Surge Components Inc.

Product Specification

Surge Type

MBRH30150CT/MBRFH30150CT

Construction : Schottky Barrier Rectifier

Application : For General Purpose

（Manufacturer）:

Surge Components Inc.

Prepared on April. 17th, 2012

Prepared: R & D Department

Approval：QRA Deparment

1. Anode 2.Cathode 3. Anode

SCHOTTKY BARRIER RECTIFIER

30 AMPERES

150VOLTS

Low Vf <0.85V(15A)

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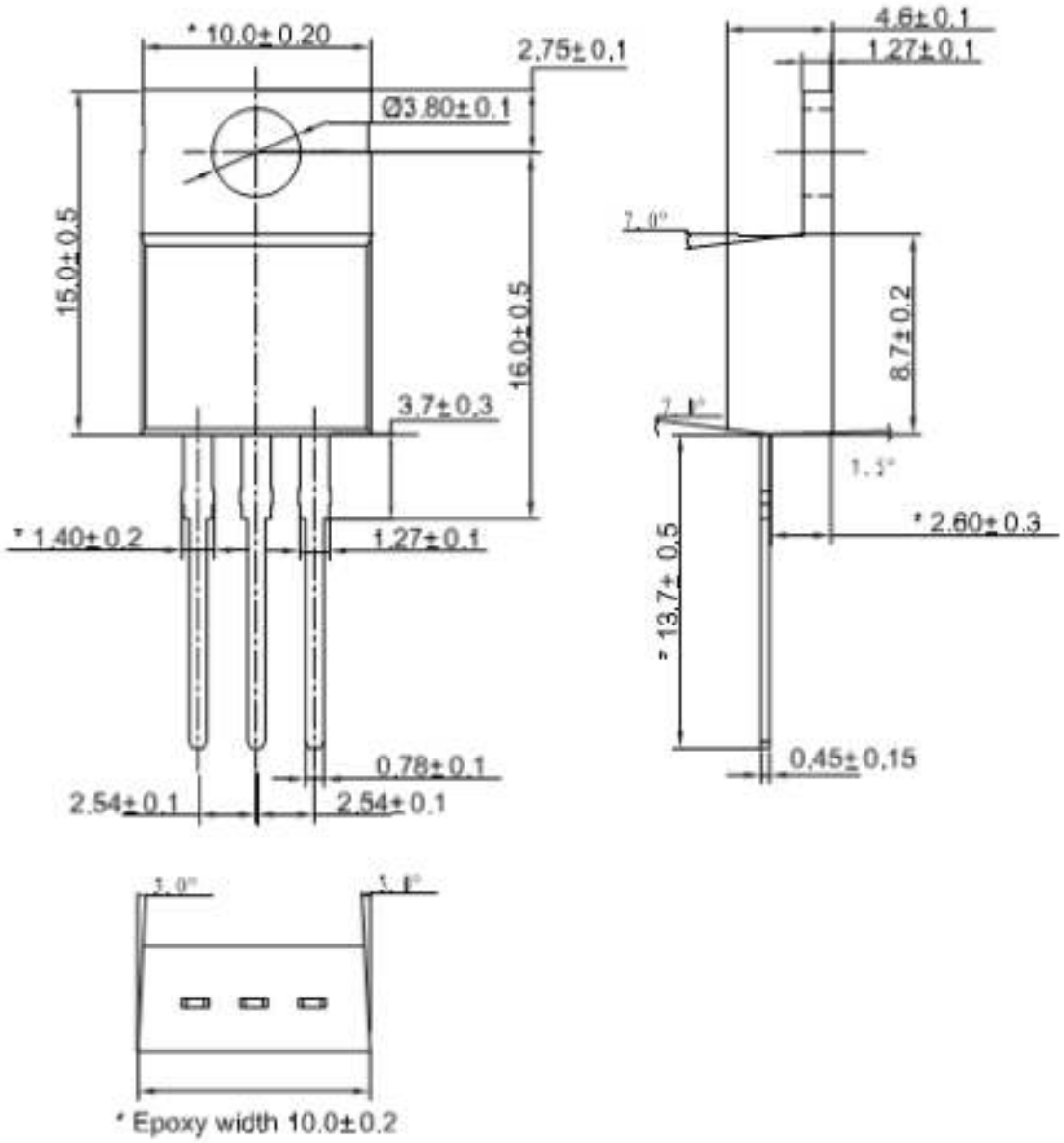
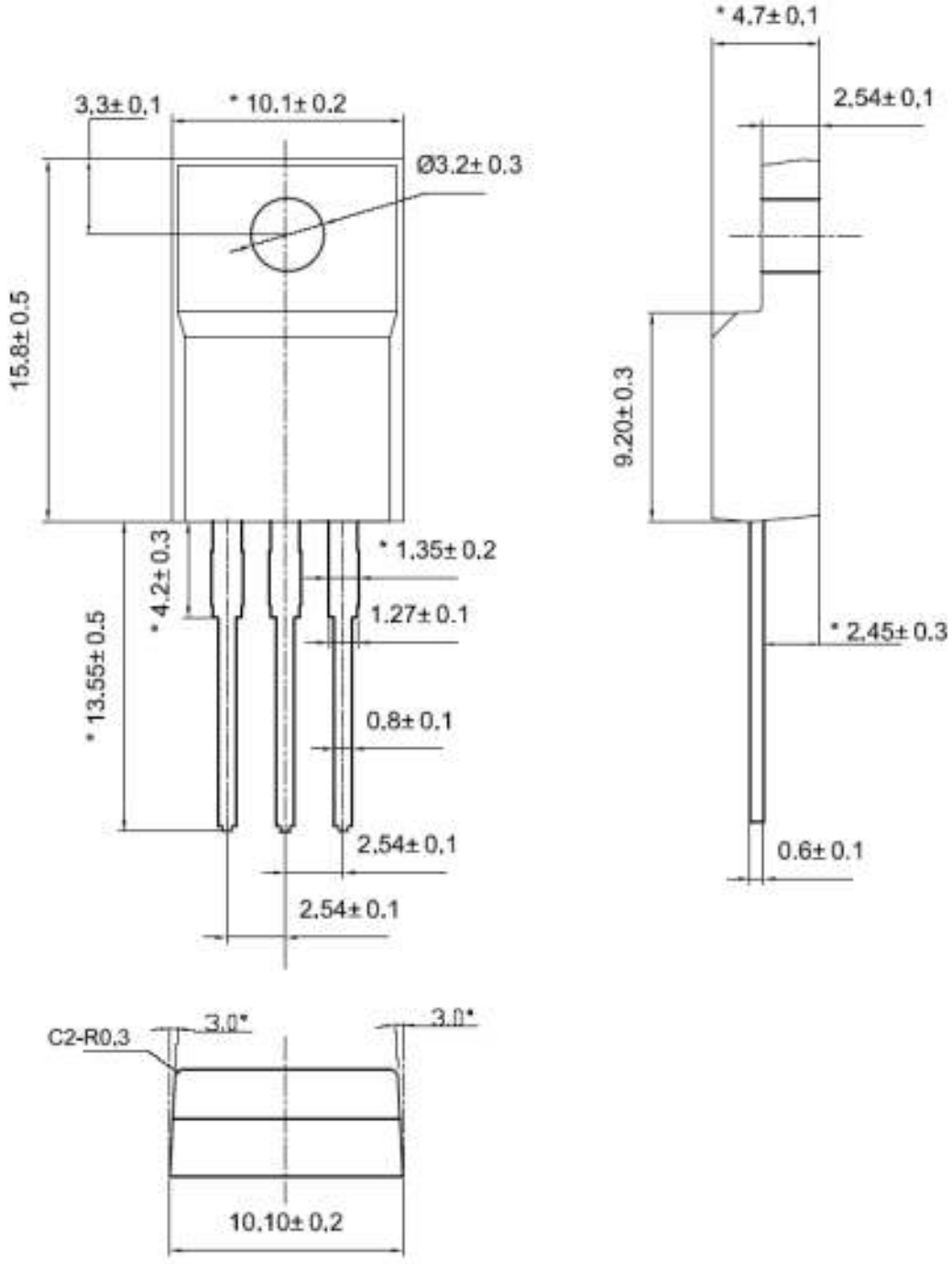
1. Package Outline (TO220-AB)

