



深圳兆同星科技有限公司

SHENZHEN ZTX TECHNOLOGY LIMITED

Product Specification

AUSHKXIN Type

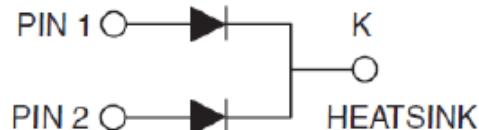
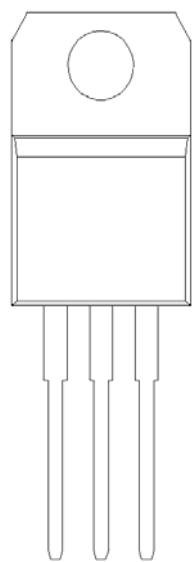
MBR10100CT

Features

- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- For surface mounted application
- Metal of silicon rectifier, majority carrier conduction
- Low forward voltage, high efficiency
- Guarding for over voltage protection
- For use in low voltage, high frequency inverters,
Free wheeling, and polarity protection applications

Mechanical Characteristics

- Case: Epoxy, Molded
- Weight: 1.9grams (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max.for10 sec
- Shipped 50 units per plastic tube



SCHOTTKY BARRIER RECTIFIER

10 AMPERES

100 VOLTS



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Maximum Ratings and Electrical Characteristics

TC=25°C unless otherwise noted

Parameter	Symbol	MBRF10100CT	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	100	Volts
Working peak reverse voltage	V _{RWM}	100	Volts
Maximum DC blocking voltage	V _{DC}	100	Volts
Maximum average forward rectified current (See Fig. 1)	Total device Per leg	I _{F(AV)}	Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load(JEDEC Method) per leg	I _{FSM}	110	Amps
Peak repetitive reverse current per leg at t _p = 2.0us, 1KHz T _J < 175 °C	I _{RRM}	2.5	Amps
Voltage rate of change (rated V _R)	dv/dt	10,000	V/us
Maximum instantaneous forward voltage per leg (Note 4) at I _F =5A, TC =25°C at I _F =5A, TC =125°C	V _F	0.82 0.75	Volts
Maximum reverse current per leg at working peak reverse voltage (Note 4)	I _R	5 5	uA mA
Typical thermal resistance per leg	R _{θJC}	4.0	°C/W
Operating junction temperature range	T _J	-55 to +175	°C
Storage temperature range	T _{STG}	-55 to +175	°C
Electrostatic Discharge Voltage. JEDEC Method.ESD HBM.Contact.	V _{ESD}	±8 (contact)	KV

- Notes:**
1. Clip mounting (on case), where lead does not overlap heatsink with 0.110" offset
 2. Clip mounting (on case), where leads do overlap heatsink
 3. Screw mounting with 4-40 screw, where washer diameter is < 4.9 mm (0.19")
 4. Pulse test: 300us pulse width, 1% duty cycle

