAPACITANCE

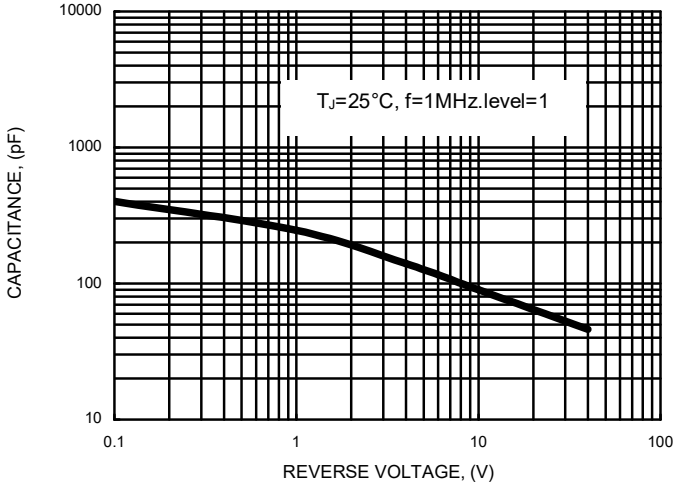


FIG.5- TYPICAL REVERSE CHARACTERISTICS

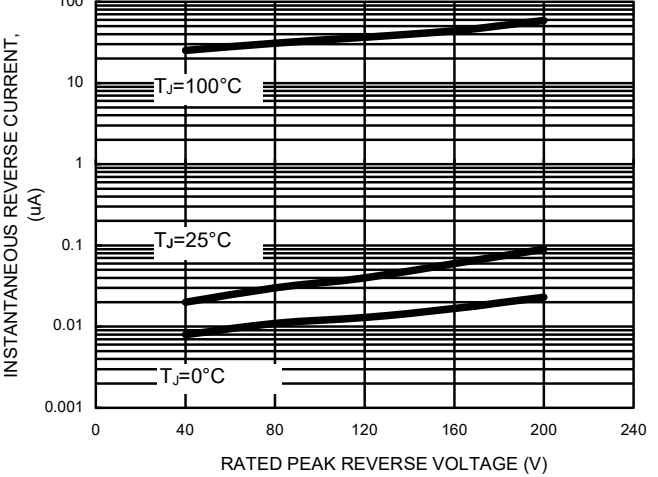
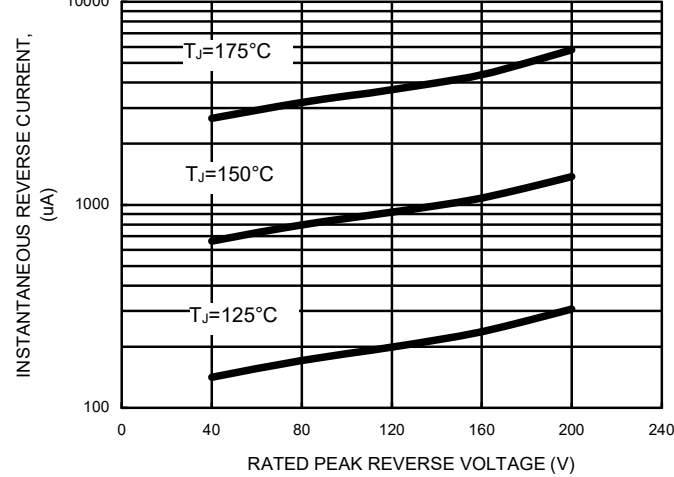
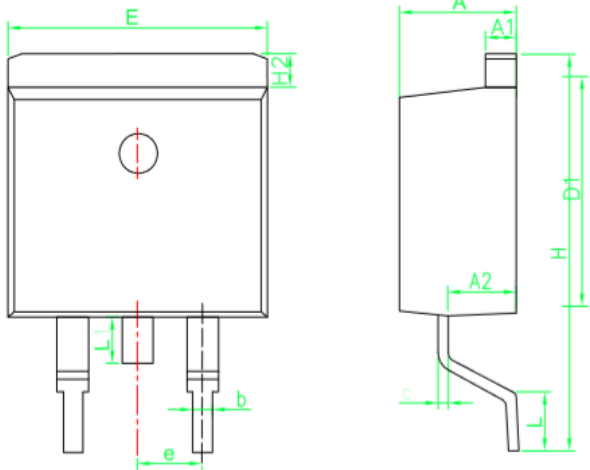