UNIT:mm



Package Outline (TO220F-AB)



Lead Frame Material : Copper Plating: Pure Tin Plating

2.MARKING

1. Part Name : MBRH30150CT(TO220)
   MBRFH30150CT(TO220F)
2. Logo Mark:
3. Polarity:

3.Features& Mechanical Characteristics Features

- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Dual rectifier construction，positive center tap
- Metal of silicon rectifier，majority carrier conduction
- Low forward voltage，high efficiency
- Guarding for over voltage protection
- For use in low voltage，high frequency inverters，
- Free wheeling，and polarity protection applications

Mechanical Characteristics

- Case：Epoxy，Molded
- Weight: 1.9grams（approximately）
- Finish：All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes：260°C Max.for10 sec
- Shipped 50 units per plastic tube

4.Maximum Ratings and Electrical Characteristics

MAXIMUM RATINGS and ELECTRICAL CHARACTERISTICS(TC=25°C unless otherwise moted)					
PARAMETER	TEST CONDITIONS		SYMBOL	MBR(F)H30150CT	UNIT
Maximum repetitive peak reverse voltage			V_{RRM}	150	V
Working peak reverse voltage			V_{RWM}	150	V
Maximum DC blocking voltage			V_{DC}	150	V
Maximum average forward rectified current at Tc=105°C total device per diode			$I_{F(AV)}$	15 30	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode			I_{FSM}	200	A
Peak repetitive reverse current per leg at tp=2.0us ， 1KHz			I_{RRM}	1	A
Voltage rate of change（rated VR）			DV/dt	10000	V/us
Operating junction temperature range			T_J	—55 to+150	°C
Isolation voltage (TO220F only) from terminal to heatsink t = 1 sec			VAC	1500	V
Storage temperature range			T_{STG}	—55 to+150	°C
Maximum instantaneous forward voltage per leg	IF=15A IF=15A	TC=25℃ TC=125℃	VF	0.85 0.75	V
Maximum reverse current per leg at working peak Reverse voltage		TJ=25℃ TJ=100°C	IR	500 50	uA mA

Thermal Characteristics Ta=25℃ unless otherwise noted

Symbol	Parameter	Max （TO220AB）	Max （TO220AB）	Unit
$R_{\theta JC}$	Thermal Resistance，Junction to Case per Leg	2.0	4.0	°C /W
$R_{\theta JA}$	Thermal Resistance，Junction to Ambient per Leg	62.5	62.5	°C /W

Note：

1. Screw mounting with 4-40 screw，where washer diameteris≤4.9mm(0.19〃)
2. Pulse test:300us pulse width,1% duty cycle

5. Rating and Characteristic Curves

(TA = 25 °C unless otherwise noted)

