

## Dual Common Cathode Schottky Rectifier

### FEATURES

- UL Recognized File # E-326243
- Low power loss, high efficiency
- Guardring for overvoltage protection
- High surge current capability
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition


**ITO-220AB**


### MECHANICAL DATA

**Case** : ITO-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** : 1.7 gram (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)						
PARAMETER	SYMBOL	MBRF20L100CT		MBRF20L120CT		UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	100		120		V
Maximum RMS voltage	V <sub>RMS</sub>	70		84		V
Maximum DC blocking voltage	V <sub>DC</sub>	100		120		V
Maximum average forward rectified current	I <sub>F(AV)</sub>	20				A
Peak Repetitive Forward Current (Rated VR, Square Wave, 20KHz)	I <sub>FRM</sub>	20				A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	150				A
Peak Repetitive Reverse Surge Current (Note 1)	I <sub>RRM</sub>	1				A
Maximum Instantaneous Forward Voltage (Note 2) I <sub>F</sub> = 10 A, T <sub>A</sub> =25°C I <sub>F</sub> = 10 A, T <sub>A</sub> =125°C I <sub>F</sub> = 20 A, T <sub>A</sub> =25°C I <sub>F</sub> = 20 A, T <sub>A</sub> =125°C	V <sub>F</sub>	TYP	MAX	TYP	MAX	V
		0.72	0.75	0.78	0.83	
		0.58	0.68	0.63	0.72	
		0.81	0.85	0.86	0.9	
		0.67	0.75	0.73	0.8	
Maximum reverse current @ rated VR T <sub>A</sub> =25 °C T <sub>A</sub> =125 °C	I <sub>R</sub>	TYP	MAX	TYP	MAX	uA mA
		1.1	20	1	20	
		1.2	15	1.4	10	
Voltage rate of change (Rated V <sub>R</sub> )	dV/dt	10000				V/us
Typical thermal resistance	R <sub>θJC</sub>	5.5		5		°C/W
Operating junction temperature range	T <sub>J</sub>	- 55 to + 150				°C
Storage temperature range	T <sub>STG</sub>	- 55 to + 150				°C

Note 1 : t<sub>p</sub> = 2.0 μs, 1.0KHz

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

ORDERING INFORMATION					
PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
MBRF20L1xxCT (Note 1)	Prefix "H"	C0	Suffix "G"	ITO-220AB	50 / Tube

Note 1: "xx" defines voltage from 100V (MBRF20L100CT) to 120V (MBRF20L120CT)

EXAMPLE					
PREFERRED P/N	PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
MBRF20L100CT C0	MBRF20L100CT		C0		
MBRF20L100CT C0G	MBRF20L100CT		C0	G	Green compound
MBRF20L100CTHC0	MBRF20L100CT	H	C0		AEC-Q101 qualified

**RATINGS AND CHARACTERISTICS CURVES**

(TA=25°C unless otherwise noted)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

