Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	MBRB 1530CT	MBRB 1535CT	MBRB 1540CT	MBRB 1545CT	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	35	40	45	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	24.5	28	31.5	V
Average Rectified Output Current @ T_C = +105°C	I_O	15				A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	150				A

Thermal Characteristics

Characteristic		Symbol	Value	Unit
Typical Thermal Resistance Junction to Terminal		$R_{\theta JT}$	3.0	°C/W
Operating Temperature Range (Note 2)	$V_R \le 80\%\ V_{RRM}$	T_J	-65 to +150	°C
	$V_R \le 50\%\ V_{RRM}$		≤+180	
	DC Forward Mode		≤+200	
Storage Temperature Range		T_{STG}	-65 to +175	°C

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic		Symbol	Value	Unit
Forward Voltage, Per Element	@ I_F = 7.5A	V_{FM}	0.7	V
Voltage Rate of Change		dv/dt	10,000	V/µs
Peak Reverse Current at Rated DC Blocking Voltage (Note 3)	@ T_A = +25°C @ T_A = +100°C	I_{RM}	0.1 15	mA
Maximum Reverse Recovery Time (Note 4)		t_{RR}	30	ns
Typical Total Capacitance (Note 5)		C_T	250	pF

Notes:
2. The heat generated must be less than the thermal conductivity from Junction-to-Ambient: $dP_D/dT_J < 1/R_{\theta JA}$.
3. 300µs pulse width, 2% duty cycle.
4. Reverse recovery test conditions: I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A (see figure 1).
5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

