

MBRD20100CT

Rev.C Feb.-2023

/ Descriptions

Schottky Diode in a TO-252 Plastic Package.

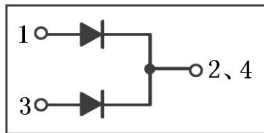
/ Features

Low power loss, high efficiency, HF Product.

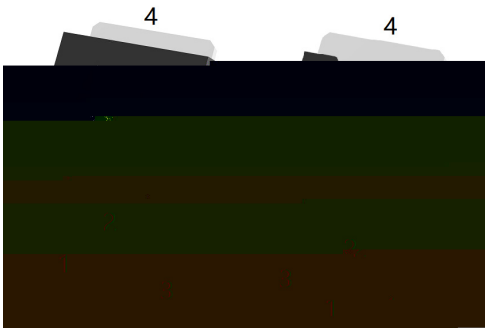
/ Applications

For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.

/ Equivalent Circuit



/ Pinning



PIN1 Anode

PIN 2,4 Cathode

PIN 3 Anode

/ Marking

See Marking Instructions.

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_{RM}	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	70	V
Average Rectified Forward Current	$I_{F(AV)}$ (per leg)	10	A
	$I_{F(AV)}$ total	20	A
Non Repetitive Peak Surge Current	I_{FSM}	150	A
Thermal resistance, junction to case	R_{Jc}	6	/W
Junction Temperature Range	T_{jMAX}	150	
Storage Temperature Range	T_{stg}	-55 150	

/ Electrical Characteristics(Ta=25)

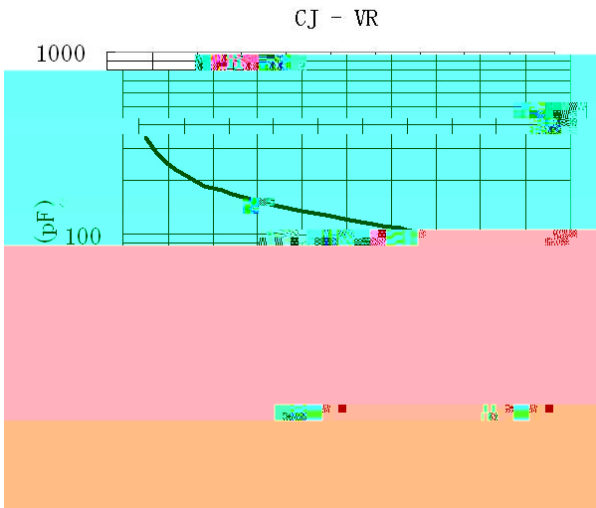
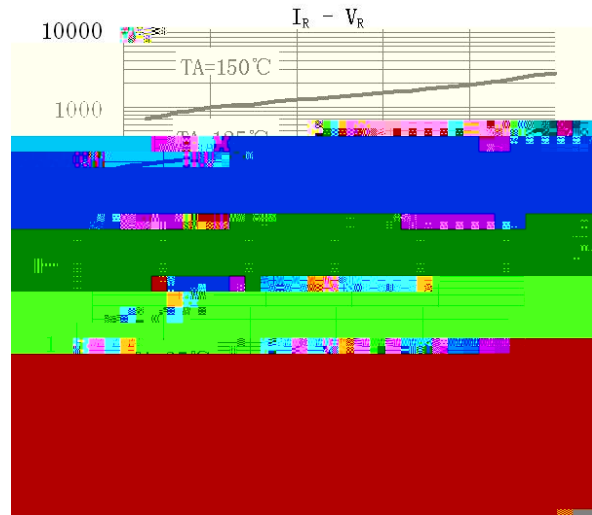
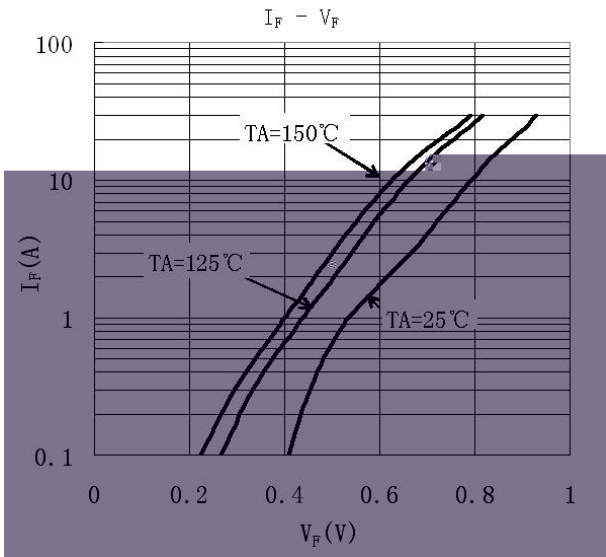
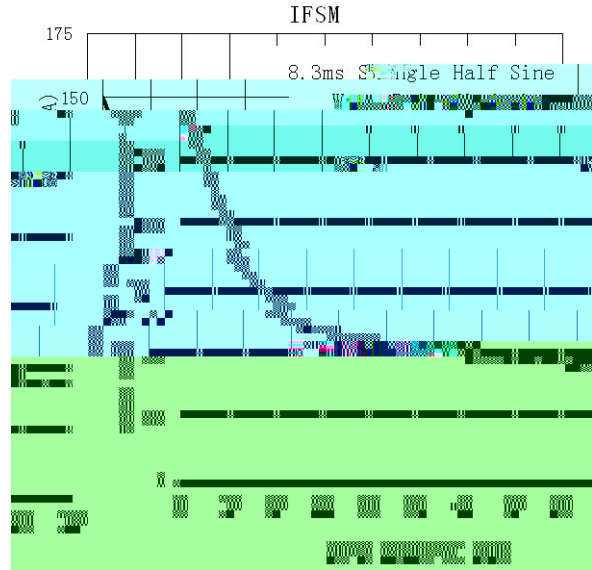
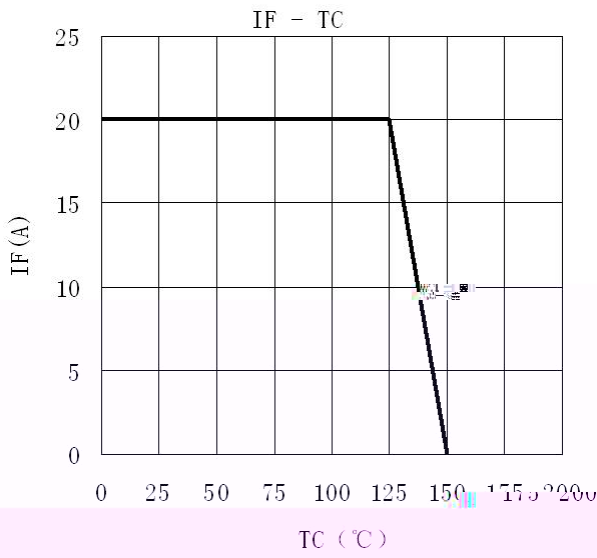
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse Voltage	V_{BR}	$I_R=0.3mA$	100			V
Forward Voltage	V_F	$I_F=10A$ $T_J=25$			0.85	V
		$I_F=10A$ $T_J=125$			0.7	V
		$I_F=20A$ $T_J=25$			0.95	V
		$I_F=20A$ $T_J=125$			0.85	V
Instantaneous Reverse Current	I_R Note 1	$V_R=100V$ $T_J=25$			0.15	mA
		$V_R=70V$ $T_J=125$			1.0	mA
		$V_R=100V$ $T_J=125$			150	mA

