

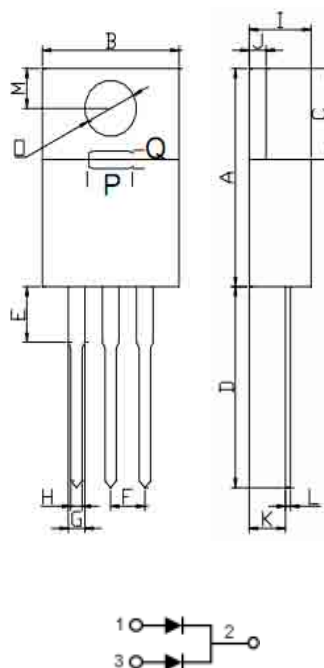
## FEATURES

- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss, high efficiency
- High current capability, low VF
- High surge capacity
- Plastic package has UL flammability classification 94V-0

## MECHANICAL DATA

- Case : TO-220 molded plastic
- Polarity : As marked on the body
- Mounting position : Any

TO-220 PACKAGE



DIM	MILLIMETERS	
	MIN	MAX
A	14.68	15.32
B	9.78	10.42
C	6.01	6.52
D	13.06	14.62
E	3.57	4.07
F	2.42	2.66
G	1.12	1.35
H	0.72	0.96
I	4.22	4.98
J	1.14	1.36
K	2.20	2.97
L	0.33	0.55
M	2.48	2.98
O	3.70	3.90
P	3.50	3.70
Q	1.20	1.40

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60HZ, resistive or inductive load.

For capacitive load, derate current by 20%

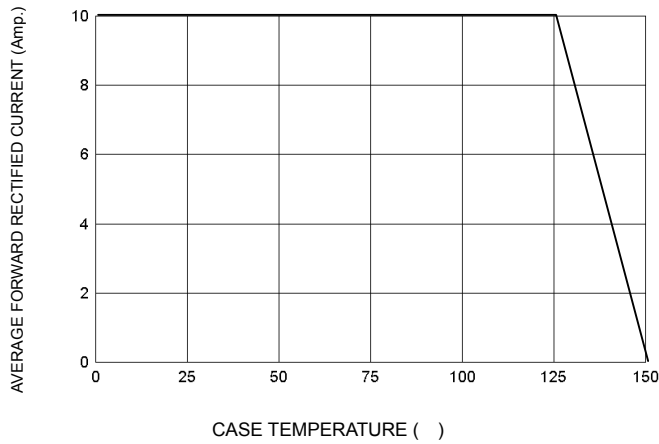


**Lead Free**

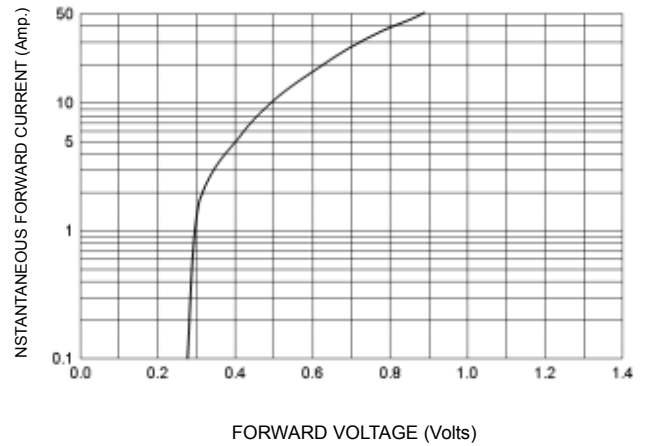
CHARACTERISTICS	SYMBOL	MBR1045CT	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	45	V
Maximum RMS Voltage	VRMS	31.5	V
Maximum DC Blocking Voltage	Vcc	45	V
Maximum Average Forward Rectified Current	I(AV)	10	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC METHOD)	IFSM	150	A
Maximum Forward Voltage at 5A DC	VF	0.55	V
Maximum DC Reverse Current @TC=25°C at Rated DC Blocking Voltage @TC=125°C	IR	0.50 30	MA
Typical Junction Capacitance (Note 2)	CJ	360	pF
Typical Thermal Resistance (Note 3)	ROJC	4.0	°C/W
Operating Temperature Range	TJ	-55to+150	°C
Storage Temperature Range	TSTG	-55to+150	°C

**RATINGS AND CHARACTERISTIC CURVES**

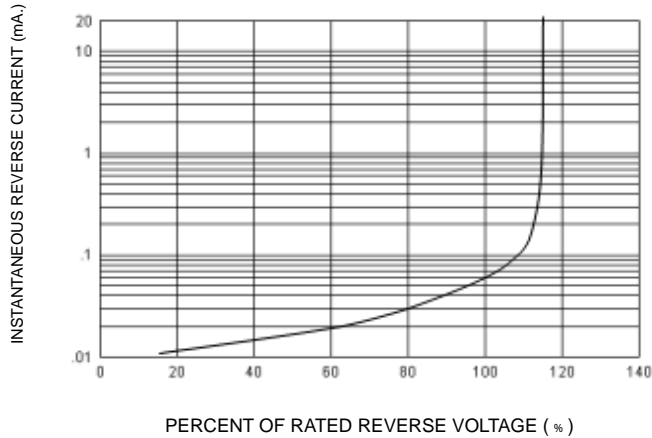
**FIG-1 FORWARD CURRENT DERATING CURVE**



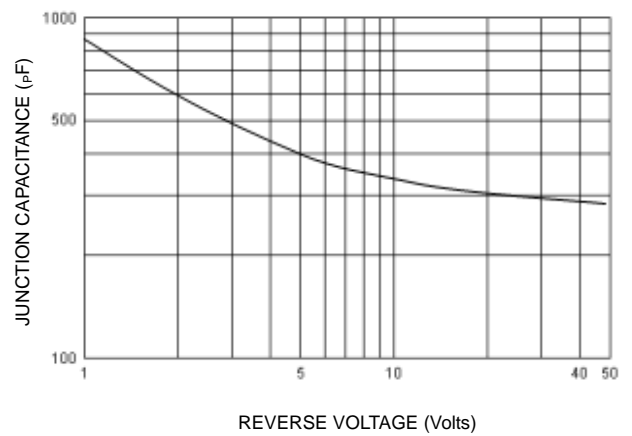
**FIG-2 TYPICAL FORWARD CHARACTERISTICS**



**FIG-3 TYPICAL REVERSE CHARACTERISTICS**



**FIG-4 TYPICAL JUNCTION CAPACITANCE**



**FIG-5 PEAK FORWARD SURGE CURRENT**