FIG.6- TYPICAL REVERSE CHARACTERISTICS



Package Outline Dimension:

TO-263 (E type)

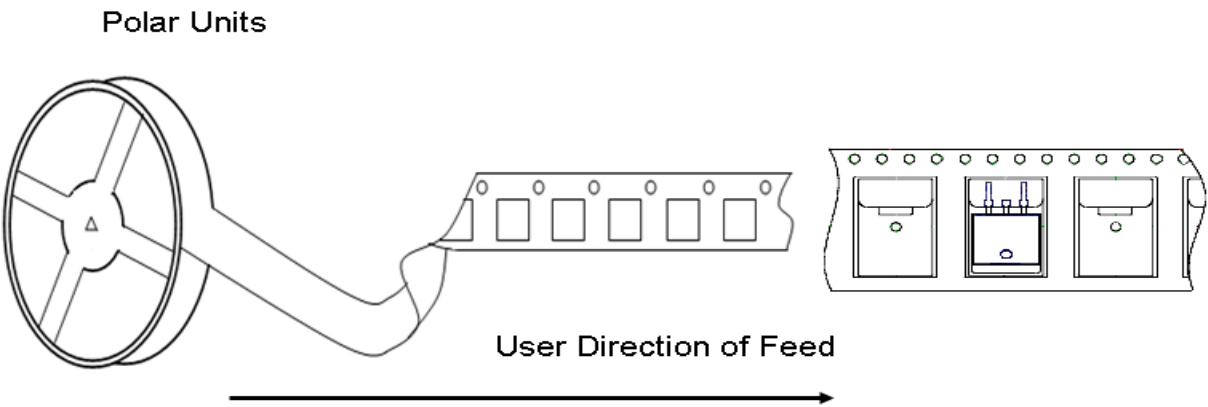


D ² PAK (E type)		
DIM	MIN	MAX
A	4.30	4.80
A1	1.12	1.42
A2	2.54	2.84
b	0.67	1.00
c	0.29	0.52
D1	8.40	9.00
E	9.80	10.46
e	2.54 BSC	
H	14.00	16.00
H2	1.12	1.45
L	1.50	3.10
L1	1.45	1.70
All Dimensions in millimeter		

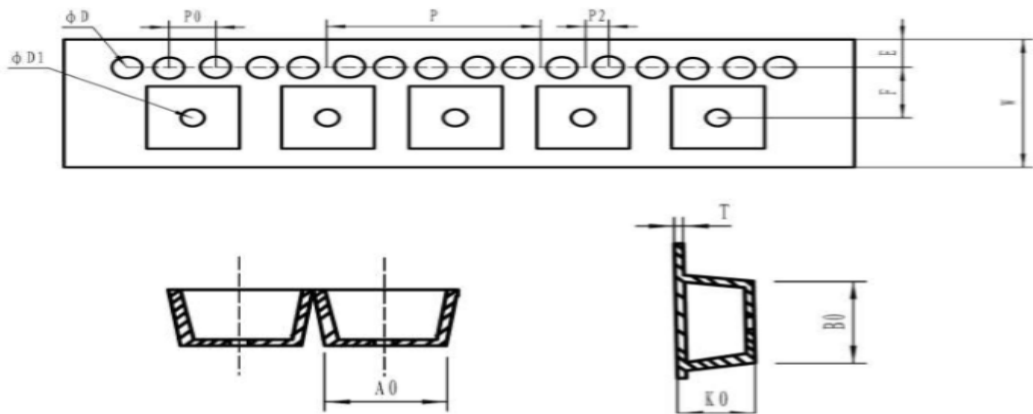
Packaging Information:

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



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±0.2	16.0±0.2	2.0±0.2	1.75±0.2	mm
	A0	T	K0	B0	F	W	
	10.9±0.2	0.35±0.05	4.9±0.2	16.0±0.2	11.5±0.2	24.0±0.3	

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