/Notes

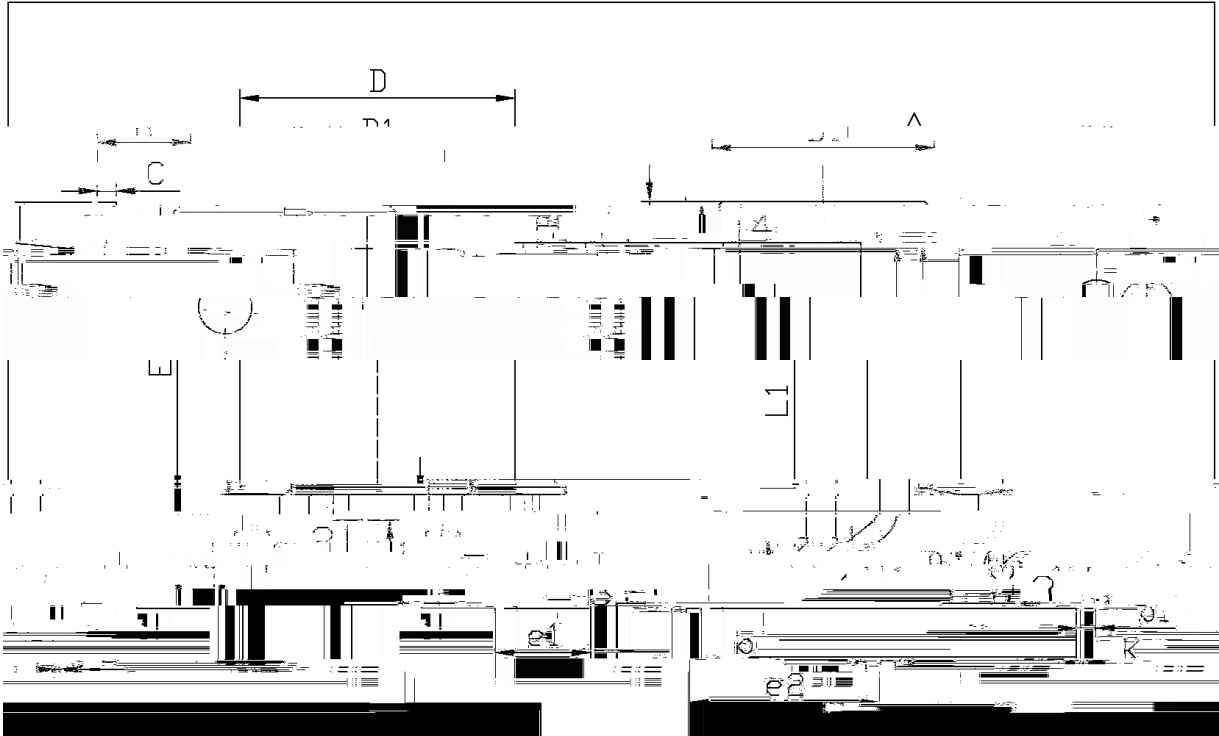
/Short duration pulse test used to minimize self-heating effect.

