

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)									
PARAMETER	SYMBOL	MBRS 2535 CT	MBRS 2545 CT	MBRS 2550 CT	MBRS 2560 CT	MBRS 2590 CT	MBRS 25100 CT	MBRS 25150 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	$R_{\theta\text{JC}}$	1	$^\circ\text{C/W}$

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)						
PARAMETER		CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode ⁽¹⁾	MBRS2535CT	$I_F = 12.5\text{A}, T_J = 25^\circ\text{C}$	V_F	-	0.65	V
	MBRS2545CT			-	0.75	V
	MBRS2550CT			-	0.85	V
	MBRS2560CT			-	0.95	V
	MBRS2590CT			-	0.82	V
	MBRS25100CT	$I_F = 25.0\text{A}, T_J = 25^\circ\text{C}$		-	0.90	V
	MBRS25150CT			-	0.92	V
	MBRS2535CT			-	1.02	V
	MBRS2545CT			-	0.55	V
	MBRS2550CT			$I_F = 12.5\text{A}, T_J = 125^\circ\text{C}$	-	0.65
	MBRS2560CT	-			0.75	V
	MBRS2590CT	-			0.92	V
	MBRS25100CT	-			0.73	V
	MBRS25150CT	$I_F = 25.0\text{A}, T_J = 125^\circ\text{C}$			-	0.80
	MBRS2535CT			-	0.88	V
	MBRS2545CT			-	0.98	V
	MBRS2550CT			-		
	MBRS2560CT			-		

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⁾	MBRS2535CT MBRS2545CT MBRS2550CT MBRS2560CT	$T_J = 25^\circ\text{C}$	I_R	-	200	μA
	MBRS2590CT MBRS25100CT MBRS25150CT			-	100	μA
	MBRS2535CT MBRS2545CT	$T_J = 125^\circ\text{C}$		-	15	mA
	MBRS2550CT			-	10	mA
	MBRS2560CT			-	7.5	mA
	MBRS2590CT			-	5	mA
	MBRS25100CT MBRS25150CT			-	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
MBRS25xCT	TO-263AB ($D^2\text{PAK}$)	800 / Tape & Reel

Notes:

1. "x" defines voltage from 35V(MBRS2535CT) to 150V(MBRS25150CT)

