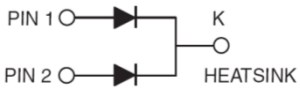
- High surge current capability
- Moisture sensitivity level: level 1, per J-STD-020
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition

TO-263AB (D^2PAK)



MECHANICAL DATA

Case: TO-263AB (D^2PAK)
Molding compound, UL flammability classification rating 94V-0
Base P/N with suffix "G" on packing code - halogen-free
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
Weight: 1.37 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise noted)

PARAMETER	SYMBOL	MBRS 2535 CT	MBRS 2545 CT	MBRS 2550 CT	MBRS 2560 CT	MBRS 2590 CT	MB 251 C
Maximum repetitive peak reverse voltage	V_{RRM}	35	45	50	60	90	10
Maximum RMS voltage	V_{RMS}	24	31	35	42	63	7(
Maximum DC blocking voltage	V_{DC}	35	45	50	60	90	10
Maximum average forward rectified current	$I_{F(AV)}$	25					
Peak repetitive forward current (Rated VR, Square wave, 20KHz)	I_{FRM}	25					
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	200					
Peak repetitive reverse surge current (Note 1)	I_{RRM}	1		0.5			
Maximum instantaneous forward voltage (Note 2)	V_F						
I_F=12.5A @ 25℃		0.65		0.75		0.85	
I_F=12.5A @ 125℃		0.55		0.65		0.75	
I_F=25.0A @ 25℃		0.82		0.90		0.92	
I_F=25.0A @ 125℃		0.73		0.80		0.88	
Maximum reverse current @ rated VR T_J=25 ℃	I_R	0.2		0.2		0.1	
T_J=125 ℃		15		10		7.5	
Voltage rate of change (Rated V_R)	dV/dt	10000					
Typical thermal resistance	$R_{\theta JC}$	1.0					
Operating junction temperature range	T_J	- 55 to +150					
Storage temperature range	T_{STG}	- 55 to +150					

Note 1: tp = 2.0 μs, 1.0KHz

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

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EXAMPLE					
PREFERRED P/N	PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	
MBRS2560CT RN	MBRS2560CT		RN		
MBRS2560CT RNG	MBRS2560CT		RN	G	
MBRS2560CTHRN	MBRS2560CT	H	RN		A