/ Unless otherwise noted, values for the parameters of a single chip

/ Electrical Characteristic Curve



/ Package Dimensions

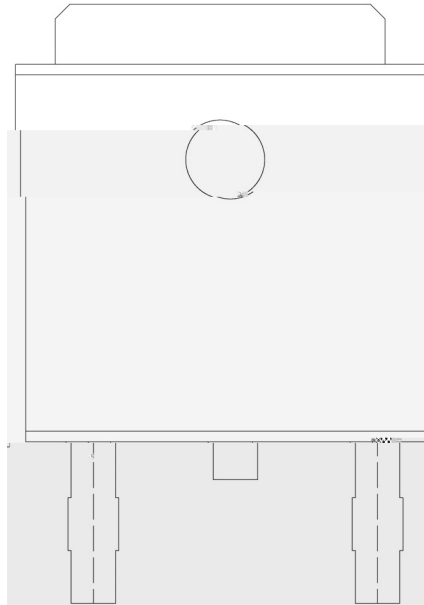


单位: mm

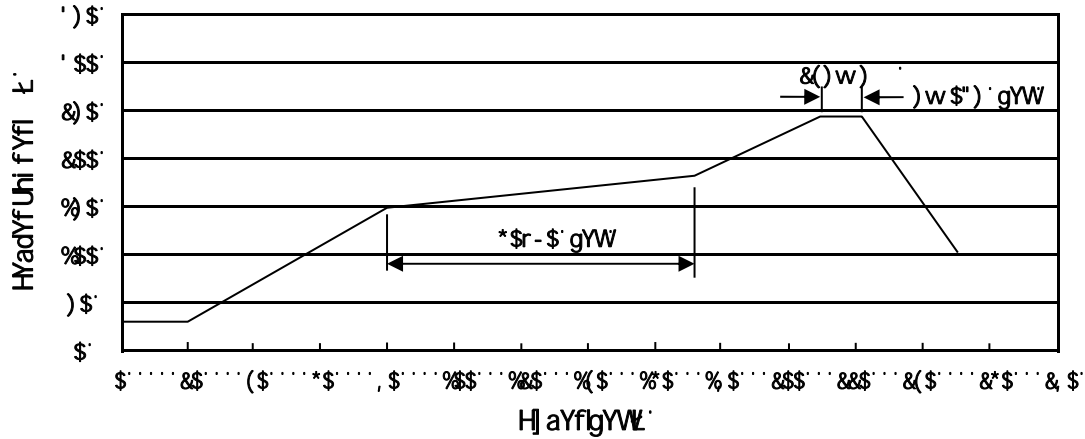
Symbol	Min	Max	Symbol	Min
A	2.30	2.40	F	5.95
B	0.50	0.53	G	4.75
C	0.45	0.55	H	9.95
D	5.16	5.50	I	0.00

12-252

/ Marking Instructions



() / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- 1 150 180 60 90sec; 1.Preheating:150~180 °C, Time:60~90sec.
- 2 245 5 5 0.5sec; 2.Peak Temp.:245 °C, Duration:5 ~0.5sec.
- 3 2 10 /sec. 3. Cooling Speed: 2~10 °C/sec.

/ Resistance to Soldering Heat Test Conditions

260 ±5 10 ±1 sec. Temp.:260±5 °C Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	2,500	2	5,000	6	30,000	13 ×16	360×360×50	380×335×366
TO-252	2,500	2	5,000	6	30,000	13 ×16	360×360×50	380×335×366

/ TUBE

Package Type	Units					Dimension (unit mm ³)		
	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180
TO-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180

/ Notices