

<b>ABSOLUTE MAXIMUM RATINGS</b> ( $T_A = 25^\circ\text{C}$ unless otherwise noted)									
PARAMETER	SYMBOL	MBRF 1535 CT	MBRF 1545 CT	MBRF 1550 CT	MBRF 1560 CT	MBRF 1590 CT	MBRF 15100 CT	MBRF 15150 CT	UNIT
Junction temperature	$T_J$	-55 to +150							$^\circ\text{C}$
Storage temperature	$T_{\text{STG}}$	-55 to +150							$^\circ\text{C}$

**Notes:**

- $t_p = 2.0\mu\text{s}, 1.0\text{KHz}$

<b>THERMAL PERFORMANCE</b>			
PARAMETER	SYMBOL	TYP	UNIT
Junction-to-case thermal resistance	$R_{\theta\text{JC}}$	3.5	$^\circ\text{C/W}$

<b>ELECTRICAL SPECIFICATIONS</b> ( $T_A = 25^\circ\text{C}$ unless otherwise noted)						
PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT	
Forward voltage per diode <sup>(1)</sup>	MBRF1535CT MBRF1545CT	$I_F = 7.5\text{A}, T_J = 25^\circ\text{C}$	$V_F$	-	-	V
	MBRF1550CT MBRF1560CT			-	0.75	V
	MBRF1590CT MBRF15100CT			-	0.92	V
	MBRF15150CT			-	0.95	V
	MBRF1535CT MBRF1545CT			$I_F = 15\text{A}, T_J = 25^\circ\text{C}$	-	0.84
	MBRF1550CT MBRF1560CT	-			-	V
	MBRF1590CT MBRF15100CT	-			-	V
	MBRF15150CT	-			-	V
	MBRF1535CT MBRF1545CT	$I_F = 7.5\text{A}, T_J = 125^\circ\text{C}$			-	0.57
	MBRF1550CT MBRF1560CT			-	0.65	V
	MBRF1590CT MBRF15100CT			-	0.82	V
	MBRF15150CT			-	0.92	V
	MBRF1535CT MBRF1545CT			$I_F = 15\text{A}, T_J = 125^\circ\text{C}$	-	0.72
	MBRF1550CT MBRF1560CT	-			-	V
	MBRF1590CT MBRF15100CT	-			-	V
	MBRF15150CT	-			-	V

<b>ELECTRICAL SPECIFICATIONS</b> ( $T_A = 25^\circ\text{C}$ unless otherwise noted)						
<b>PARAMETER</b>		<b>CONDITIONS</b>	<b>SYMBOL</b>	<b>TYP</b>	<b>MAX</b>	<b>UNIT</b>
Reverse current @ rated $V_R$ per diode <sup>(2)</sup>	MBRF1535CT MBRF1545CT	$T_J = 25^\circ\text{C}$	$I_R$	-	500	$\mu\text{A}$
	MBRF1550CT MBRF1560CT			-	300	$\mu\text{A}$
	MBRF1590CT MBRF15100CT MBRF15150CT			-	100	$\mu\text{A}$
	MBRF1535CT MBRF1545CT			$T_J = 125^\circ\text{C}$	-	10
	MBRF1550CT MBRF1560CT	-	7.5		mA	
	MBRF1590CT MBRF15100CT MBRF15150CT	-	5		mA	

**Notes:**

1. Pulse test with  $PW = 0.3\text{ms}$
2. Pulse test with  $PW = 30\text{ms}$

<b>ORDERING INFORMATION</b>		
<b>ORDERING CODE</b> <sup>(1)(2)</sup>	<b>PACKAGE</b>	<b>PACKING</b>
MBRF15xCT	ITO-220AB	50 / Tube
MBRF15xCTH	ITO-220AB	50 / Tube

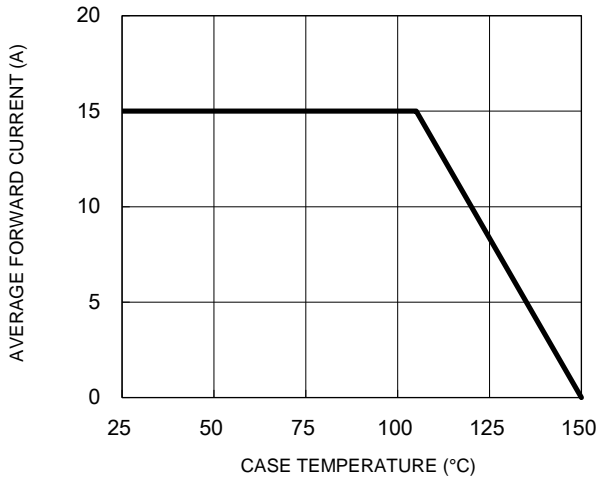
**Notes:**

1. "x" defines voltage from 35V(MBRF1535CT) to 150V(MBRF15150CT)
2. "H" means AEC-Q101 qualified

