

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)									
PARAMETER	SYMBOL	MBRS 1035 CT	MBRS 1045 CT	MBRS 1050 CT	MBRS 1060 CT	MBRS 1090 CT	MBRS 10100 CT	MBRS 10150 CT	UNIT
Junction temperature	T_J	-55 to +150							$^\circ\text{C}$
Storage temperature	T_{STG}	-55 to +150							$^\circ\text{C}$

THERMAL PERFORMANCE			
PARAMETER	SYMBOL	TYP	UNIT
Junction-to-case thermal resistance	$R_{\theta\text{JC}}$	2	$^\circ\text{C/W}$

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)						
PARAMETER		CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode ⁽¹⁾	MBRS1035CT	$I_F = 5\text{A}, T_J = 25^\circ\text{C}$	V_F	-	0.70	V
	MBRS1045CT			-	0.80	V
	MBRS1050CT			-	0.85	V
	MBRS1060CT			-	0.88	V
	MBRS1090CT			-	0.80	V
	MBRS10100CT	-		0.90	V	
	MBRS10150CT	-		0.95	V	
	MBRS1035CT	$I_F = 10\text{A}, T_J = 25^\circ\text{C}$		-	0.98	V
	MBRS1045CT			-	0.57	V
	MBRS1050CT			-	0.65	V
	MBRS1060CT			-	0.75	V
	MBRS1090CT			-	0.78	V
	MBRS10100CT	-		0.67	V	
	MBRS10150CT	-		0.75	V	
	MBRS1035CT	$I_F = 5\text{A}, T_J = 125^\circ\text{C}$		-	0.85	V
	MBRS1045CT			-	0.88	V
	MBRS1050CT			-	0.67	V
	MBRS1060CT			-	0.75	V
MBRS1090CT	-		0.85	V		
MBRS10100CT	-	0.88	V			
MBRS10150CT	-	0.88	V			

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)						
PARAMETER		CONDITIONS	SYMBOL	TYP	MAX	UNIT
Reverse current @ rated V_R per diode ⁽²⁾	MBRS1035CT MBRS1045CT MBRS1050CT MBRS1060CT MBRS1090CT MBRS10100CT MBRS10150CT	$T_J = 25^\circ\text{C}$	I_R	-	100	μA
	MBRS1035CT MBRS1045CT	$T_J = 100^\circ\text{C}$		-	15	mA
	MBRS1050CT MBRS1060CT			-	10	mA
	MBRS1090CT MBRS10100CT MBRS10150CT			-	-	mA
	MBRS1035CT MBRS1045CT MBRS1050CT MBRS1060CT	$T_J = 125^\circ\text{C}$		-	-	mA
	MBRS1090CT MBRS10100CT MBRS10150CT			-	5	mA

Notes:

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

ORDERING INFORMATION		
ORDERING CODE⁽¹⁾	PACKAGE	PACKING
MBRS10xCT	TO-263AB (D ² PAK)	800 / Tape & Reel

Notes:

1. "x" defines voltage from 35V(MBRS1035CT) to 150V(MBRS10150CT)

