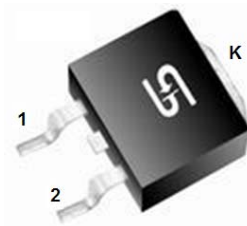


## 25A, 35V - 150V Dual Common Cathode Schottky Rectifiers

### FEATURES

- Low power loss, high efficiency
- Ideal for automated placement
- 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



TO-263AB (D<sup>2</sup>PAK)



### MECHANICAL DATA

**Case:** TO-263AB (D<sup>2</sup>PAK)

Molding compound, UL flammability classification rating 94V-0

Moisture sensitivity level: level 1, per J-STD-020

Part no. with suffix "H" means AEC-Q101 qualified

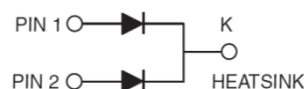
Packing code with suffix "G" means green compound (halogen-free)

**Terminal:** Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 2 whisker test

**Polarity:** As marked

**Weight:** 1.37 g (approximately)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°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
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	35	45	50	60	90	100	150	V
Maximum RMS voltage	V <sub>RMS</sub>	24	31	35	42	63	70	105	V
Maximum DC blocking voltage	V <sub>DC</sub>	35	45	50	60	90	100	150	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	25							A
Peak repetitive forward current (Rated VR, Square wave, 20KHz)	I <sub>FRM</sub>	25							A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	200							A
Peak repetitive reverse surge current (Note 1)	I <sub>RRM</sub>	1		0.5				A	
Maximum instantaneous forward voltage (Note 2) I <sub>F</sub> =12.5A @ 25°C I <sub>F</sub> =12.5A @ 125°C I <sub>F</sub> =25.0A @ 25°C I <sub>F</sub> =25.0A @ 125°C	V <sub>F</sub>	0.65 0.55 0.82 0.73		0.75 0.65 0.90 0.80		0.85 0.75 0.92 0.88		0.95 0.92 1.02 0.98	V
Maximum reverse current @ rated V <sub>R</sub> T <sub>J</sub> =25°C T <sub>J</sub> =125°C	I <sub>R</sub>	0.2		0.2		0.1		0.1	mA
		15		10		7.5		5	
Voltage rate of change (Rated V <sub>R</sub> )	dV/dt	10000							V/μs
Typical thermal resistance	R <sub>θJC</sub>	1.0							°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: tp = 2.0 μs, 1.0KHz

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

ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX (*)	PACKAGE	PACKING
MBRS25xxCT (Note 1)	H	RN	G	D <sup>2</sup> PAK	800 / 13" Paper reel
		MN			800 / 13" Plastic reel

Note 1: "xx" defines voltage from 35V (MBRS2535CT) to 150V (MBRS25150CT)

\*: Optional available

EXAMPLE					
PREFERRED P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
MBRS2560CTHRNG	MBRS2560CT	H	RN	G	AEC-Q101 qualified Green compound