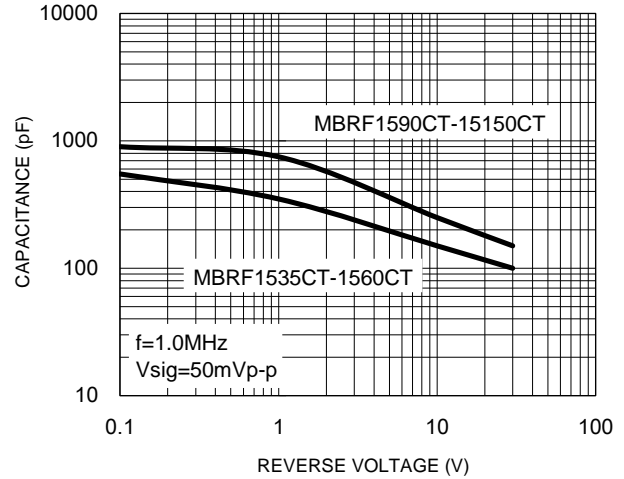
**CHARACTERISTICS CURVES**

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

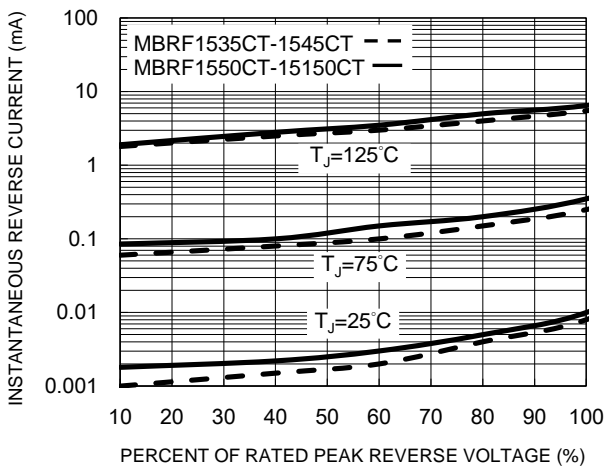
**Fig.1 Forward Current Derating Curve**



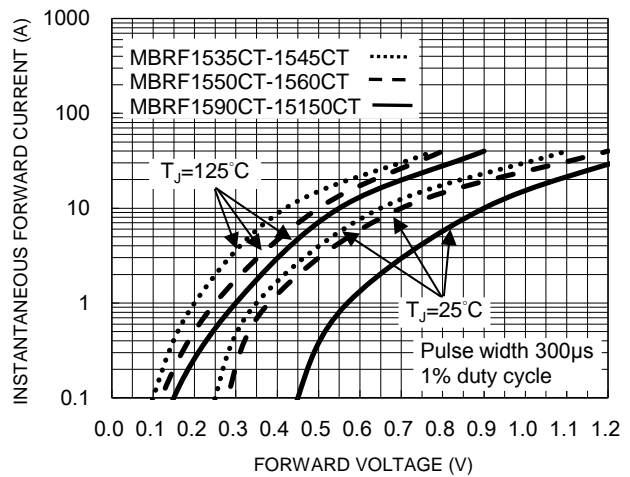
**Fig.2 Typical Junction Capacitance**



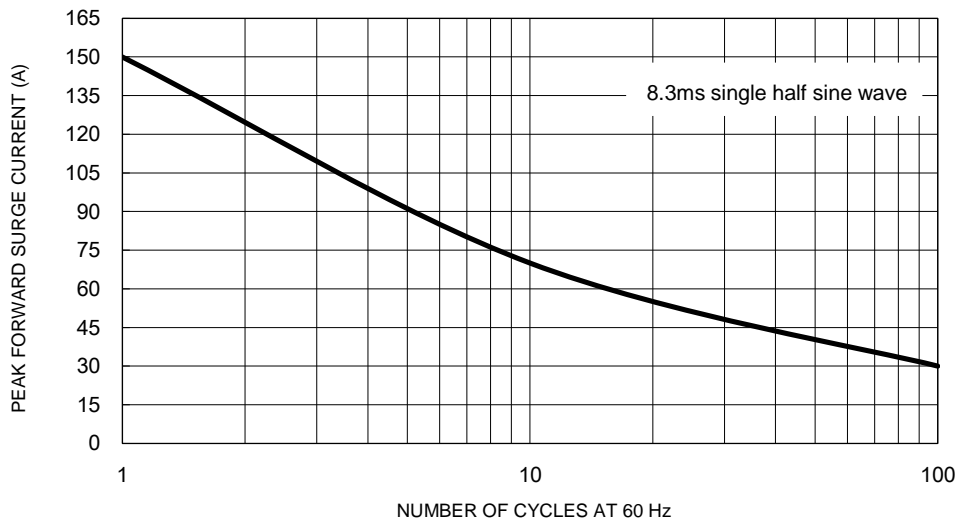
**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**



