

MBRF40150CT

SCHOTTKY BARRIER RECTIFIER

DESCRIPTION

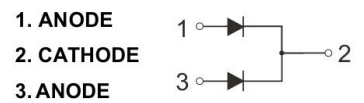
The MBRF40150CT is a 40A schottky barrier rectifier, it uses our advanced technology to provide the customers with high surge capability, high efficiency, high current capability, low power loss and low forward voltage drop, etc.

The MBRF40150CT is suitable for free wheeling and polarity protection, etc.



FEATURE

- * Low Power Loss,High Efficiency
- * Guard Ring Die Construction for Transient Protection
- * High Current Capability and Low Forward Voltage Drop



MARKING(The image is for reference only. Please take the actual product as the standard)



MBRF40150CT=Device Code

XXXXX=Date Code

Solid Dot=Green molding compound

ABSOLUTE MAXIMUM RATINGS(TA=25°C, unless otherwise specified.)

SYMBOL	PARAMETER		VALUE	UNIT
VRRM	Peak repetitive reverse voltage		150	V
VRWM	Working peak reverse voltage			V
VR	DC blocking voltage			V
VR(RMS)	RMS reverse voltage		105	V
IO	Average rectified output current	Per Leg	20	A
		Total	40	
IFSM	Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		250*2	A
Tj	Junction temperature		175	°C
Tstg	Storage temperature		-55~+150	°C
RθJA	Thermal Resistance fromJunction to Ambient		62.5	°C/W
RθJC	Thermal Resistance From Junction To Case		3	°C/W

Notes:Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

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ELECTRICAL CHARACTERISTICS (TA=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse voltage	$V_{(BR)}$	$I_R=0.2mA$	150			V
Forward voltage	V_F	$I_F=20A$		$T_j=25^{\circ}C$	1.0	V
				$T_j=125^{\circ}C$	0.69	V
Reverse current	I_R	$V=150V$	$T_j=25^{\circ}C$		100	μA
			$T_j=125^{\circ}C$	5		mA

Note: Pulse Test: Pulse width $\leq 300\mu s$, Duty cycle $\leq 2\%$.