RATINGS AND CHARACTERISTICS CURVES

(T<sub>A</sub>=25°C unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

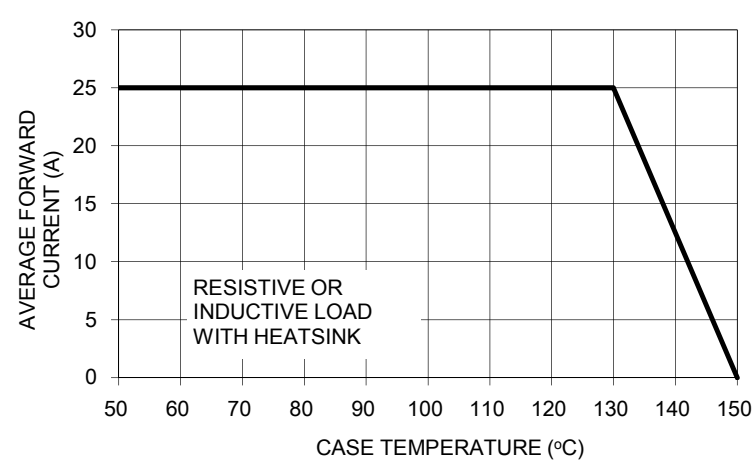


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

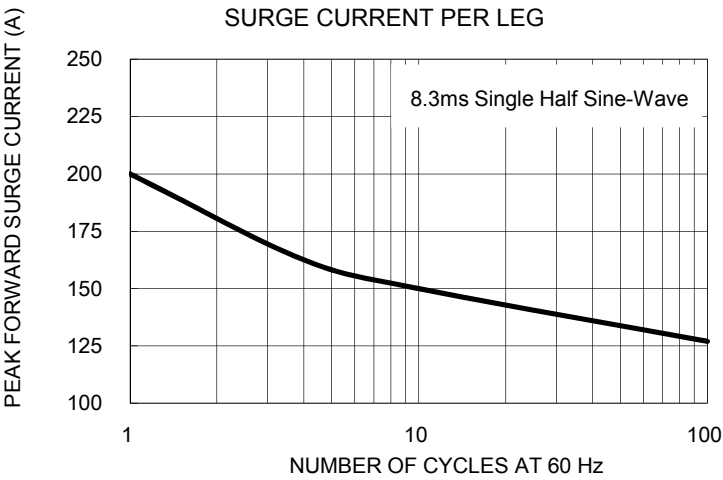


FIG. 3 TYPICAL FORWARD CHARACTERSTICS PER LEG

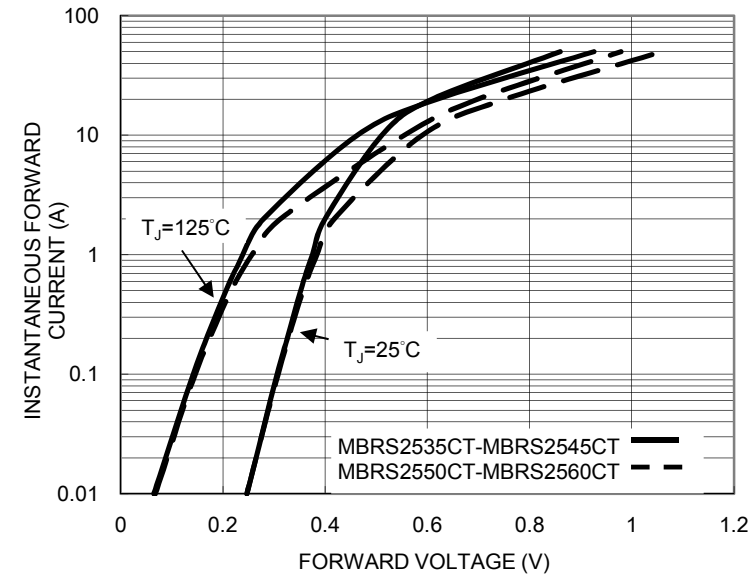


FIG. 4 TYPICAL FORWARD CHARACTERISTICS PER LEG

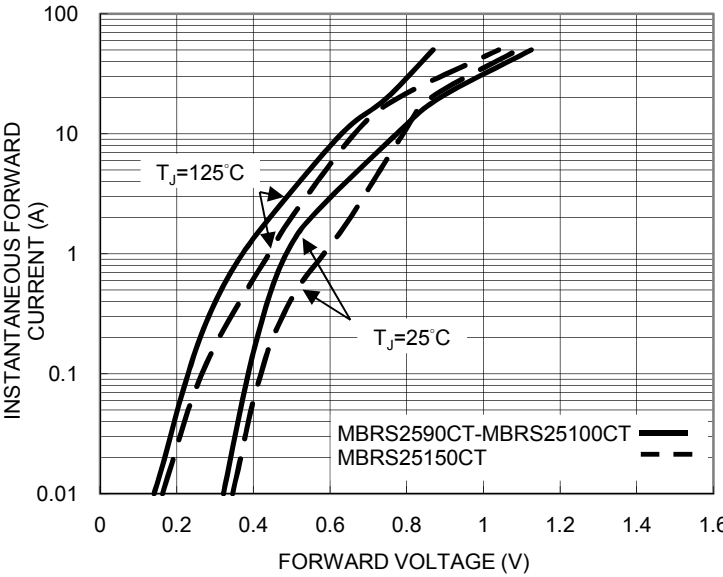


FIG. 5 TYPICAL REVERSE CHARACTERISTICS PER LEG

