

## Schottky Diodes



### Features

- High frequency operation
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced ruggedness and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

### Typical Applications

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

### Mechanical Data

**Package:** TO-220AB

Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant

**Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

**Polarity:** As marked

### Maximum Ratings (T<sub>a</sub>=25 °C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBRL40120CT
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D

	FSM	A	320
Current Squared Time @1ms t 8.3ms T <sub>j</sub> =25	I <sup>2</sup> t	A <sup>2</sup> s	425
Storage Temperature	T <sub>stg</sub>		-55 ~ +150
Junction Temperature	T <sub>j</sub>		-55 ~ +150

### Electrical Characteristics (T<sub>a</sub>=25 °C Unless otherwise specified)

V

	I <sub>FM</sub>	V	I <sub>FM</sub> =20.0A	0.85
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>RRM1</sub>	mA	V <sub>RM</sub> =V <sub>RRM</sub> T <sub>a</sub> =25	0.1
	I <sub>RRM2</sub>		V <sub>RM</sub> =V <sub>RRM</sub> T <sub>a</sub> =100	20

Note1:Pulse test:300uS pulse width,1% duty cycle

Note2:Pulse test:pulse width 40mS



# MBRL40120CT

**Thermal Characteristics**  $T_a=25$  Unless otherwise specified

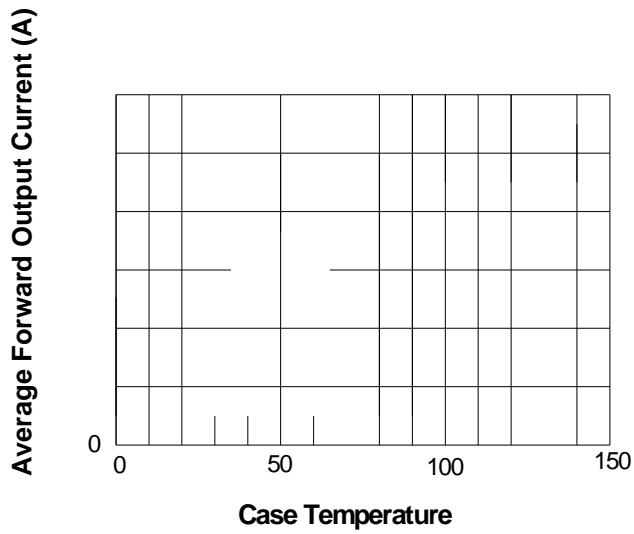
PARAMETER		SYMBOL	UNIT	MBRL40120CT
Thermal Resistance	Between junction and case	$R_{J-C}$	/W	2.0

**Ordering Information (Example)**

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MBRL40120CT	Approximate 1.9	50	1000	5000	Tube

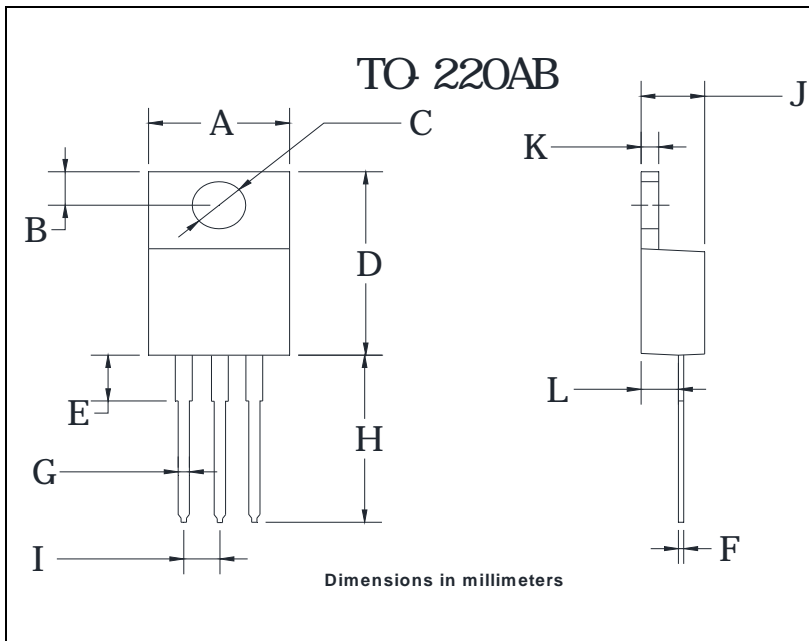
**Characteristics (Typical)**

**FIG1:Io -Tc Curve**





Outline Dimensions



TO-220AB		
Dim	Min	Max
A	9.95	10.35
B	2.55	2.95
C	3.8	4.0
D	14.95	15.25
E	3.75	4.25
F	0.26	0.5
G	0.68	0.94
H	13.4	13.9
I	2.35	2.65
J	4.38	4.78
K	1.14	1.4
L	2.37	2.79



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