TYPICAL CHARACTERISTICS

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

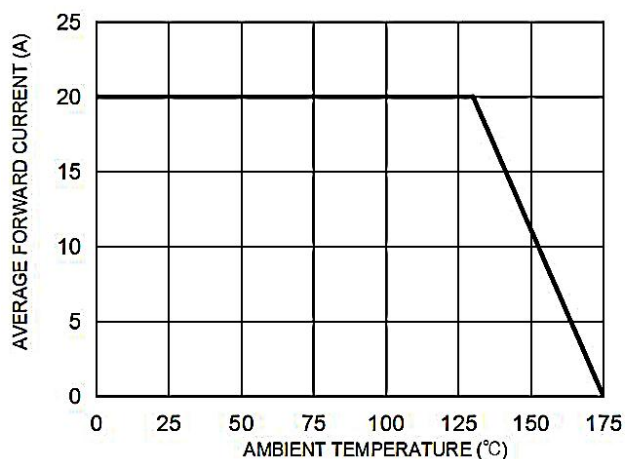


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

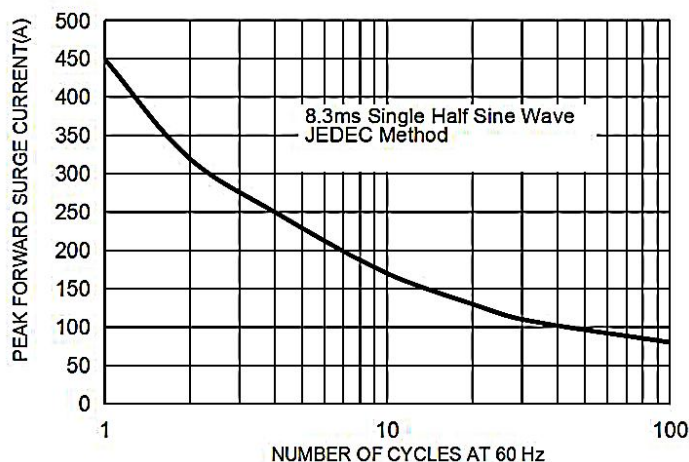


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

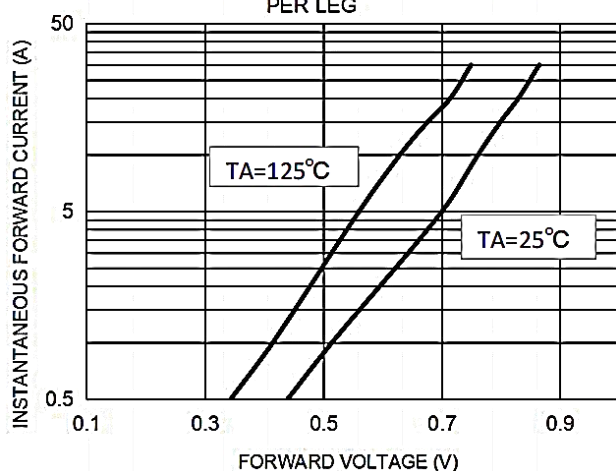
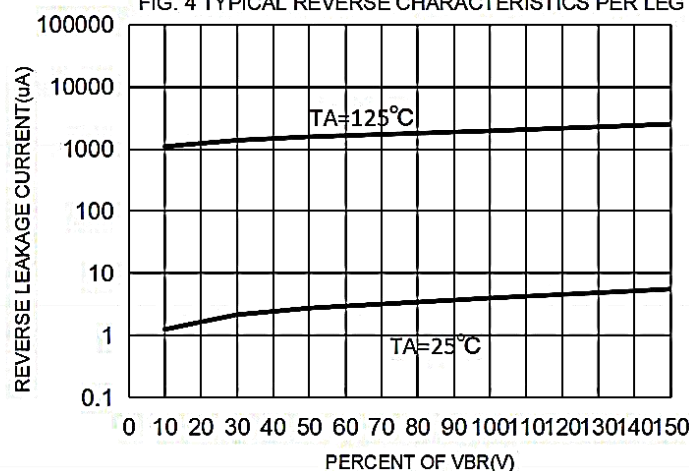


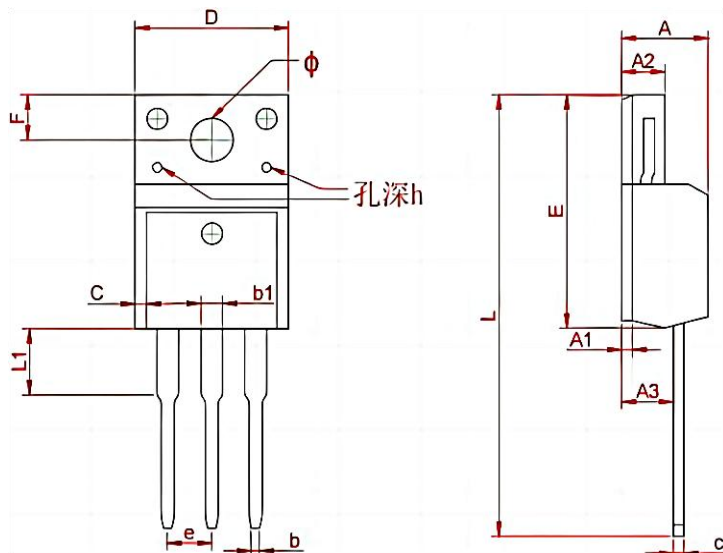
FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



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TO - 220F Package Outline Dimensions



Symbol	Dimensions In Millimeters	
	Min	Max
A	4.300	4.750
A1	0.7 REF	
A2	2.300	2.850
A3	2.500	2.900
b	0.380	0.420
b1	1.220	1.280
C	1.08	1.200
c	0.480	0.520
D	10.15	10.450
E	15.700	15.950
e	2.574 TYP	
F	3.470 REF	
y	3.200 REF	
h	0.000	0.800
L	28.780	28.900
L1	2.990	3.100

TO - 220F Packing Information

Package version	Tube dimensions LxWxH (mm)	Per Tube (pcs)	Tube per box	Inner box dimensions LxWxH (mm)	PCS/ Inner box	Outer box dimensions LxWxH(mm)	PCS/ Outer box
TO-220F	530*32*7	50	20	580*155*50	1000	602*277*188	5000