

- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



TO-220AB



MECHANICAL DATA

Case : TO-220AB

Molding compound, UL flammability classification rating 94V-0
 Base P/N with suffix "G" on packing code - halogen-free, RoHS compliant
 Base P/N with prefix "H" on packing code - AEC-Q101 qualified

Terminal : Matte tin plated leads, solderable per JESD22-B102
 Meet JESD 201 class 1A whisker test,
 with prefix "H" on packing code meet JESD 201 class 2 whisker test

Polarity : As marked

Mounting torque : 5 in-lbs maximum

Weight : 1.88 gram (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	MBR 1035 CT	MBR 1045 CT	MBR 1050 CT	MBR 1060 CT	MBR 1090 CT	MBR 10100 CT	MBR 101000 CT	
Maximum repetitive peak reverse voltage	V _{RRM}	35	45	50	60	90	100	100	
Maximum RMS voltage	V _{RMS}	24	31	35	42	63	70	70	
Maximum DC blocking voltage	V _{DC}	35	45	50	60	90	100	100	
Maximum average forward rectified current	I _{F(AV)}	10							10
Peak Repetitive Forward Current (Rated VR, Square Wave, 20KHz)	I _{FRM}	10							10
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	120							120
Peak Repetitive Reverse Surge Current (Note 1)	I _{RRM}	1		0.5					0.5
Maximum Instantaneous Forward Voltage (Note 2) IF= 5 A, TA=25°C	V _F	0.70		0.80		0.85			
IF= 5 A, TA=125°C		0.57		0.65		0.75			
IF= 10 A, TA=25°C		0.80		0.90		0.95			
IF= 10 A, TA=125°C		0.67		0.75		0.85			
Maximum reverse current @ rated VR T _A =25 °C T _A =125 °C	I _R	0.1							0.1
		15		10		2			2
Voltage rate of change (Rated V _R)	dV/dt	10000							10000
Typical thermal resistance	R _{θJC}	1.5							1.5
Operating junction temperature range	T _J	- 55 to + 150							- 55 to + 150
Storage temperature range	T _{STG}	- 55 to + 150							- 55 to + 150

Note 1 : tp = 2.0 μs, 1.0KHz

Note 2 : Pulse test with PW=300u sec, 1% duty cycle

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EXAMPLE					
PREFERRED P/N	PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	D
MBR1060CT C0	MBR1060CT		C0		
MBR1060CT C0G	MBR1060CT		C0	G	Green
MBR1060CTHC0	MBR1060CT	H	C0		AEC-Q101

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG.1- FORWARD CURRENT DERATING CURVE