CHARACTERISTICS CURVES

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

Fig.1 Forward Current Derating Curve

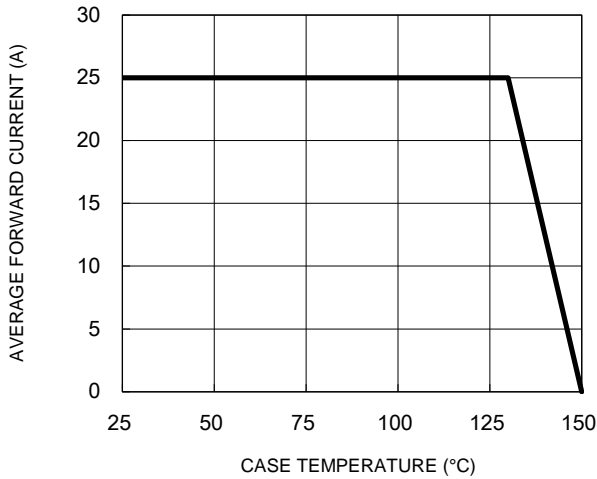


Fig.2 Typical Junction Capacitance

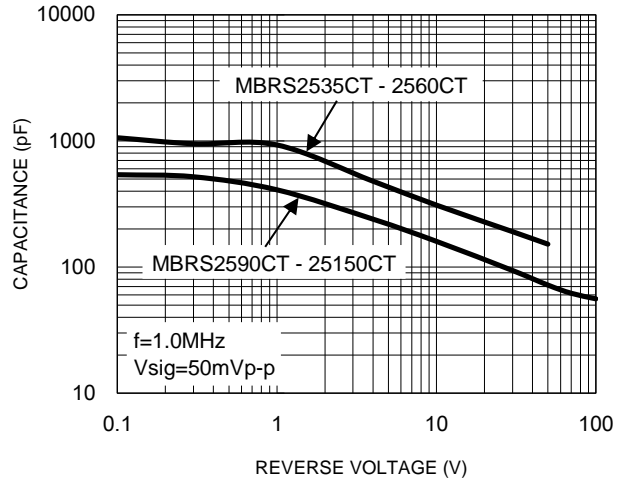


Fig.3 Typical Reverse Characteristics

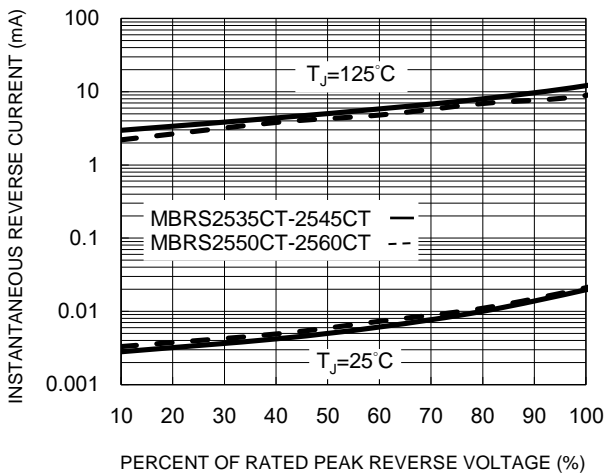


Fig.4 Typical Forward Characteristics

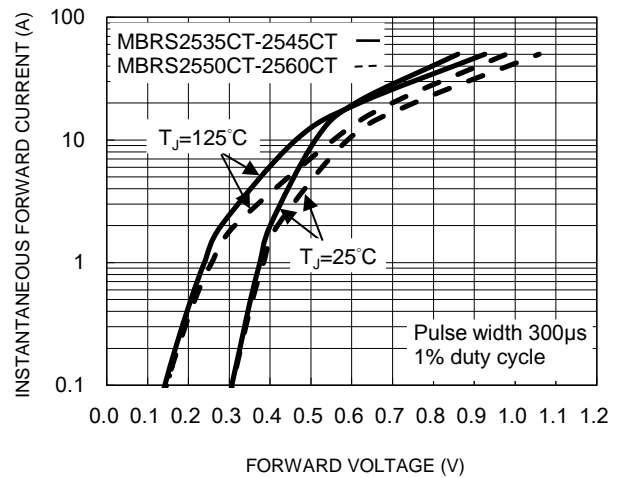


Fig.5 Typical Reverse Characteristics

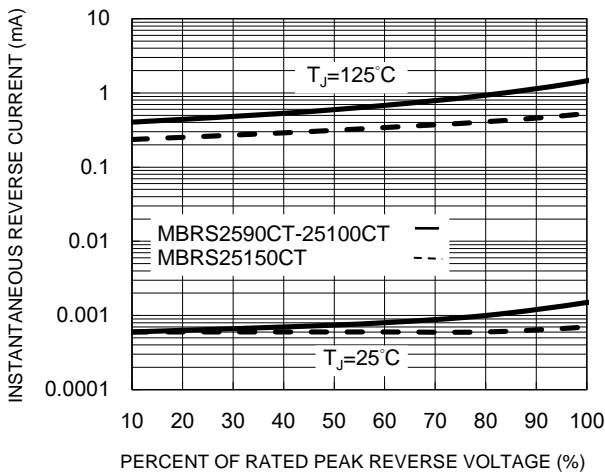
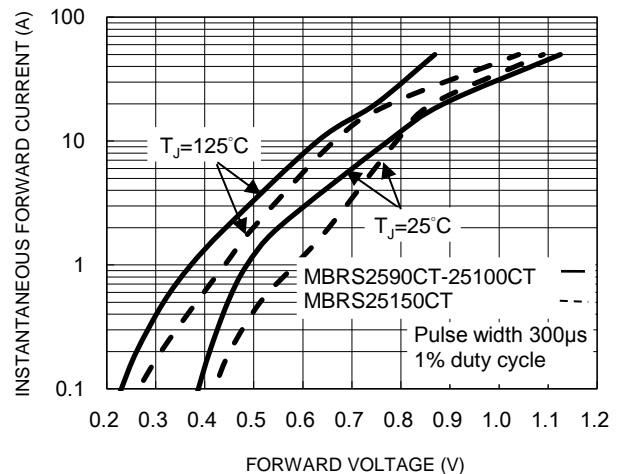


Fig.6 Typical Forward Characteristics



CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.7 Maximum Non-Repetitive Forward Surge Current

