



Extrtreme Low VF Schottky Barrier Rectifiers

Reverse Voltage - 45 Volts

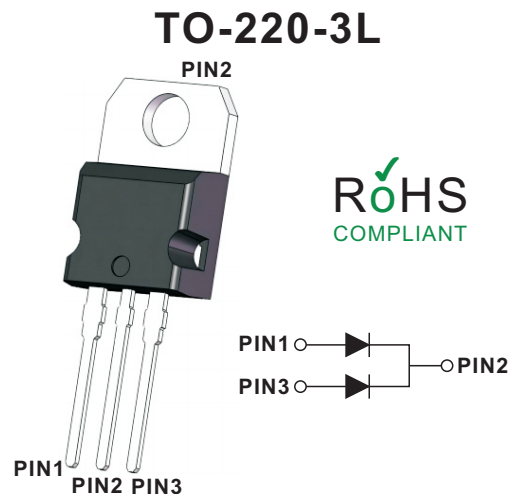
Forward Current - 40 Amperes

Features

- Super Low Forward Voltage Drop
- Reliable High Temperature Operation
- Softest, fast switching capability
- 150 °C Operating Junction Temperature
- Lead Free Finish, RoHS Compliant

Mechanical data

- Case: TO-220-3L
- Approx Weight: 2.04g (0.07oz)
- Case Material: “Green” molding compound, UL flammability classification 94V-0, “Halogen-free”.



Maximum Ratings And Electrical Characteristics

Ratings At 25°C Ambient Temperature Unless Otherwise Specified

Characteristics	Symbols	MBRT4045CD	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	45	V
Maximum RMS voltage	V_{RMS}	32	V
Maximum DC Blocking Voltage	V_{DC}	45	V
Average Rectified Forward Current Per leg Per device	I_O	20 40	A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)(Per leg)	I_{FSM}	250	A
Operating Junction Temperature Range	T_j	-55 ~ +150	°C
Storage Temperature Range	T_{stg}	-55 ~ +150	°C

Characteristics	Symbols	Test Conditions	Min	Typ	Max	Units
Breakdown voltage per leg	V_{BR}	$I_R=0.5mA$	45			V
Instantaneous forward voltage per leg	V_F	$I_F=20A, T_J=25^\circ C$		0.50	0.55	V
Reverse current per leg	I_R	$V_R=45, T_J=25^\circ C$			0.25	mA



Fig.1 Typical Forward Current Derating Curve

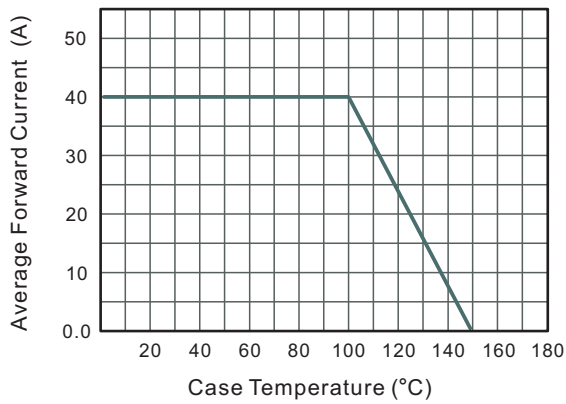


Fig.2 Typical Reverse Characteristics

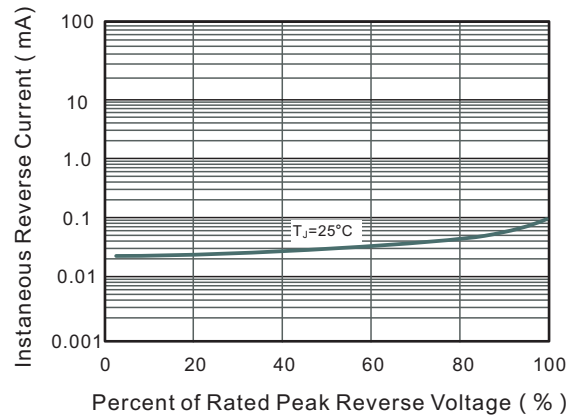


Fig.3 Typical Forward Characteristic(per leg)

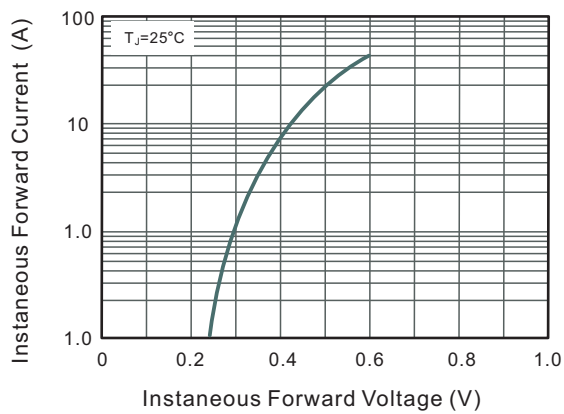
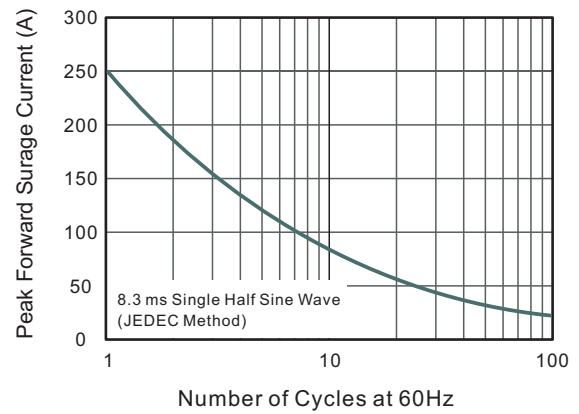