FIG.1- FORWARD CURRENT DERATING CURVE

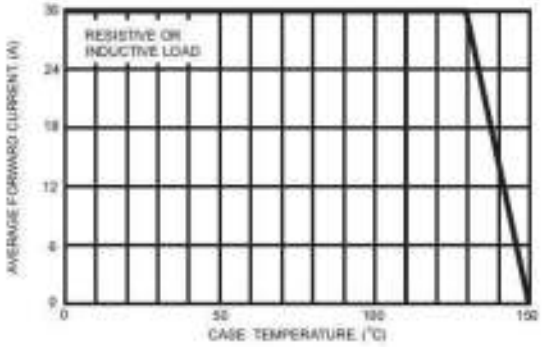


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

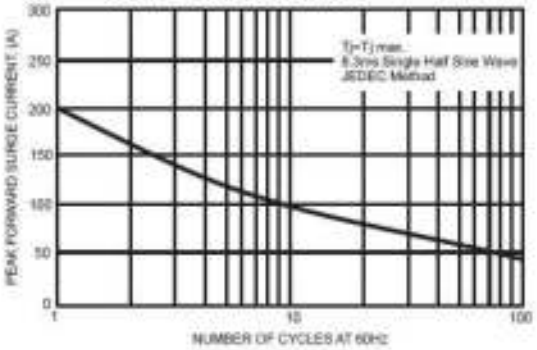


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

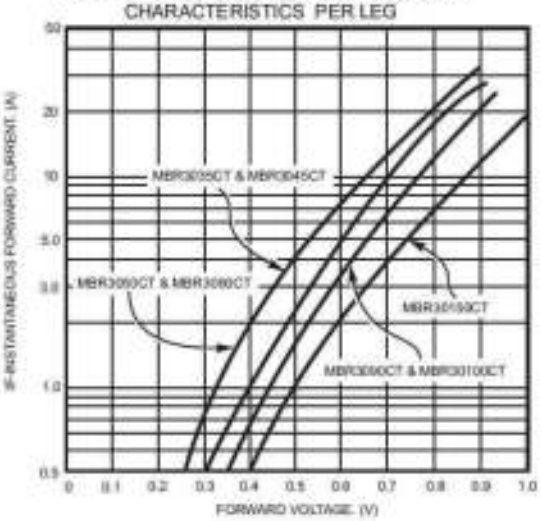


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

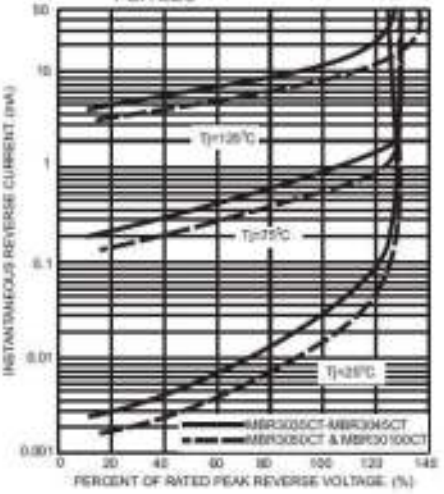


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

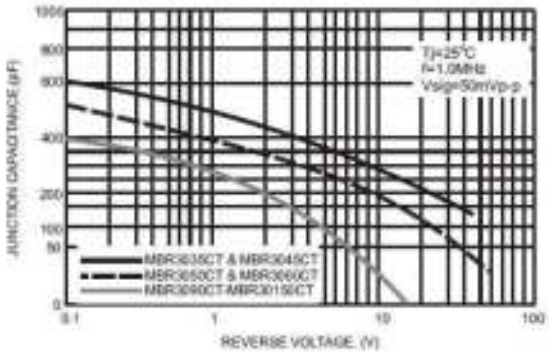
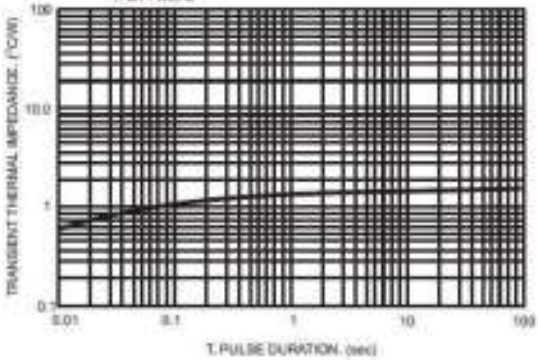


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



Pb
Pb-free Plating