RATINGS AND CHARACTERISTIC CURVES

$T_A = 25^\circ\text{C}$ unless otherwise noted

Fig.1-Forward Current Derating Curve

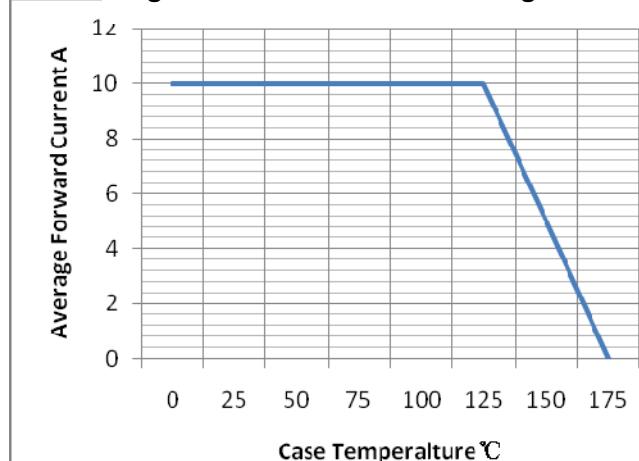


Fig.2-Maximum Non-Repetitive Peak Forward Surge Current Per Leg

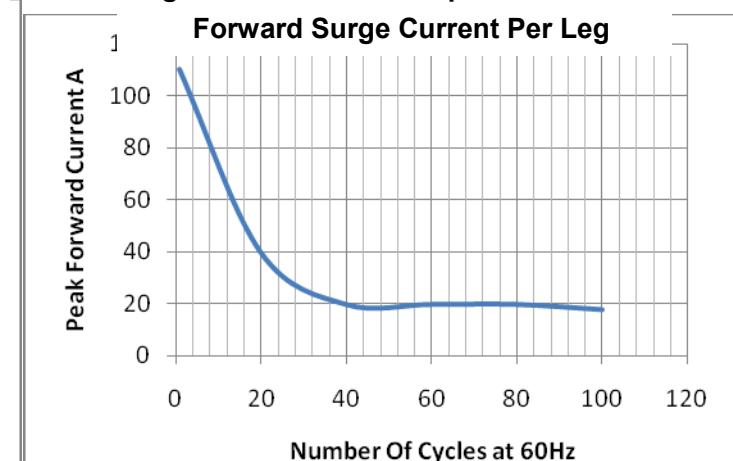


Fig. 3 – Typical Instantaneous Forward Characteristics Per Leg

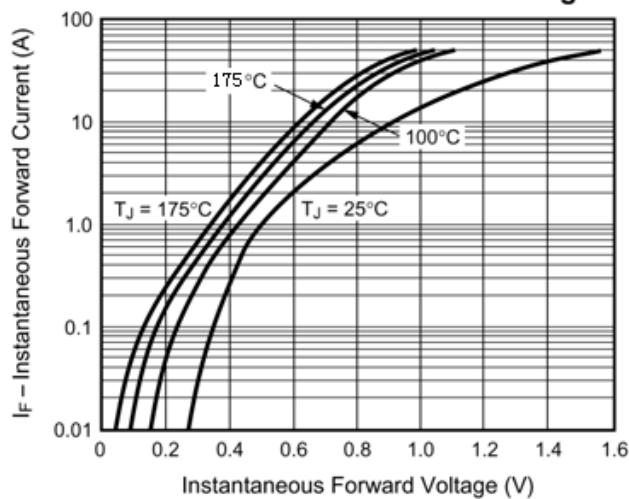


Fig. 4 – Typical Reverse Characteristics Per Leg

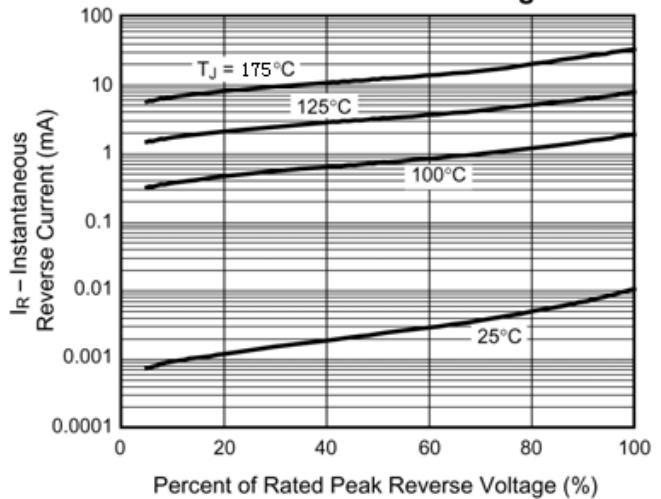
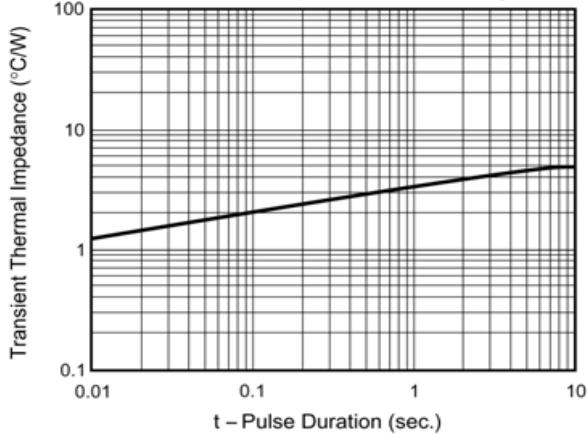


Fig. 5 – Typical Transient Thermal Impedance Per Leg





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Package Outline (TO-220A)

This technical drawing illustrates a component assembly with the following dimensions and features:

- Horizontal dimension E is indicated at the top.
- Vertical dimension A is indicated on the right side.
- Vertical dimension $A1$ is indicated on the right side.
- Vertical dimension $A2$ is indicated on the right side.
- Vertical dimension $H1$ is indicated on the left side.
- Vertical dimension $H2$ is indicated on the left side.
- Vertical dimension $H3$ is indicated on the left side.
- Vertical dimension G is indicated on the right side.
- Vertical dimension ϕD is indicated near the top center.
- Feature a is located on the left vertical support.
- Feature b is located on the right vertical support.
- Feature c is located at the bottom right corner.
- Feature e is located at the bottom center.

UNIT:mm

	单位: mm		
	MIN	NOM	MAX
A	4.05	4.25	4.45
A1	1.15	1.25	1.35
A2	2.35	2.55	2.75
b	0.70	0.80	0.90
b 1	1.12	1.32	1.52
c	0.30	0.45	0.60
e	2.34	2.54	2.74
E	9.95	10.15	10.35
H	15.3	15.5	15.7
H1	8.8	9	9.2
H2	13	13.5	14
H3	3.8	4	4.2
G	2.65	2.8	2.95
Ø	3.65	3.8	3.95