CHARACTERISTICS CURVES

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

Fig.1 Forward Current Derating Curve

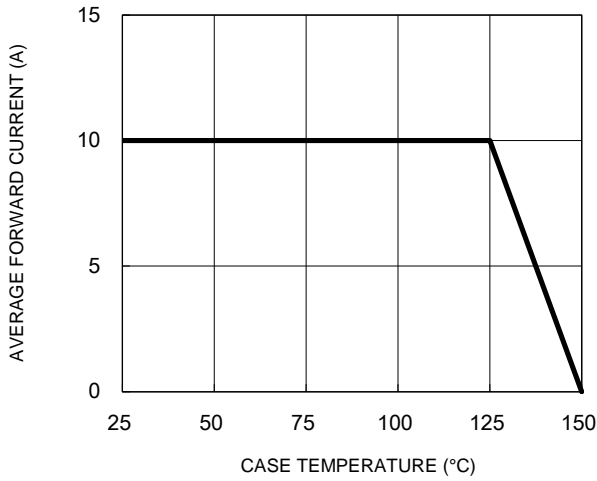


Fig.2 Typical Junction Capacitance

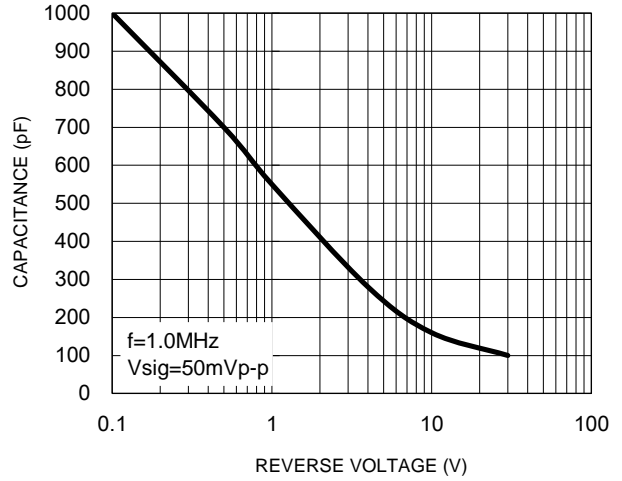


Fig.3 Typical Reverse Characteristics

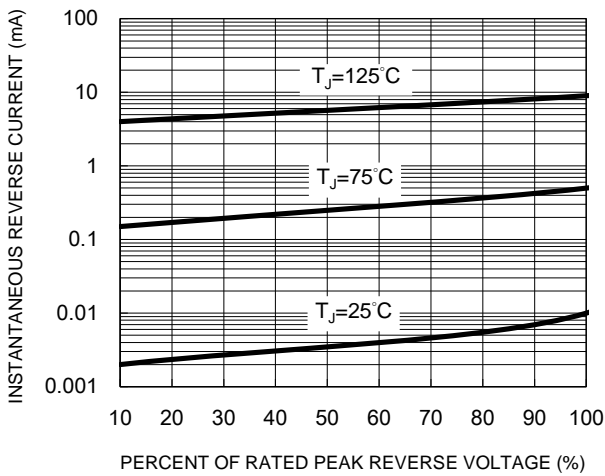


Fig.4 Typical Forward Characteristics

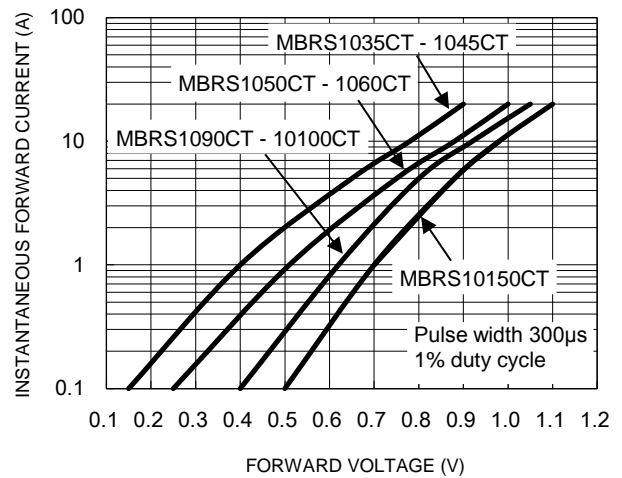
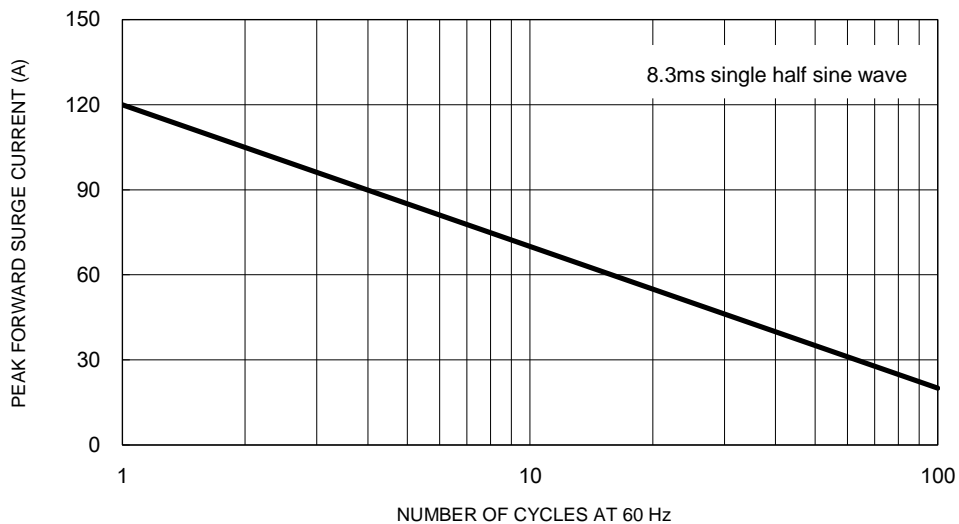


