

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

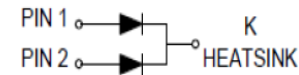
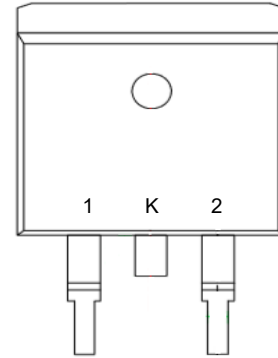
APPLICATION

- 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)	$I_F=10A$		$T_J = 25^\circ C$	--	0.93	V
			$T_J = 125^\circ C$	0.72	0.75	
Reverse leakage current	$V_R=200V$		$T_J = 25^\circ C$	--	10	uA
			$T_J = 125^\circ C$	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

REV.-1, Jul-2018, KTHB26

RATING AND CHARACTERISTIC CURVES MBR20200CG



FIG.1- FORWARD CURRENT DERATING CURVE

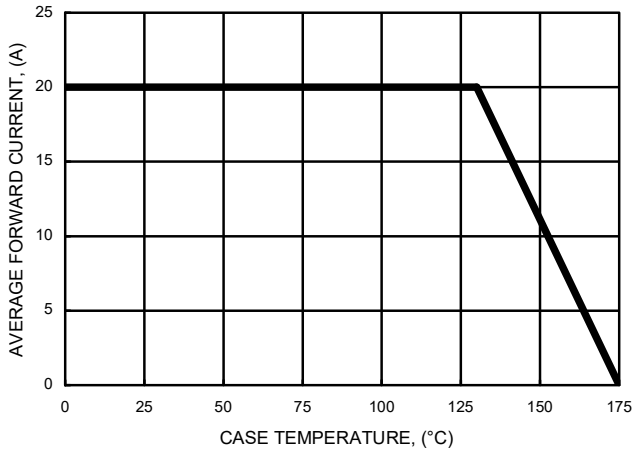


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

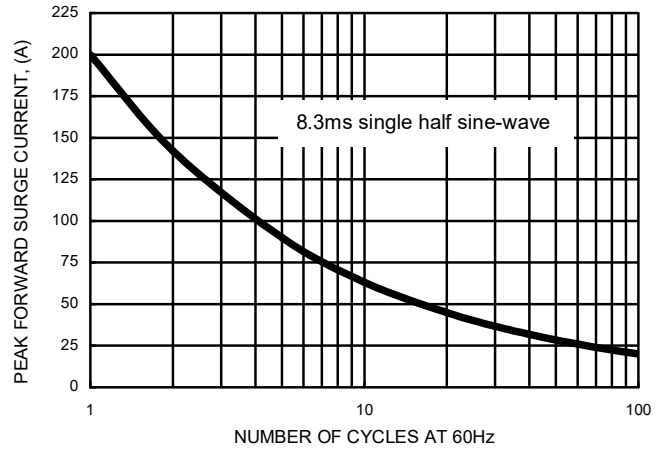


FIG.3- TYPICAL FORWARD CHARACTERISTICS

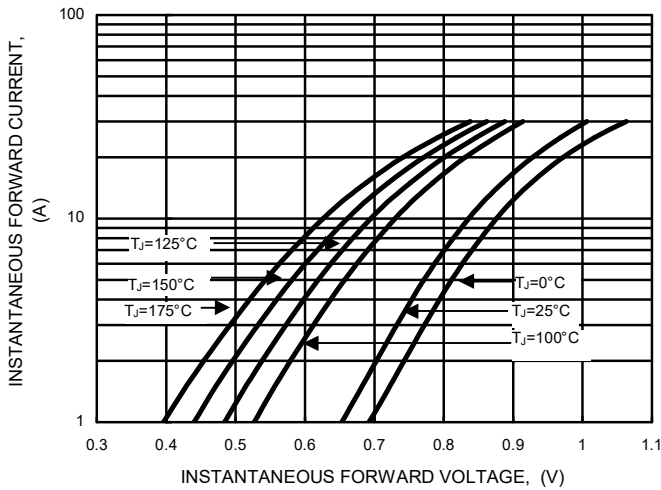


FIG.4- TYPICAL JUNCTION CAPACITANCE

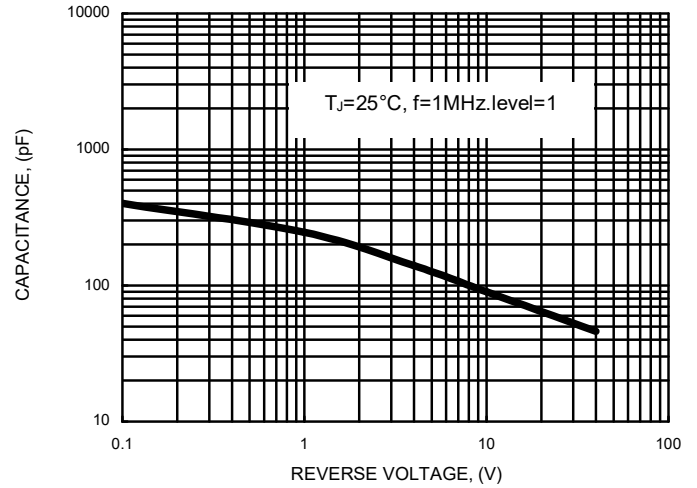


FIG.5- TYPICAL REVERSE CHARACTERISTICS

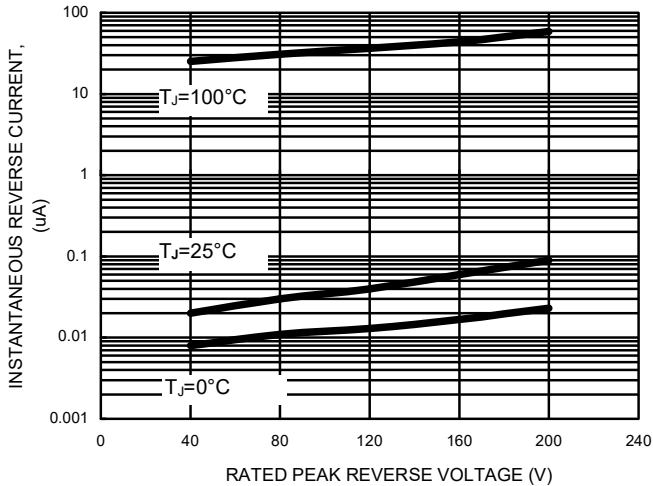
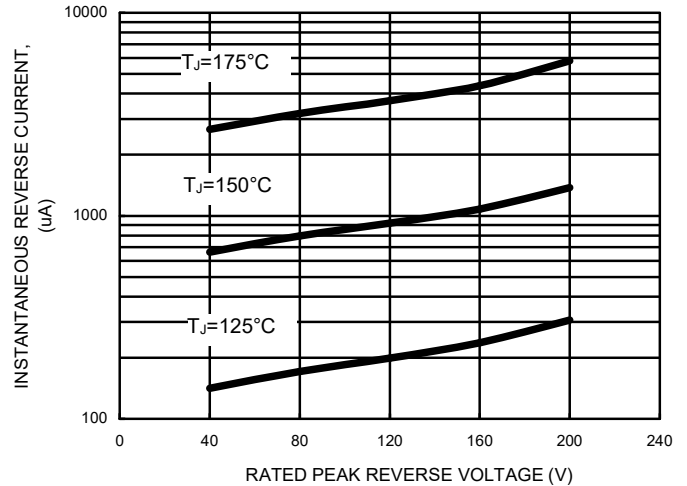
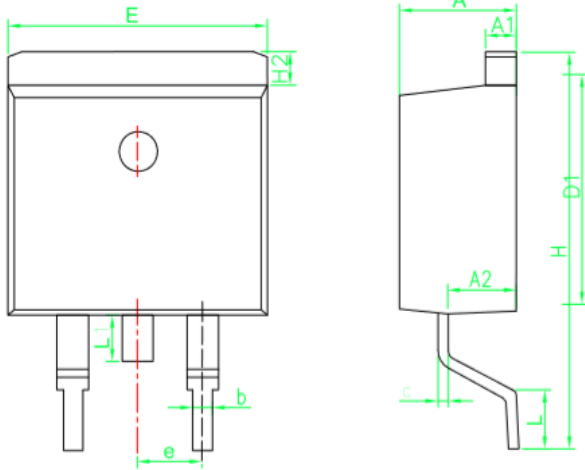