RATINGS AND CHARACTERISTICS CURVES

(TA=25℃ unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

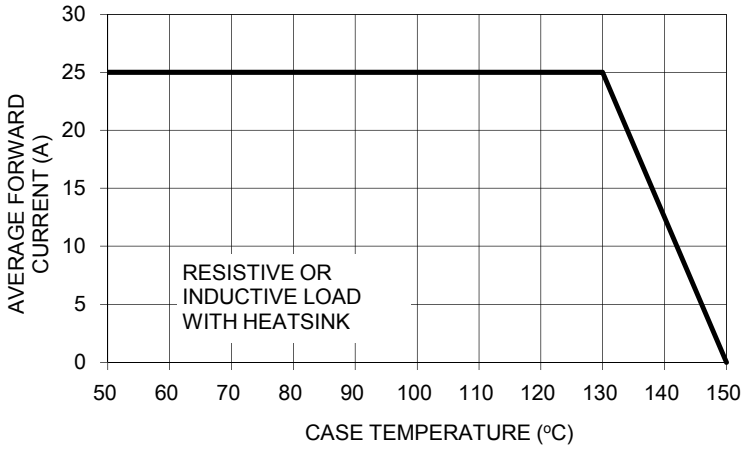


FIG. 2 MAXIMUM NON-REPETITIVE FO
SURGE CURRENT PER LEG

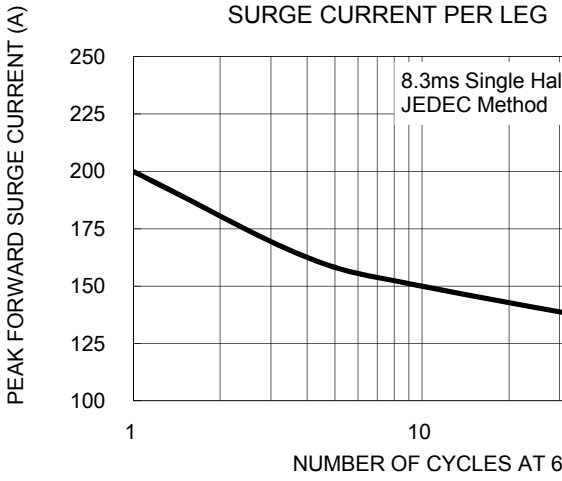


FIG. 3 TYPICAL FORWARD
CHARACTERSTICS PER LEG

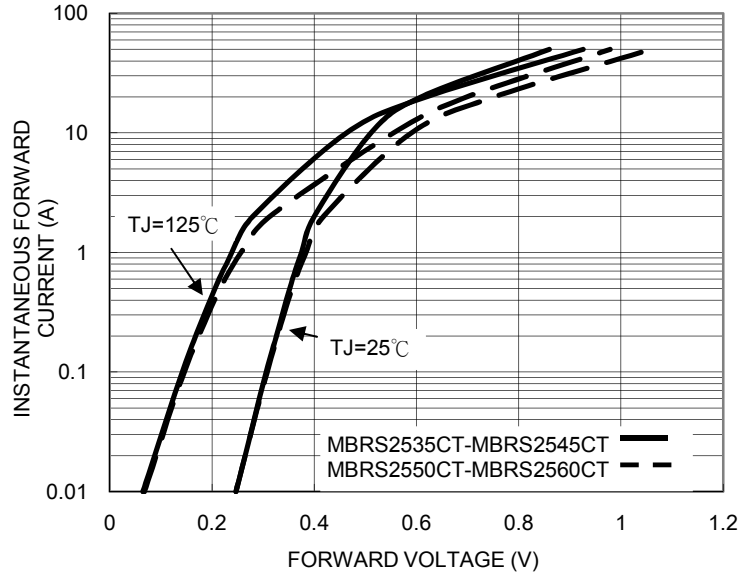
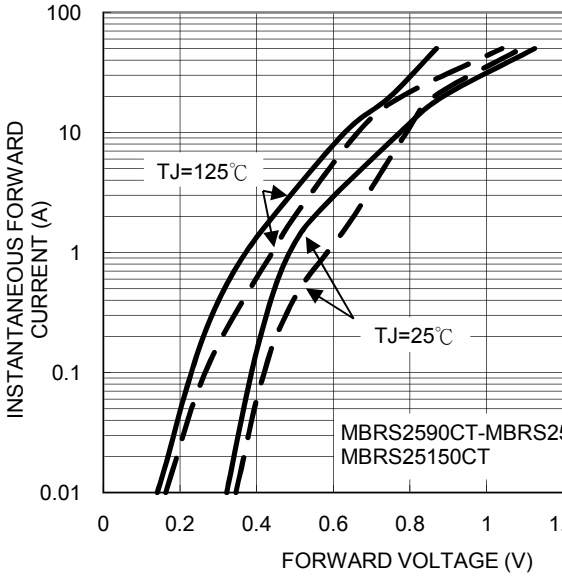


FIG. 4 TYPICAL FORWARD
CHARACTERSTICS PER LE



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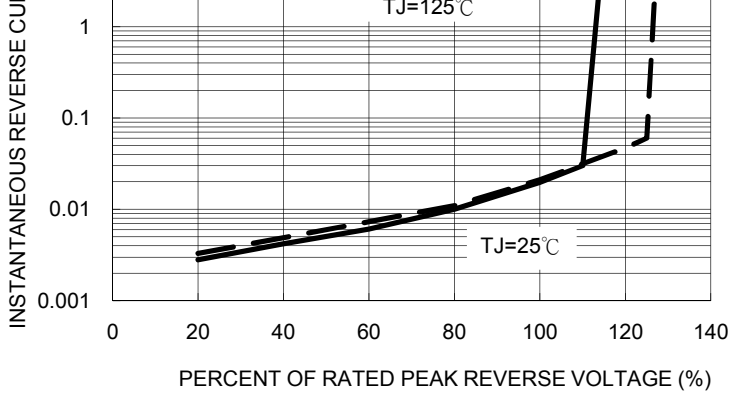