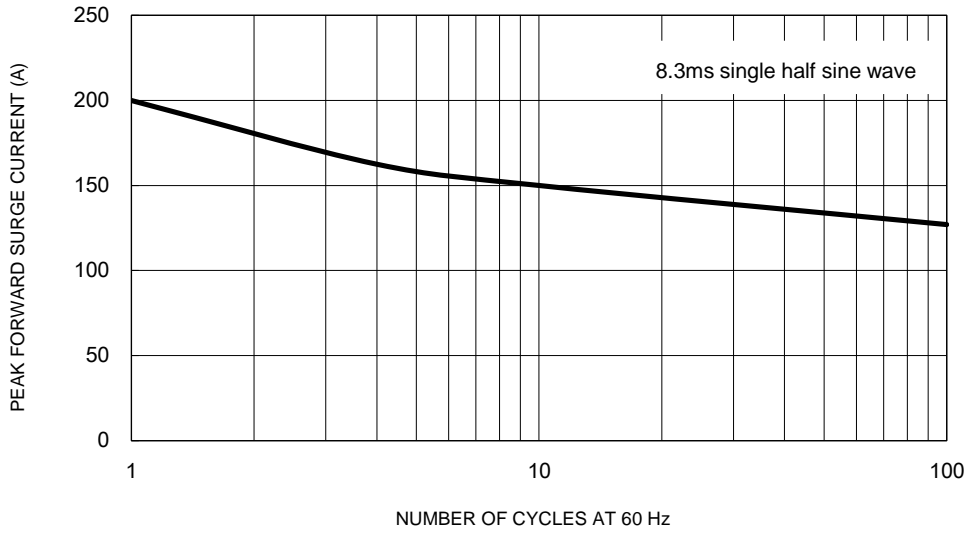
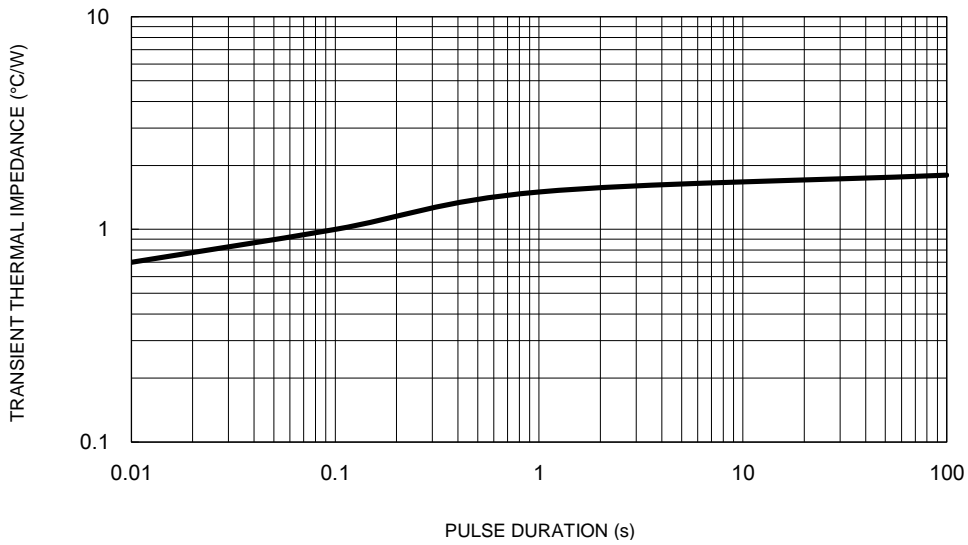
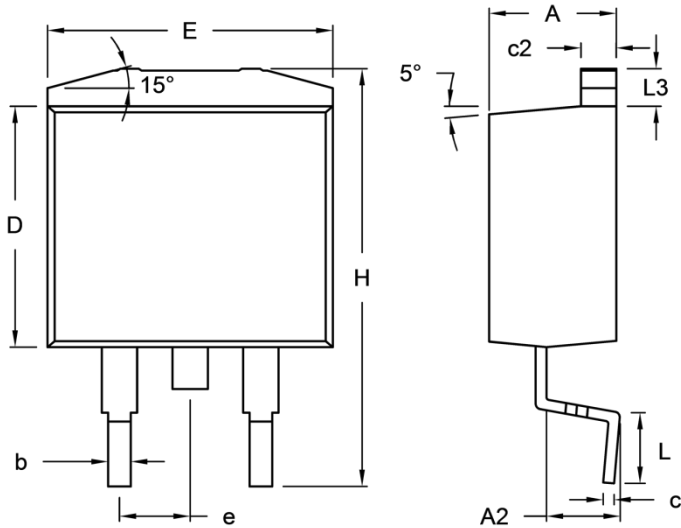


Fig.8 Typical Transient Thermal Impedance



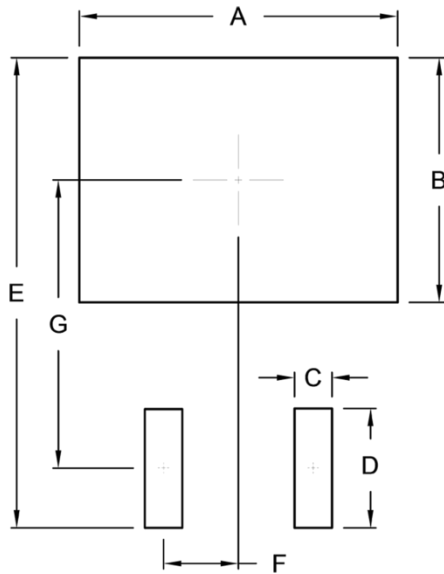
PACKAGE OUTLINE DIMENSIONS

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

Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies.

Purchasers are solely responsible for the choice, selection, and use of TSC products and TSC assumes no liability for application assistance or the design of Purchasers' products.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Taiwan Semiconductor:](#)

[MBRS2545CT](#) [MBRS2560CT](#) [MBRS25100CT](#) [MBRS25150CT](#)