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

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	45	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	100	mA
Peak Collector Current	I_{CM}	200	mA
Peak Base Current	I_{BM}	200	mA

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

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 5)	P_D	200	mW
Thermal Resistance, Junction to Ambient (Note 5)	$R_{\Theta JA}$	625	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

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

Characteristic (Note 6)	Symbol	Min	Typ	Max	Unit	Test Condition
Collector-Base Breakdown Voltage	BV_{CBO}	50	—	—	V	I_C = 100µA, I_B = 0
Collector-Emitter Breakdown Voltage	BV_{CEO}	45	—	—	V	I_C = 10mA, I_B = 0
Emitter-Base Breakdown Voltage	BV_{EBO}	6	—	—	V	I_E = 100µA, I_C = 0
DC Current Gain	h_{FE}	200	—	450	—	V_{CE} = 5.0V, I_C = 2.0mA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	—	—	100 400	mV	I_C = 10mA, I_B = 0.5mA I_C = 100mA, I_B = 5.0mA
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	—	755	—	mV	I_C = 10mA, I_B = 0.5mA
Base-Emitter Voltage	$V_{BE(on)}$	580	665	700	mV	V_{CE} = 5.0V, I_C = 2.0mA
Collector-Cutoff Current	I_{CBO}	— —	— —	20 5.0	nA µA	V_{CB} = 40V V_{CB} = 40V, T_A = +125°C
Emitter-Cutoff Current	I_{EBO}	—	—	100	nA	V_{EB} = 5.0V, I_C = 0
Gain Bandwidth Product	f_T	100	—	—	MHz	V_{CE} = 5.0V, I_C = 10mA, f = 100MHz
Collector-Base Capacitance	C_{CBO}	—	2.0	3.0	pF	V_{CB} = 10V, f = 1.0MHz
Emitter-Base Capacitance	C_{EBO}	—	11	—	pF	V_{EB} = 0.5V, f = 1.0MHz

Notes: 5. For the device mounted on minimum recommended pad layout FR4 PCB with high coverage of single sided 1oz copper, in still air conditions; the device is measured when operating in a steady-state condition.
6. Short duration pulse test used to minimize self-heating effect.