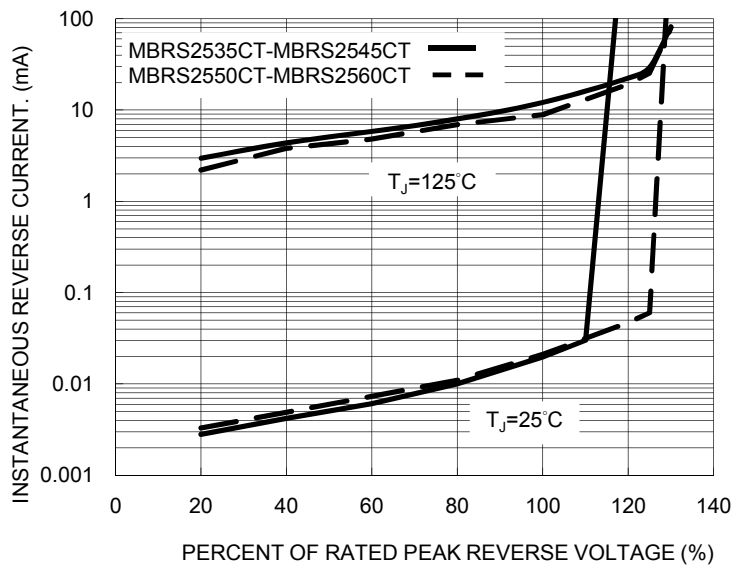


FIG. 6 TYPICAL REVERSE CHARACTERISTICS PER LEG

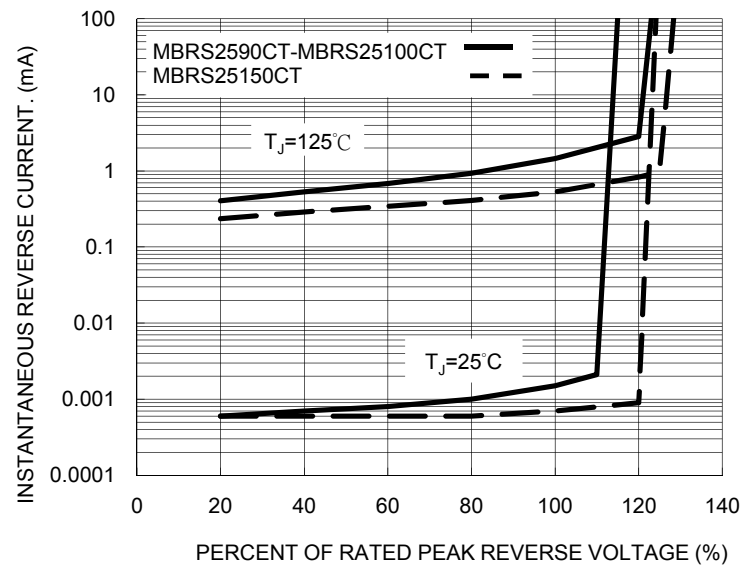


FIG. 7 TYPICAL JUNCTION CAPACITANCE PER LEG

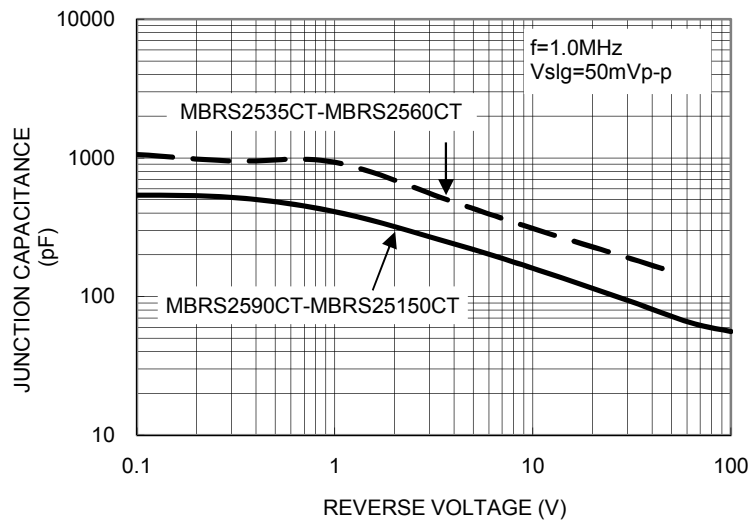
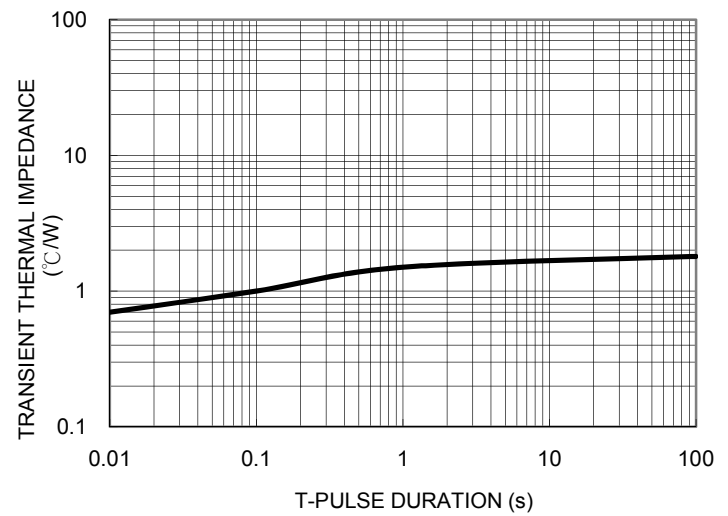
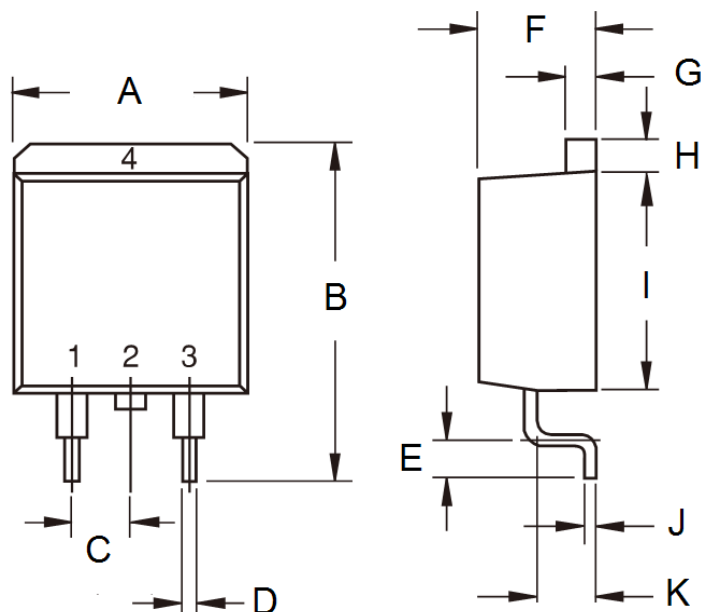


FIG. 8 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



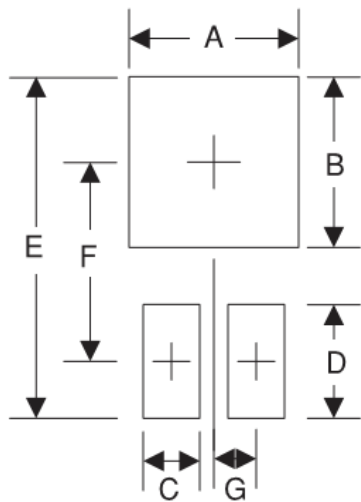
## PACKAGE OUTLINE DIMENSIONS

### TO-263AB (D<sup>2</sup>PAK)



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	-	10.5	-	0.413
B	14.60	15.88	0.575	0.625
C	2.41	2.67	0.095	0.105
D	0.68	0.94	0.027	0.037
E	2.29	2.79	0.090	0.110
F	4.44	4.70	0.175	0.185
G	1.14	1.40	0.045	0.055
H	1.14	1.40	0.045	0.055
I	8.25	9.25	0.325	0.364
J	0.36	0.53	0.014	0.021
K	2.03	2.79	0.080	0.110

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	10.8	0.425
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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