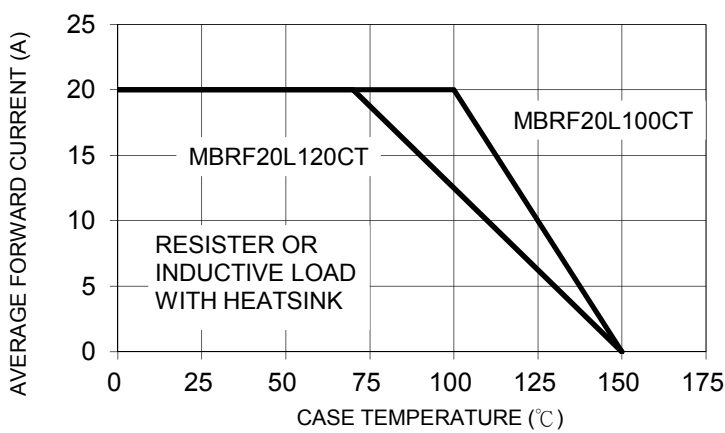


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

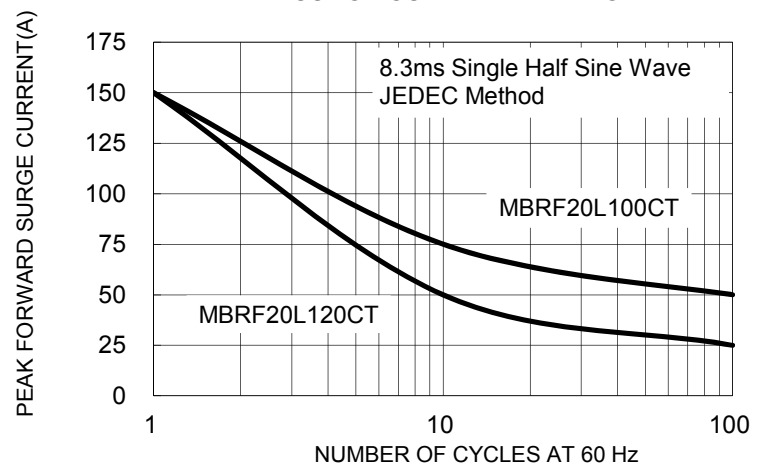


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

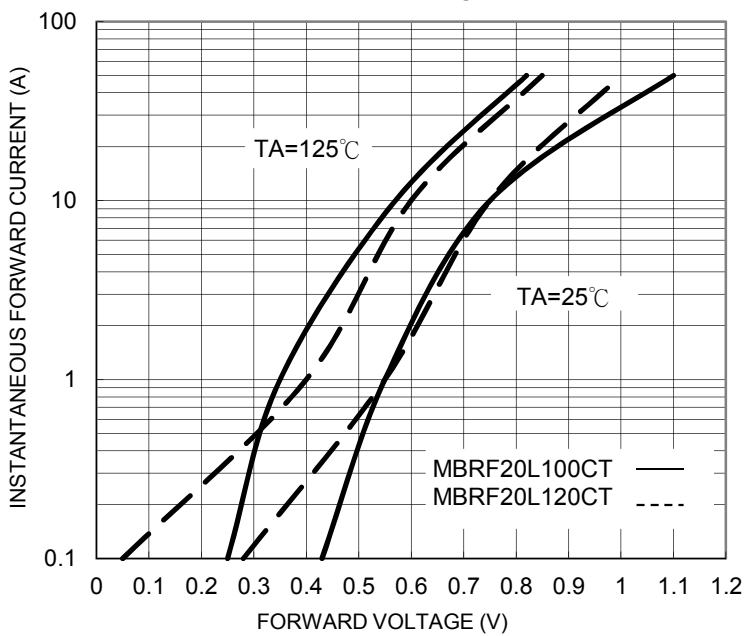


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

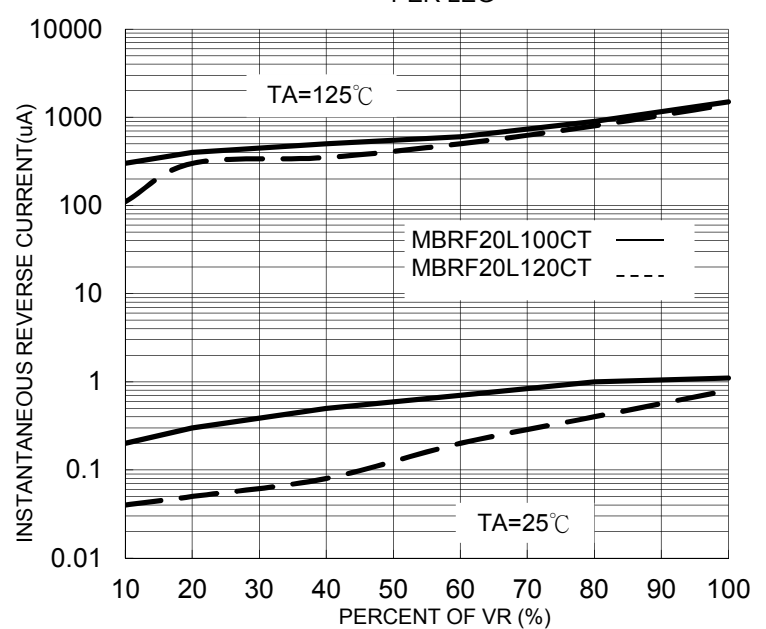


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

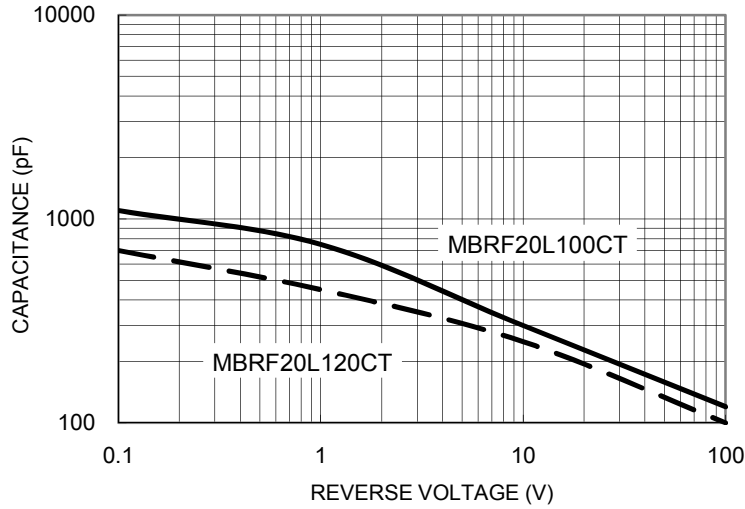
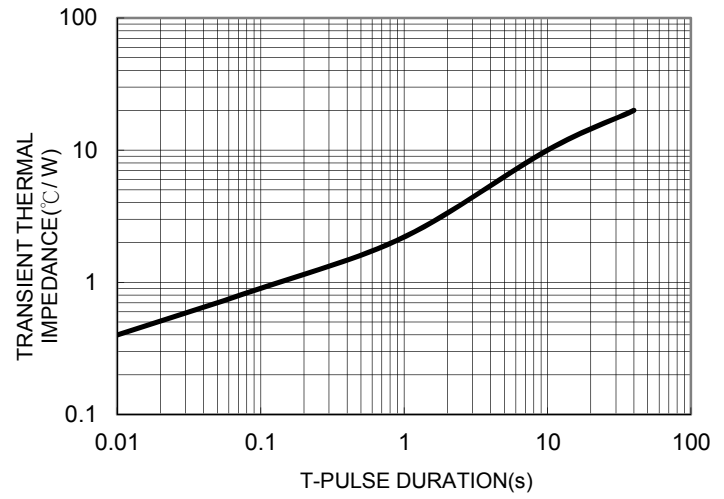
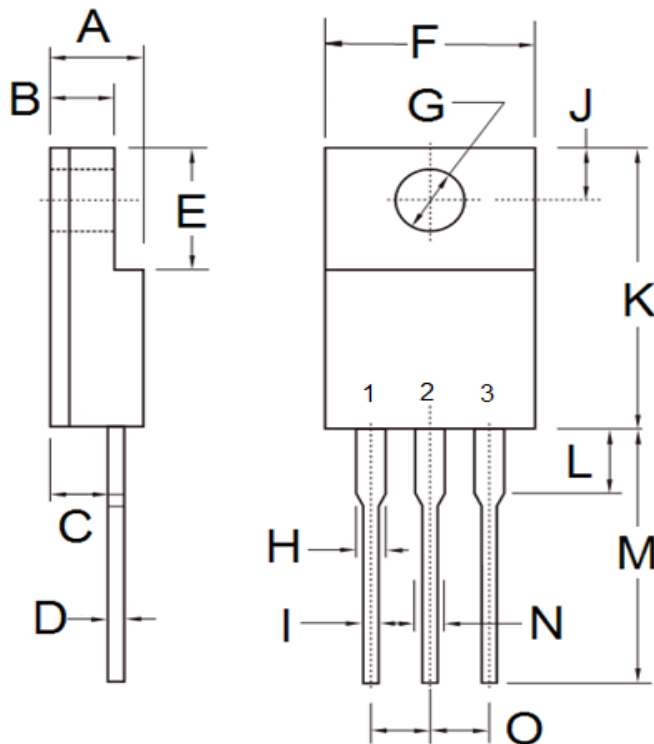


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



PACKAGE OUTLINE DIMENSIONS



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	4.30	4.70	0.169	0.185
B	2.50	3.16	0.098	0.124
C	2.30	2.96	0.091	0.117
D	0.46	0.76	0.018	0.030
E	6.30	6.90	0.248	0.272
F	9.60	10.30	0.378	0.406
G	3.00	3.40	0.118	0.134
H	0.95	1.45	0.037	0.057
I	0.50	0.90	0.020	0.035
J	2.40	3.20	0.094	0.126
K	14.80	15.50	0.583	0.610
L	-	4.10	-	0.161
M	12.60	13.80	0.496	0.543
N	-	1.80	-	0.071
O	2.41	2.67	0.095	0.105

MARKING DIAGRAM



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