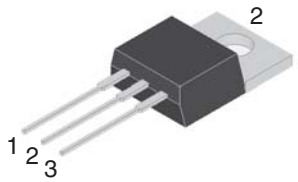
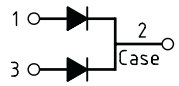
30 Amp. Schottky Barrier Rectifier

TO-220AB





Common Cathode
Suffix "C"

Voltage	Current
45 to 100 V	30 A

- Metal silicon junction, majority carrier conduction
- High current capability
- The plastic material U/L recognition 94 V-0
- Terminals: Leads solderable per MIL-STD202
- Low forward Voltage drop

Absolute Maximum Ratings, according to IEC publication No. 134

		MBR3045CT	MBR3060CT	MBR30100CT	MBR30150CT
V_{RRM}	Peak recurrent reverse voltage (V)	45	60	100	150
V_{RMS}	Maximum RMS voltage (V)	31	42	70	105
V_{DC}	Maximum DC blocking voltage (V)	45	60	100	150
$I_{F\,(AV)}$	Maximum average Forward current at T_C = 130 °C (both diodes conducting)	30 A			
I_{FSM}	8.3 ms. peak forward surge current (Jedec Method)	200 A			
I_{RRM}	Peak repetitive reverse surge current	1.0 A	0.5 A		
T_j	Operating temperature range	– 65 to + 150 °C			
T_{stg}	Storage temperature range	– 65 to + 175 °C			

Electrical Characteristics

			MBR3045CT	MBR3060CT	MBR30100CT	MBR30150CT
V_F	Max. forward voltage drop at I_F = 15 A (Note 1)	Tc = 25 °C	0.70 V	0.77 V	0.84 V	0.95 V
		Tc = 125 °C	0.60 V	0.67 V	0.70 V	0.92 V
	Max. forward voltage drop at I_F = 30 A	Tc = 25 °C	0.82 V	--	0.94 V	1.02 V
		Tc = 125 °C	0.73 V	--	0.82 V	0.98 V
I_R	Max. Instantaneous reverse current at $V_R = V_{RRMax}$ (Note 1)	Tc = 25 °C	0.20 mA			0.10 mA
		Tc = 125 °C	15.0 mA	10.0 mA	7.5 mA	5.0 mA
R_{thj-c}	Typical Thermal Resistance (Note 2)		1.0 °C/W		1.5 °C/W	

Note: 1. Pulse Test: 300µs Pulse Width, 1% Duty Cycle
2. Thermal Resistance from Junction to Case Per Leg