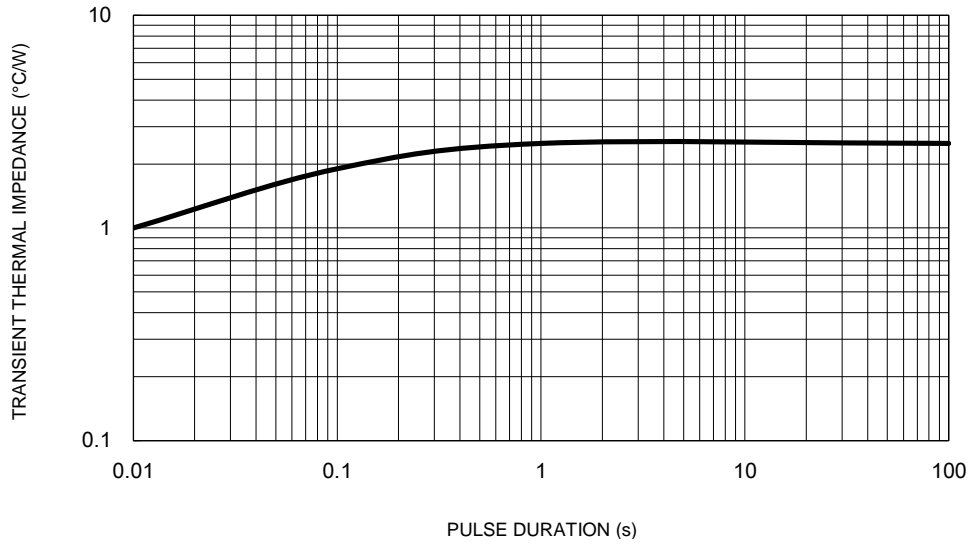
**Fig.5 Maximum Non-Repetitive Forward Surge Current**



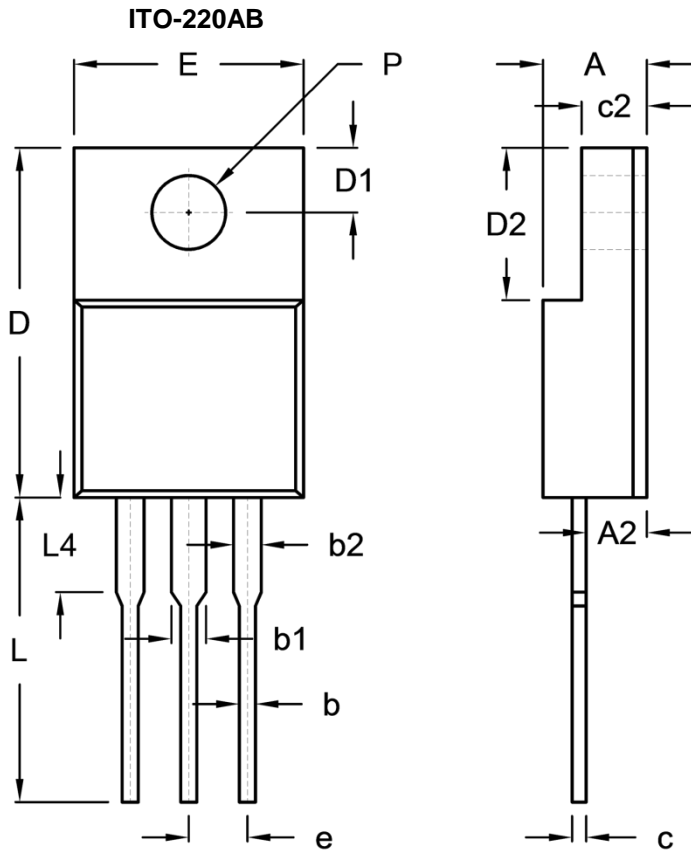
**CHARACTERISTICS CURVES**

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

**Fig.6 Typical Transient Thermal Impedance**



**PACKAGE OUTLINE DIMENSIONS**



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	4.30	4.70	0.169	0.185
A2	2.30	2.96	0.091	0.117
b	0.50	0.90	0.020	0.035
b1	-	1.80	-	0.071
b2	0.95	1.45	0.037	0.057
c	0.46	0.76	0.018	0.030
c2	2.50	3.16	0.098	0.124
D	14.80	15.50	0.583	0.610
D1	2.40	3.20	0.094	0.126
D2	6.30	6.90	0.248	0.272
E	9.60	10.30	0.378	0.406
e	2.41	2.67	0.095	0.105
L	12.60	13.80	0.496	0.543
L4	-	4.10	-	0.161
P	3.00	3.40	0.118	0.134

**MARKING DIAGRAM**



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

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