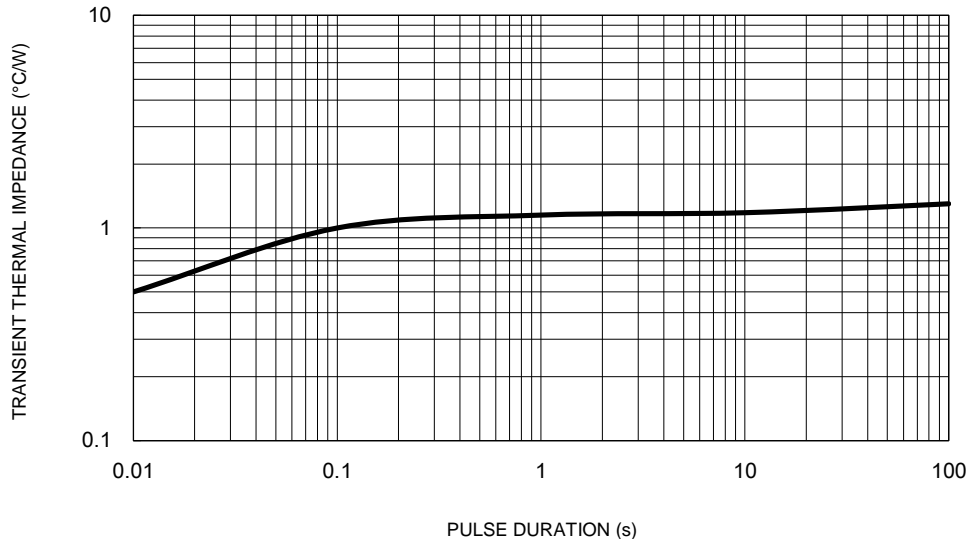
Fig.5 Maximum Non-Repetitive Forward Surge Current



CHARACTERISTICS CURVES

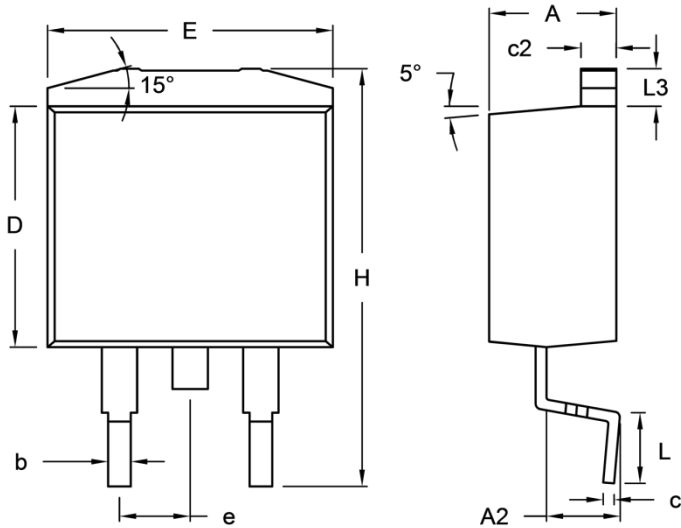
($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.6 Typical Transient Thermal Impedance



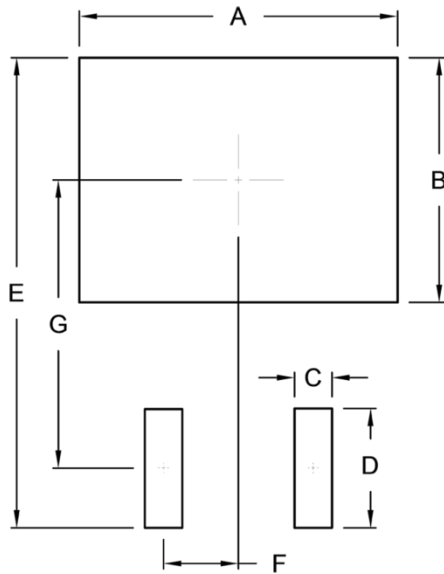
PACKAGE OUTLINE DIMENSIONS

TO-263AB (D²PAK)



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	4.44	4.70	0.175	0.185
A2	2.03	2.79	0.080	0.110
b	0.68	0.94	0.027	0.037
c	0.36	0.53	0.014	0.021
c2	1.14	1.40	0.045	0.055
D	8.25	9.25	0.325	0.364
E	-	10.50	-	0.413
e	2.41	2.67	0.095	0.105
H	14.60	15.88	0.575	0.625
L	2.29	2.79	0.090	0.110
L3	1.14	1.40	0.045	0.055

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	10.80	0.425
B	8.30	0.327
C	1.27	0.050
D	4.05	0.159
E	15.95	0.628
F	2.54	0.100
G	9.775	0.385

MARKING DIAGRAM



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

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