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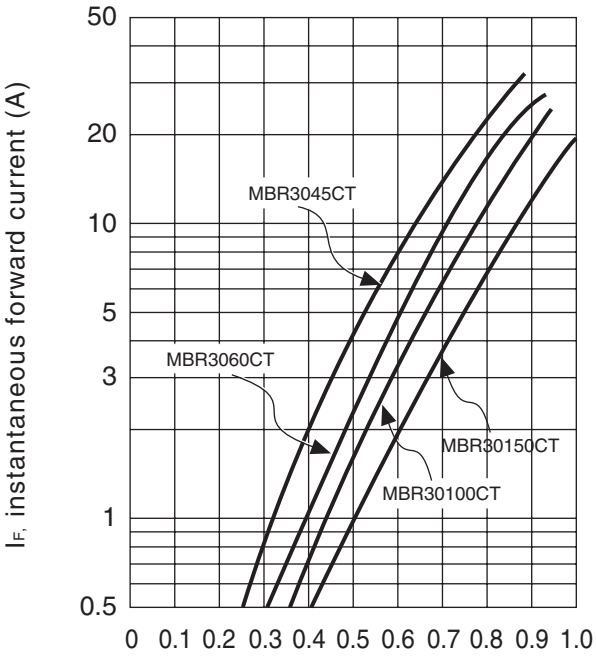
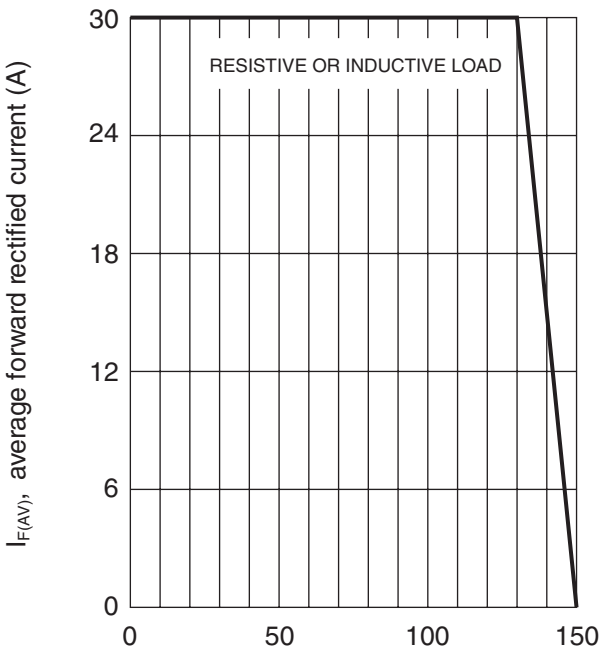
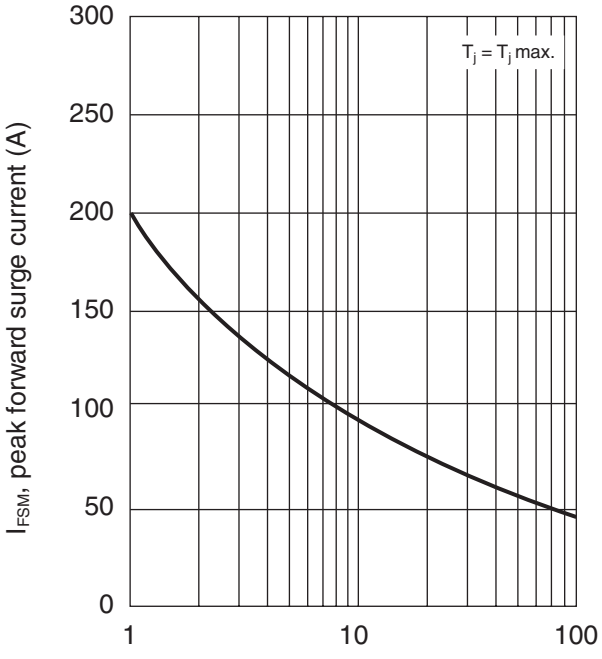
TYPICAL FORWARD CHARACTERISTIC