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

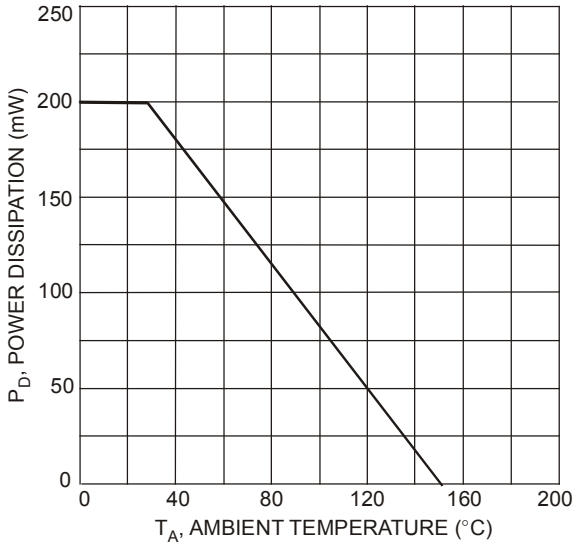

Figure 1 Power Derating Curve

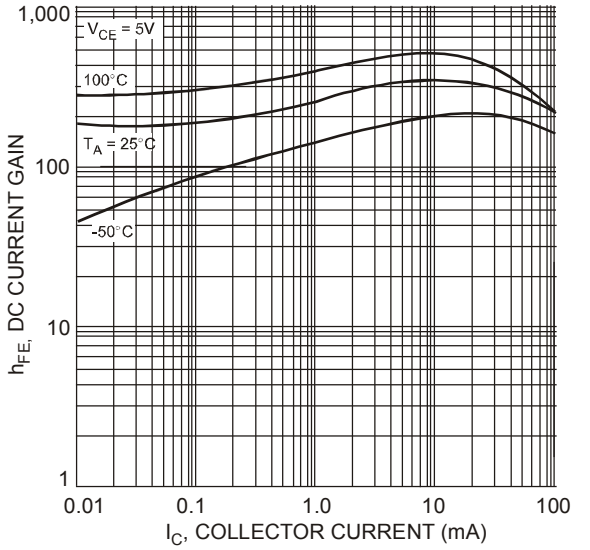

Figure 2 Typical DC Current Gain vs. Collector Current

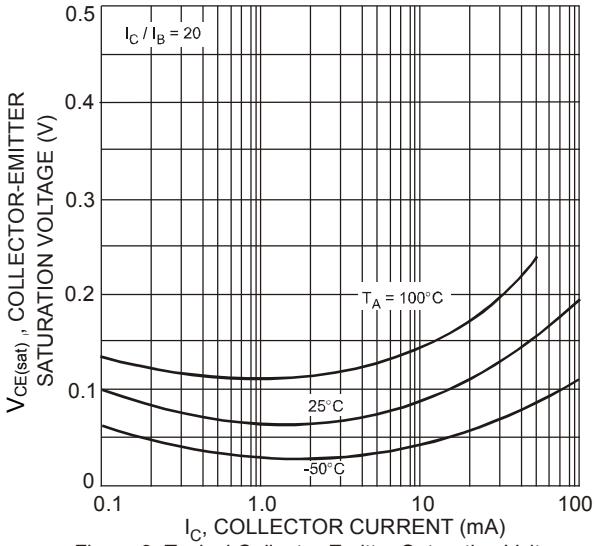

Figure 3 Typical Collector-Emitter Saturation Voltage vs. Collector Current

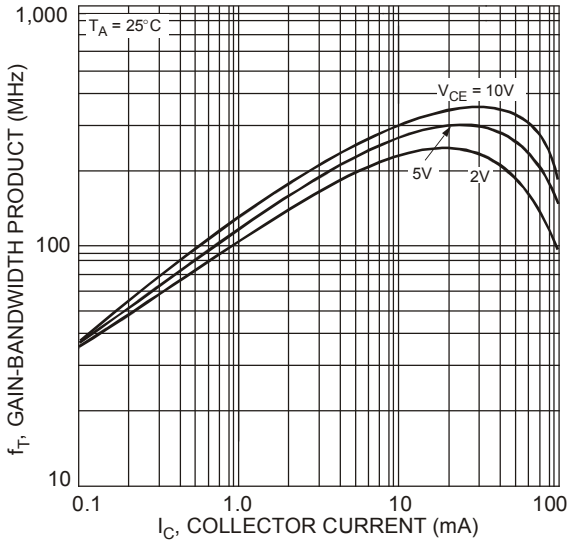

Figure 4 Typical Gain-Bandwidth Product vs. Collector Current

Package Outline Dimensions

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

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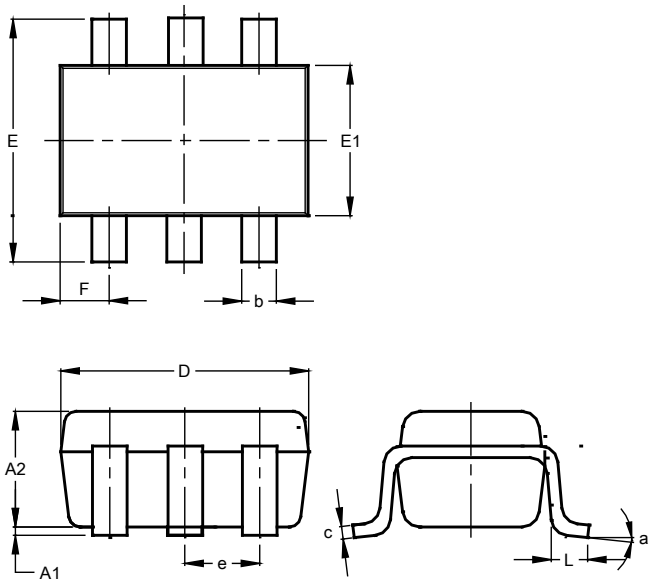
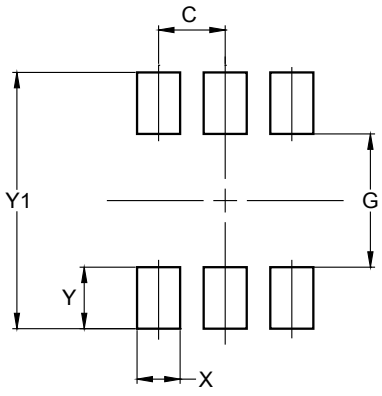


SOT363			
Dim	**Min**	**Max**	**Typ**
A1	0.00	0.10	0.05
A2	0.90	1.00	0.95
b	0.10	0.30	0.25
c	0.10	0.22	0.11
D	1.80	2.20	2.15
E	2.00	2.20	2.10
E1	1.15	1.35	1.30
e	0.650 BSC		
F	0.40	0.45	0.425
L	0.25	0.40	0.30
a	0°	8°	--
All Dimensions in mm			

Suggested Pad Layout

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

SOT363



Dimensions	Value (in mm)
C	0.650
G	1.300
X	0.420
Y	0.600
Y1	2.500

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