Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic		Symbol	Value	Unit
Supply Voltage <Pin: (3) to (2)>		V_{CC}	50	V
Input Voltage <Pin: (1) to (2)>	DDTA123ECA DDTA143ECA DDTA114ECA DDTA124ECA DDTA144ECA DDTA115ECA	V_{IN}	+10 to –12 +10 to –30 +10 to –40 +10 to –40 +10 to –40 +10 to –40	V
Output Current	DDTA123ECA DDTA143ECA DDTA114ECA DDTA124ECA DDTA144ECA DDTA115ECA	I_O	-100 -100 -50 -30 -30 -20	mA
Output Current		I_C (Max)	-100	mA

Thermal Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 5 & 6)	P_D	200	mW
Thermal Resistance, Junction to Ambient Air (Note 5)	$R_{\theta JA}$	625	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

Notes: 5. Mounted on FR4 PC Board with minimum recommended pad layout
6. 150mW per element must not be exceeded.

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic		Symbol	Min	Typ	Max	Unit	Test Condition
Input Voltage		$V_{I(off)}$	-0.5	-1.1	—	V	V_{CC} = -5V, I_O = -100μA
		$V_{I(on)}$	—	-1.9	-3		V_O = -0.3V, I_O = -20mA, DDTA123ECA V_O = -0.3V, I_O = -20mA, DDTA143ECA V_O = -0.3V, I_O = -10mA, DDTA114ECA V_O = -0.3V, I_O = -5mA, DDTA124ECA V_O = -0.3V, I_O = -2mA, DDTA144ECA V_O = -0.3V, I_O = -1mA, DDTA115ECA
Output Voltage		$V_{O(on)}$	—	-0.1	-0.3	V	I_O/I_I = -10mA/-0.5mA DDTA123ECA I_O/I_I = -10mA/-0.5mA DDTA143ECA I_O/I_I = -10mA/-0.5mA DDTA114ECA I_O/I_I = -10mA/-0.5mA DDTA124ECA I_O/I_I = -10mA/-0.5mA DDTA144ECA I_O/I_I = -5mA/-0.25mA DDTA115ECA
Input Current	DDTA123ECA DDTA143ECA DDTA114ECA DDTA124ECA DDTA144ECA DDTA115ECA	I_I	—	—	-3.8 -1.8 -0.88 -0.36 -0.18 -0.15	mA	V_I = -5V
Output Current		$I_{O(off)}$	—	—	-0.5	μA	V_{CC} = -50V, V_I = 0V
DC Current Gain	DDTA123ECA DDTA143ECA DDTA114ECA DDTA124ECA DDTA144ECA DDTA115ECA	G_I	20 20 30 56 68 82	—	—	—	V_O = -5V, I_O = -20mA V_O = -5V, I_O = -10mA V_O = -5V, I_O = -5mA V_O = -5V, I_O = -5mA V_O = -5V, I_O = -5mA V_O = -5V, I_O = -5mA
Input Resistor Tolerance		ΔR_1	-30	—	+30	%	—
Resistance Ratio Tolerance		$\Delta R_2/R_1$	0.8	1	1.2	%	—
Gain-Bandwidth Product		f_T	—	250	—	MHz	V_{CE} = -10V, I_E = -5mA, f = 100MHz