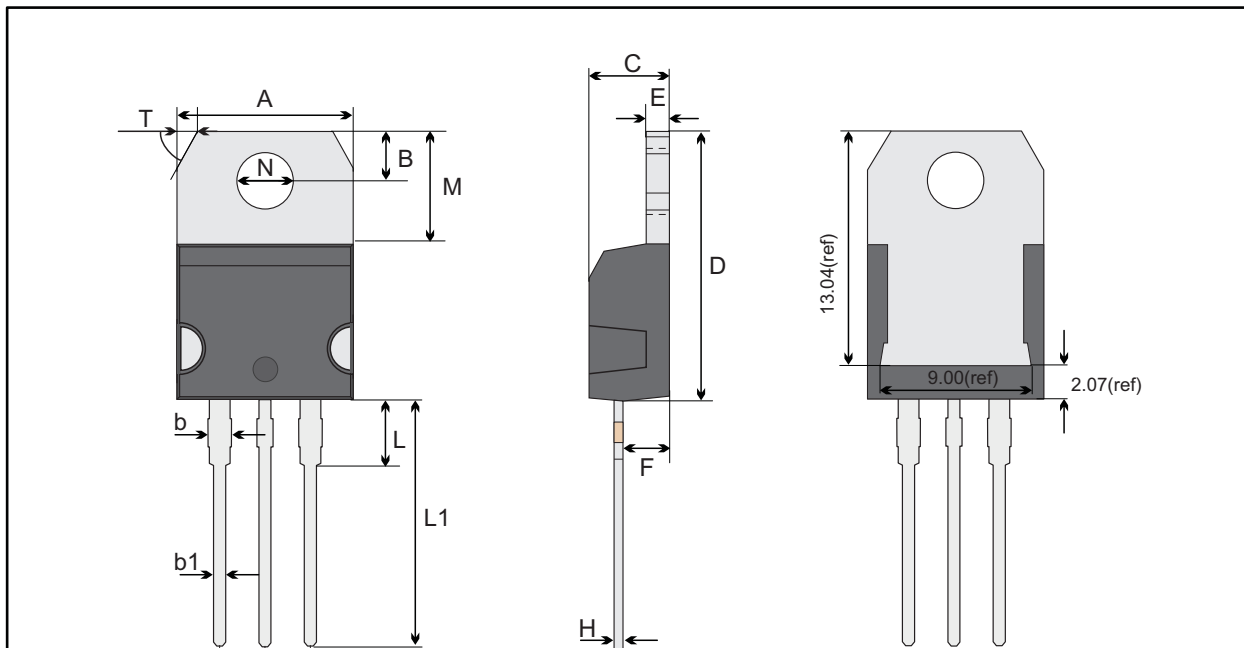
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current





Package Outline
Through Hole Package ; 3 leads

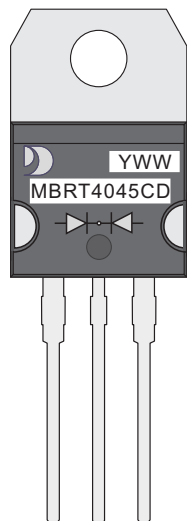
TO-220-3L



TO-220-3L mechanical data

UNIT		A	B	b	b1	C	D	E	F	G	H	L	L1	M	N	T
mm	max	10.28	2.84	1.67	0.9	4.65	15.54	1.37	2.79	2.64	0.6	3.88	13.13	6.39	3.82 typ.	1.19 58° ref.
	typ	10.18	2.74	1.47	0.8	4.45	15.34	1.27	2.59	2.54	0.5	3.68	12.93	6.19		
	min	10.08	2.64	1.27	0.7	4.25	15.14	1.17	2.39	2.44	0.4	3.48	12.73	5.99		
mil	max	405	112	66	35	183	612	54	110	104	24	153	517	252	150 typ.	47 58° ref.
	typ	401	108	58	31	175	604	50	102	100	20	145	509	244		
	min	397	104	50	28	167	596	46	94	92	16	137	501	236		

Marking Diagram



YWW: Date Code
Y: Years(0~9)
WW: Week
MBRT4045CD: Product name
(NOTE: The weekly code is based on the actual number of weeks in the calendar year.)



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