FIG.6- TYPICAL REVERSE CHARACTERISTICS



Package Outline Dimension:

TO-263 (E type)



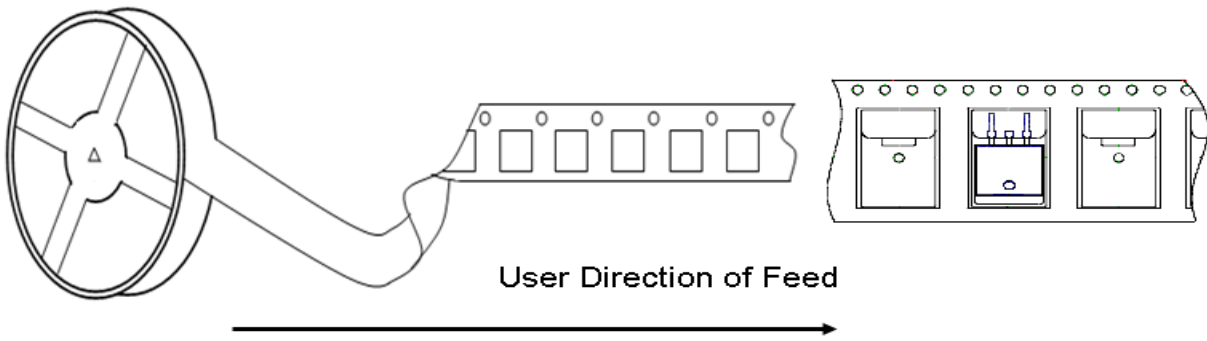
D ² PAK (E type)		
DIM	MIN	MAX
A	4.30	4.80
A1	1.12	1.42
A2	2.54	2.84
b	0.67	1.00
c	0.29	0.52
D1	8.40	9.00
E	9.80	10.46
e	2.54 BSC	
H	14.00	16.00
H2	1.12	1.45
L	1.50	3.10
L1	1.45	1.70
All Dimensions in millimeter		

Packaging Information:

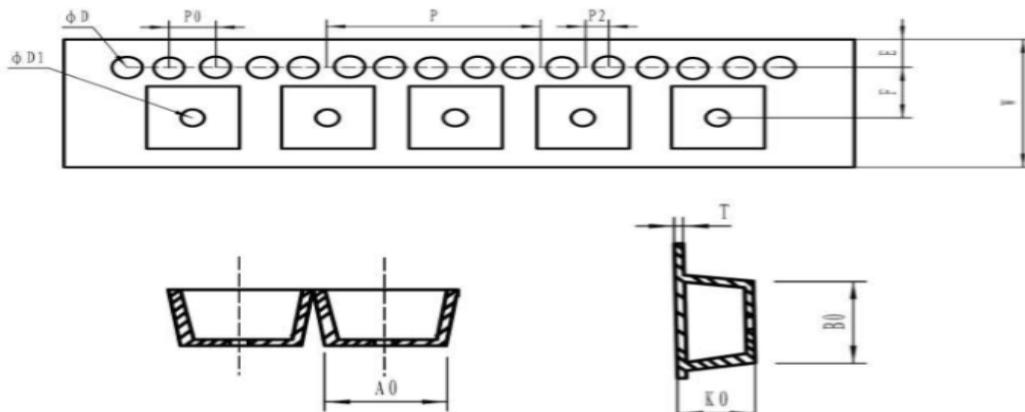
DEVICE	Units / Tape	Tapes / Inner Box	Box size (mm)	Units / Inner Box	Inner Box / Carton Box	Carton size (mm)	Units / Carton Box
TO-263 (E type)	800	1	350X338X50	800	5	385X358X303	4K

Embossed Carrier Dimensions Information

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 ± 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	

Important Notice and Disclaimer

LSC reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

LSC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does LSC assume any liability for application assistance or customer product design. LSC does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of LSC.

LSC products are not authorized for use as critical components in life support devices or systems without express written approval of LSC.