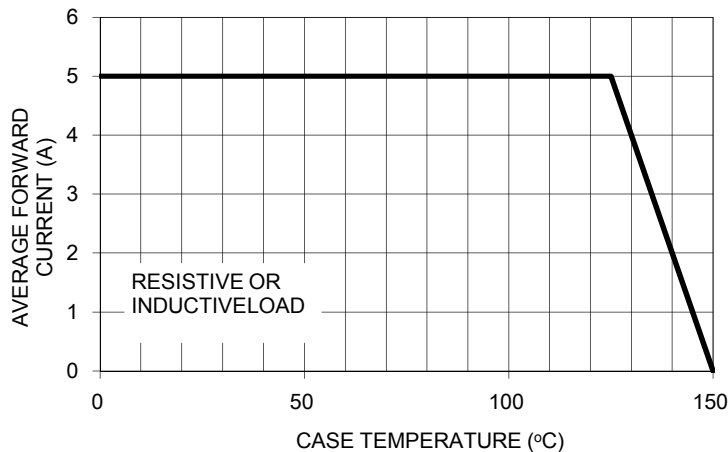


FIG. 2- MAXIMUM NON-REPETITIVE SURGE CURRENT

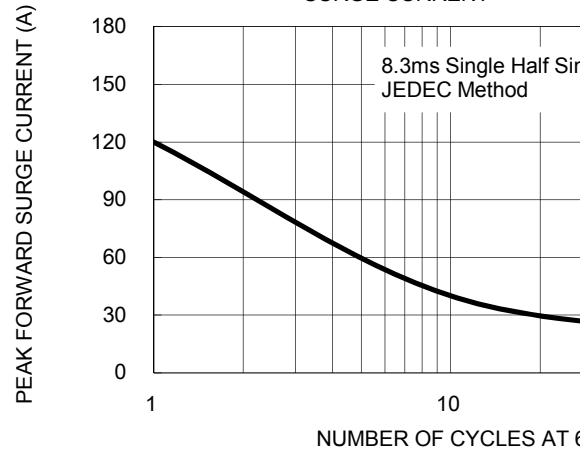


FIG. 3- TYPICAL FORWARD CHARACTERISTICS

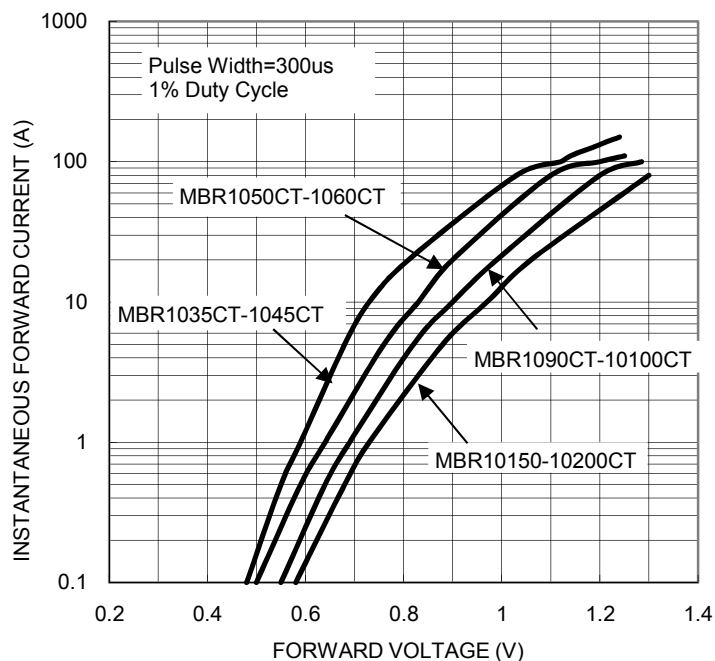
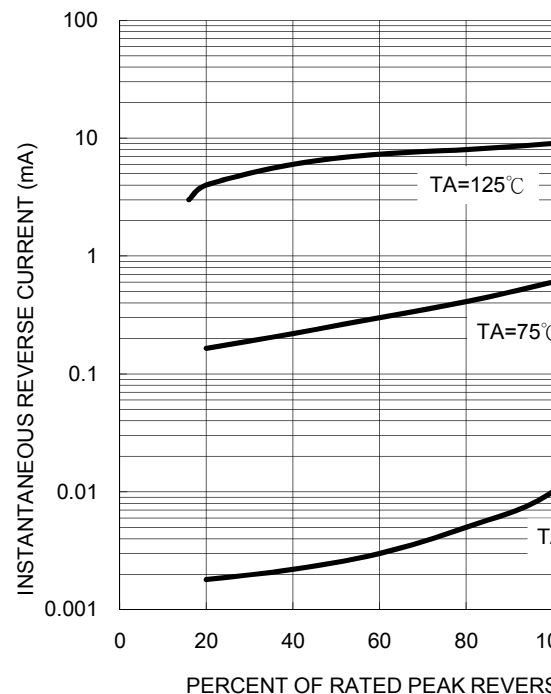
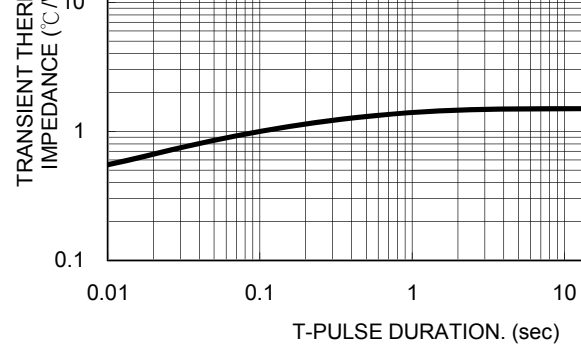
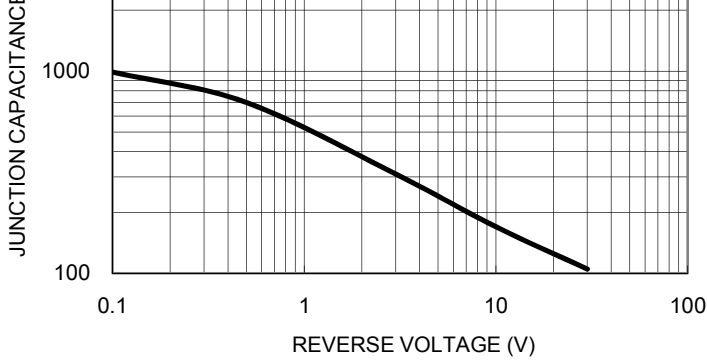
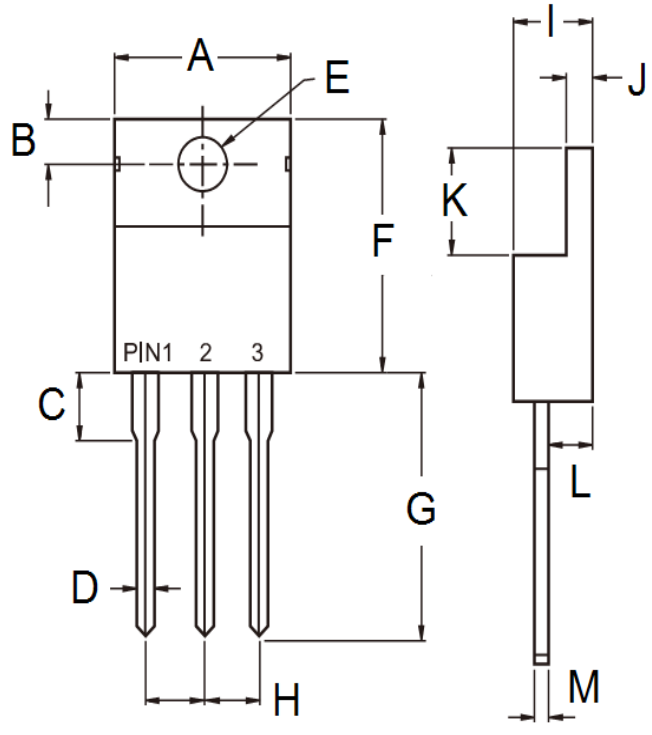


FIG. 4- TYPICAL REVERSE CHARACTERISTICS





PACKAGE OUTLINE DIMENSIONS



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	-	10.50	-	0.413
B	2.62	3.44	0.103	0.135
C	2.80	4.20	0.110	0.165
D	0.68	0.94	0.027	0.037
E	3.54	4.00	0.139	0.157
F	14.60	16.00	0.575	0.630
G	13.19	14.79	0.519	0.582
H	2.41	2.67	0.095	0.105
I	4.42	4.76	0.174	0.187
J	1.14	1.40	0.045	0.055
K	5.84	6.86	0.230	0.270
L	2.20	2.80	0.087	0.110
M	0.35	0.64	0.014	0.025

MARKING DIAGRAM



- P/N = Marking Code
- G = Green Compound
- YWW = Date Code
- F = Factory Code