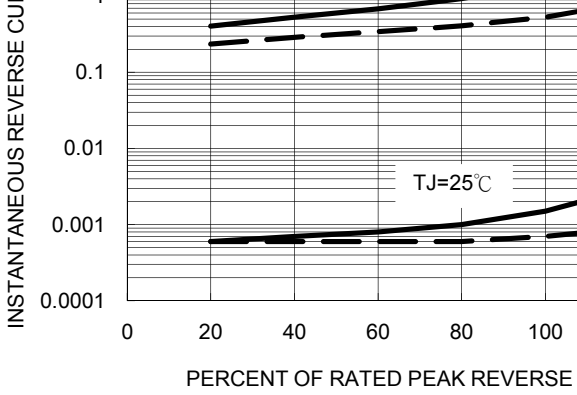


FIG. 7 TYPICAL JUNCTION CAPACITANCE PER LEG

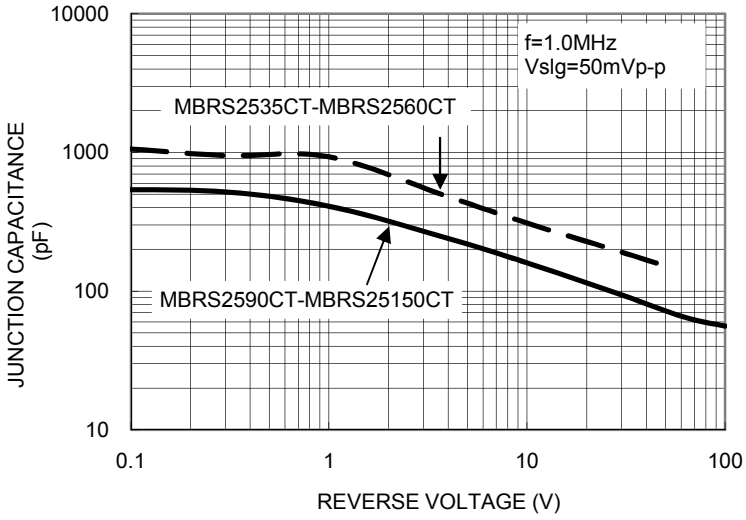
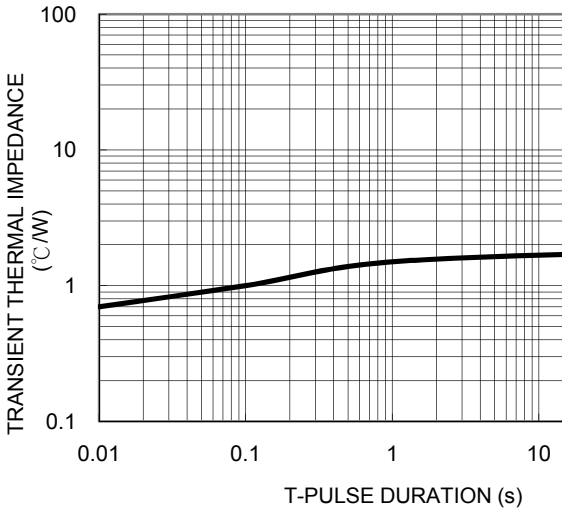
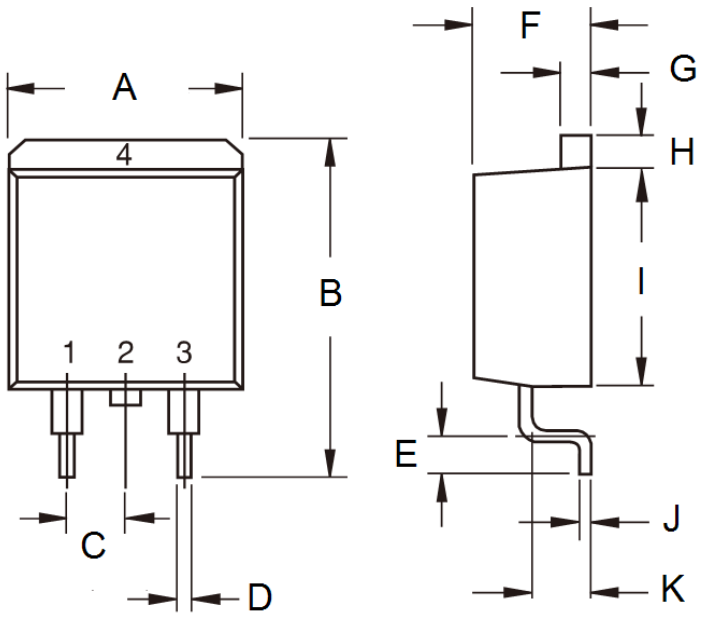


FIG. 8 TYPICAL TRANSIENT THERMAL IM
PER LEG



PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (in
	Min	Max	Min
A	-	10.5	-
B	14.60	15.88	0.575
C	2.41	2.67	0.095
D	0.68	0.94	0.027
E	2.29	2.79	0.090
F	4.44	4.70	0.175
G	1.14	1.40	0.045
H	1.14	1.40	0.045
I	8.25	9.25	0.325
J	0.36	0.53	0.014
K	2.03	2.79	0.080

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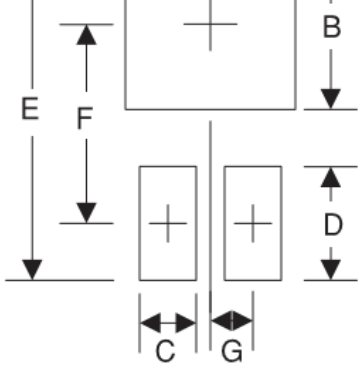

B	8.3	0.327
C	1.1	0.043
D	3.5	0.138
E	16.9	0.665
F	9.5	0.374
G	2.5	0.098

MARKING DIAGRAM

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

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