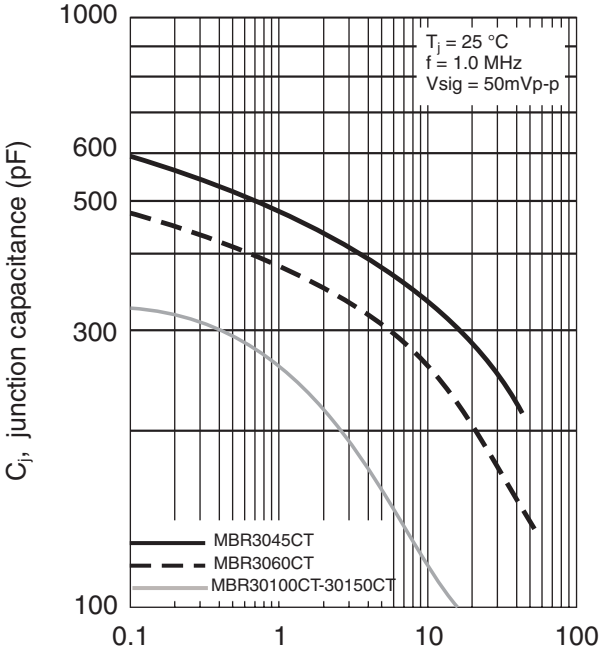
FORWARD CURRENT DERATING CURVE



MAXIMUM NON-REPETITIVE
PEAK FORWARD SURGE CURRENT



TYPICAL JUNCTION CAPACITANCE



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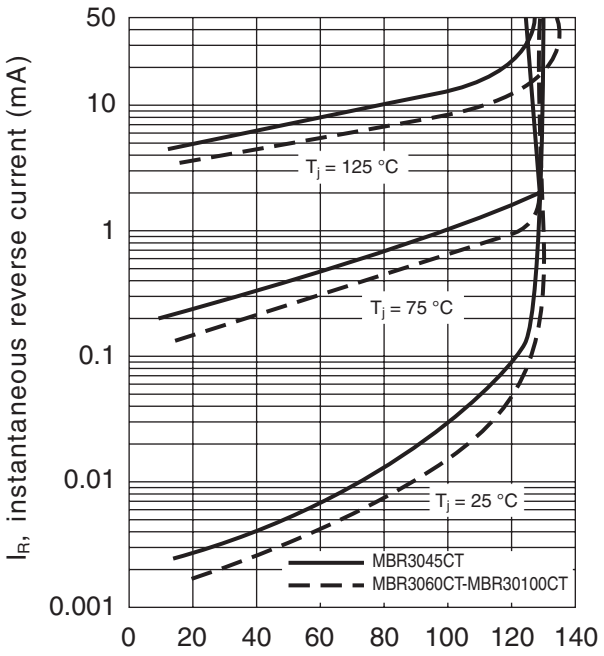
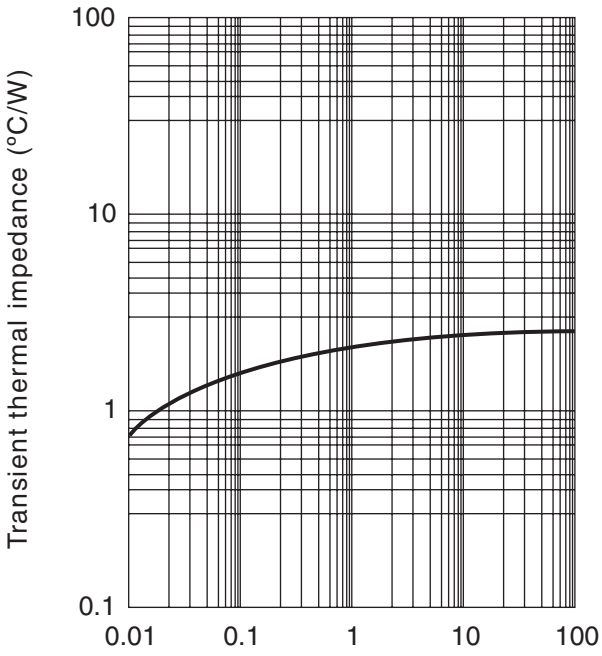
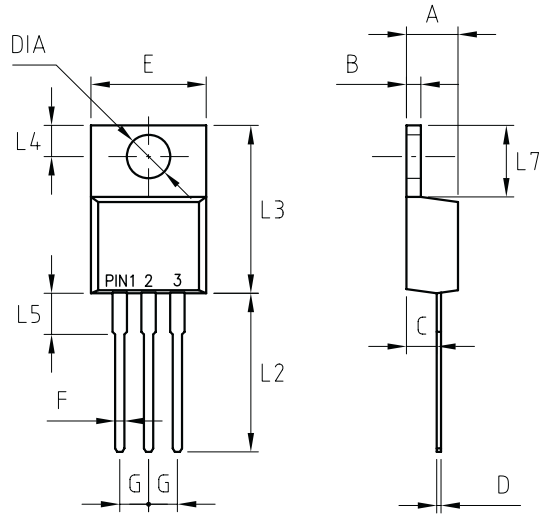
TYPICAL REVERSE CHARACTERISTIC



TYPICAL TRANSIENT THERMAL IMPEDANCE



PACKAGE MECHANICAL DATA TO-220AB



REF.	DIMENSIONS Milimeters	
	Min.	Max.
A	4.44	4.70
B	1.14	1.40
C	2.54	2.79
D	0.35	0.64
E	--	10.5
F	0.68	0.94
G	2.41	2.67
L2	13.46	14.22
L3	14.90	15.10
L4	2.62	2.87
L5	3.56	4.06
L7	5.84	6.86
DIA	3.91	3.74