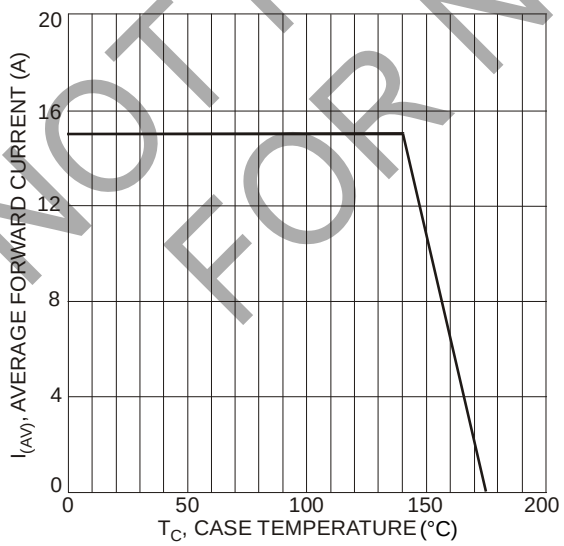


Fig. 1 Forward Current Derating Curve

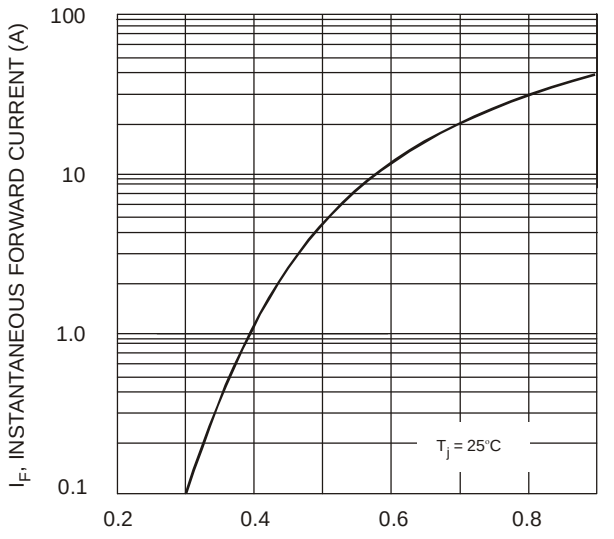


Fig. 2 Typical Forward Characteristics, per Element

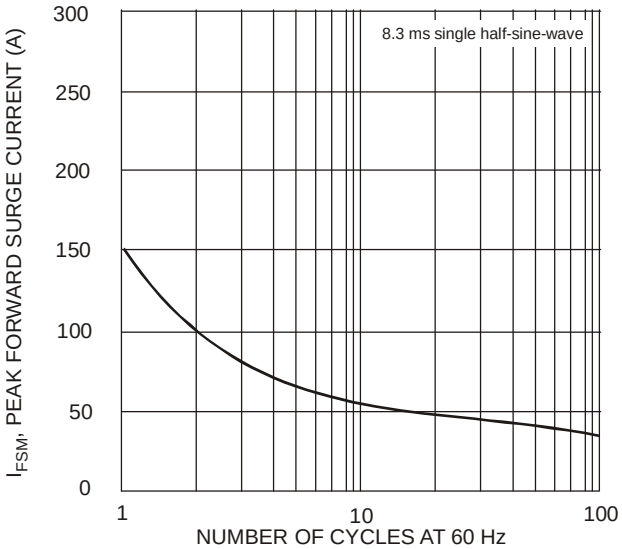


Fig. 3 Max Non-Repetitive Surge Current

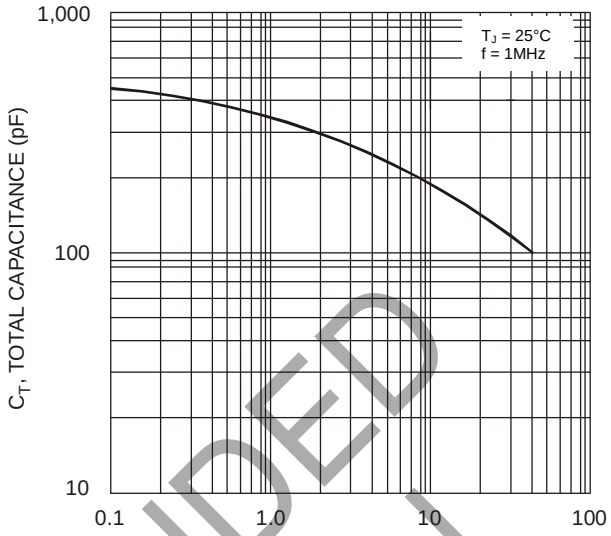


Fig. 4 Typical Total Capacitance

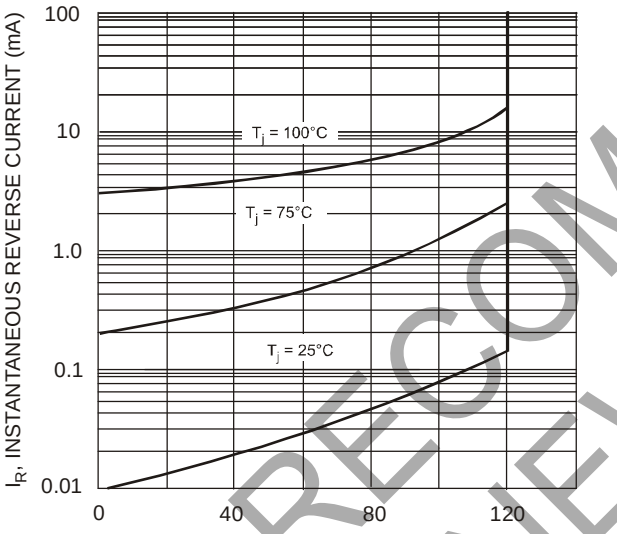
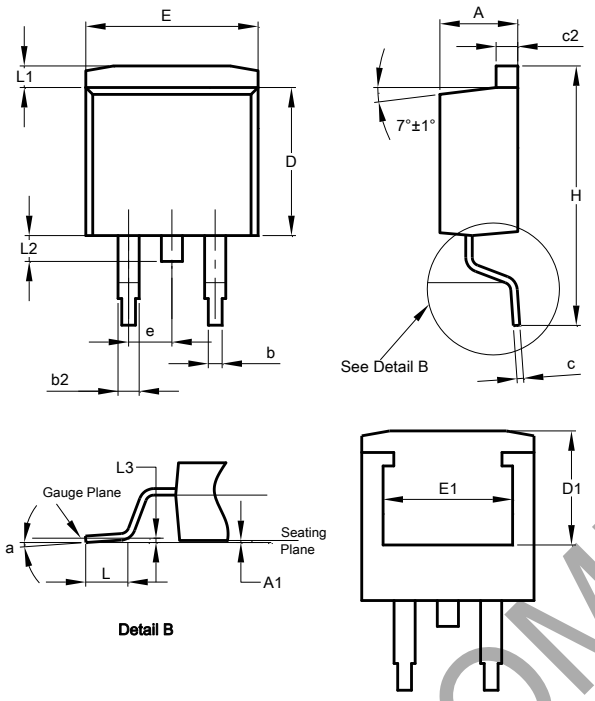


Fig. 5 Typical Reverse Characteristics, per element

Package Outline Dimensions

Please see http://www.diodes.com/package-outlines.html for the latest version.

TO263AB (D2PAK)

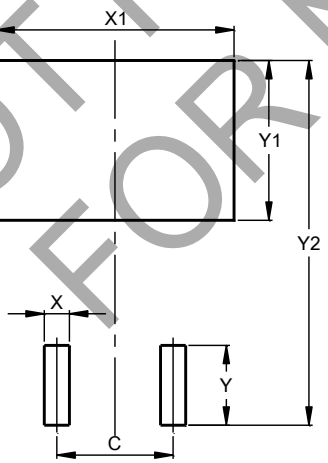


TO263AB (D2PAK)			
Dim	**Min**	**Max**	**Typ**
A	4.07	4.82	-
A1	0.00	0.25	-
b	0.51	0.99	-
b2	1.15	1.77	-
c	0.356	0.73	-
c2	1.143	1.65	-
D	8.39	9.65	-
D1	6.55	6.95	-
e	2.54 TYP		
E	9.66	10.66	-
E1	6.23	8.23	-
H	14.61	15.87	-
L	1.78	2.79	-
L1	-	1.67	-
L2	-	1.77	-
L3	-	-	0.254
a	0°	8°	-
All Dimensions in mm			

Suggested Pad Layout

Please see http://www.diodes.com/package-outlines.html for the latest version.

TO263AB (D2PAK)



Dimensions	Value (in mm)
C	5.08
X	1.10
X1	10.41
Y	3.50
Y1	7.01
Y2	15.99

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