Typical Characteristics – DDTA143ECA

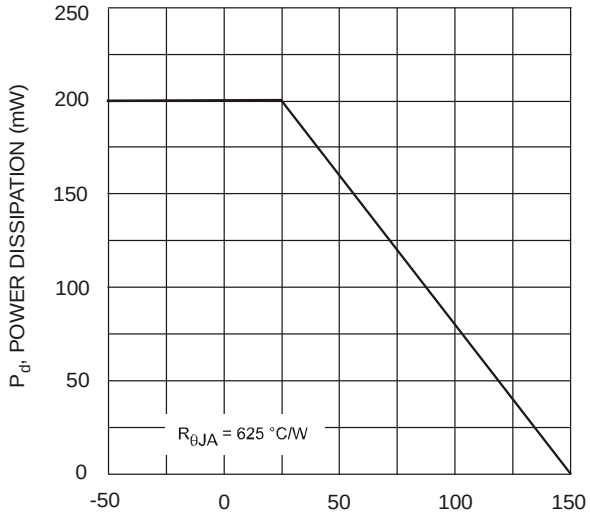


Fig. 1 Derating Curve

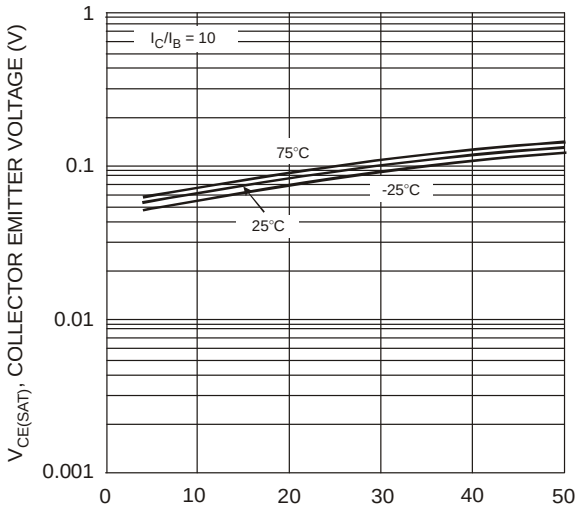


Fig. 2 $V_{CE(SAT)}$ vs. I_C

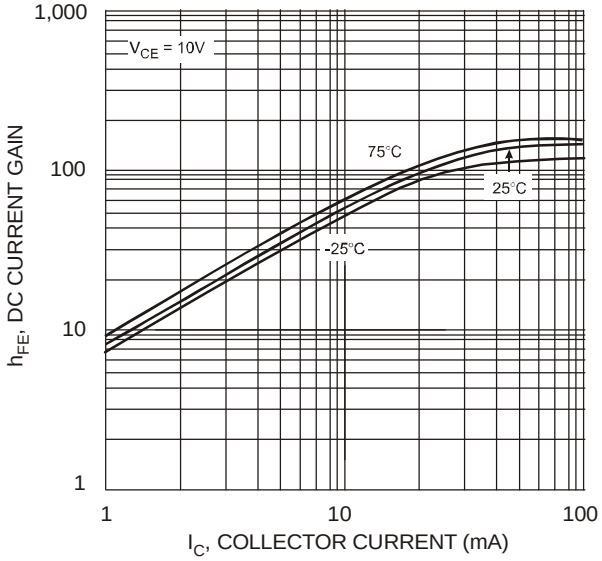


Fig. 3 DC Current Gain

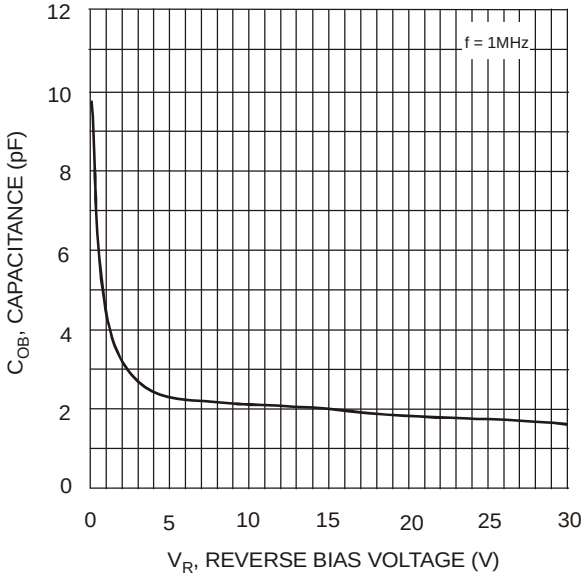


Fig. 4 Output Capacitance

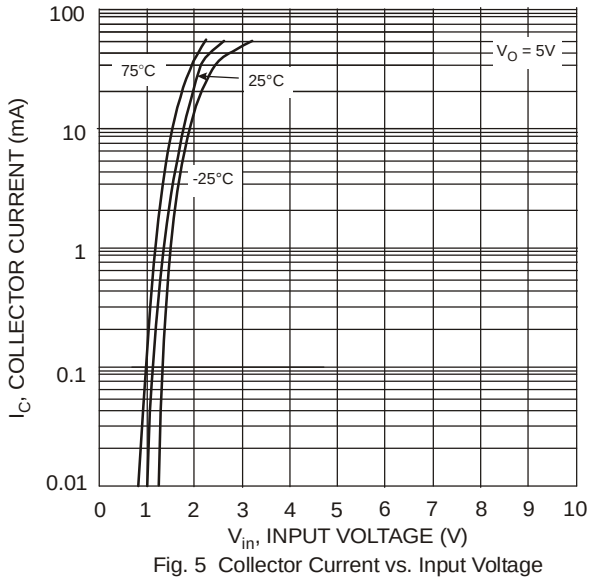


Fig. 5 Collector Current vs. Input Voltage

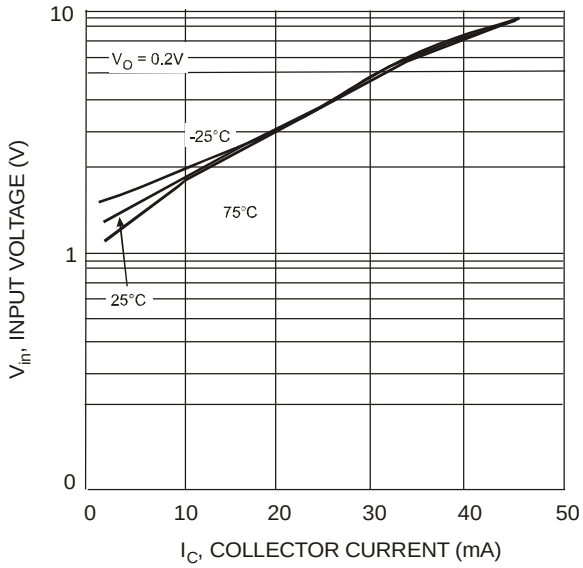
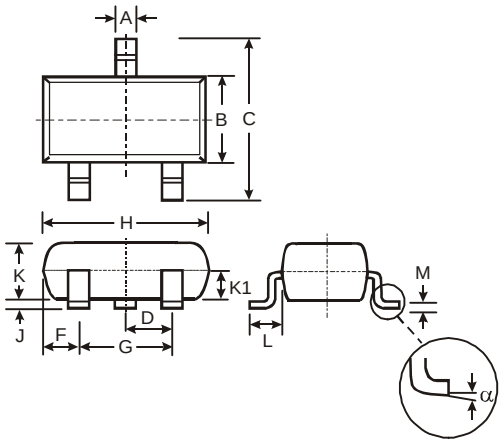


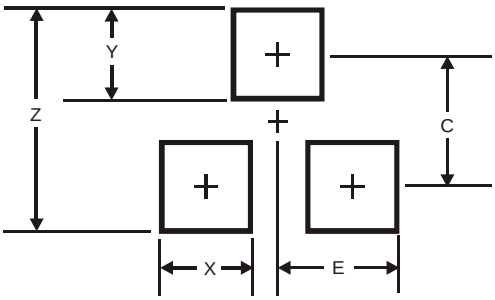
Fig. 6 Input Voltage vs. Collector Current

Package Outline Dimensions



SOT23			
Dim	**Min**	**Max**	**Typ**
A	0.37	0.51	0.40
B	1.20	1.40	1.30
C	2.30	2.50	2.40
D	0.89	1.03	0.915
F	0.45	0.60	0.535
G	1.78	2.05	1.83
H	2.80	3.00	2.90
J	0.013	0.10	0.05
K	0.903	1.10	1.00
K1	-	-	0.400
L	0.45	0.61	0.55
M	0.085	0.18	0.11
α	0°	8°	-
All Dimensions in mm			

Suggested Pad Layout



Dimensions	Value (in mm)
Z	2.9
X	0.8
Y	0.9
C	2.0
E	1.35

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