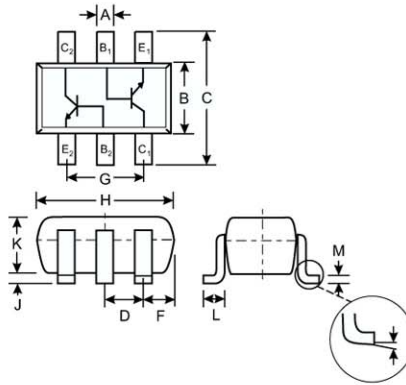


● Features

Ideally Suited for Automatic Insertion
For Switching and AF Amplifier Applications
Ultra-Small Surface Mount Package

● Mechanical Data

Case: SOT-363, Molded Plastic
Case material - UL Flammability Rating
Classification 94V - 0
Moisture sensitivity: Level 1 per J-STD-020A
Terminals: Solderable per MIL-STD-202,
Method 208
Terminal Connections: See Diagram
Marking: K1F (See Page 2)
Weight: 0.006 grams
Ordering & Date Code Information: See Page 2



SOT-363		
Dim	Min	Max
A	0.10	0.30
B	1.15	1.35
C	2.00	2.20
D	0.65 Nominal	
F	0.30	0.40
H	1.80	2.20
J	—	0.10
K	0.90	1.00
L	0.25	0.40
M	0.10	0.25
α	°8	
All Dimensions in mm		

● Maximum Ratings @ $T_A = 25^\circ\text{C}$ 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}	5.0	V
Collector Current	I_C	100	mA
Peak Collector Current	I_{CM}	200	mA
Peak Base Current	I_{BM}	200	mA
Power Dissipation (Note 1)	P_d	200	mW
Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	500	$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +125	$^\circ\text{C}$

● Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
DC Current Gain (Note 2)	h_{FE}	200	—	450	—	$V_{CE} = 5.0\text{V}, I_C = 2.0\text{mA}$
Collector-Emitter Saturation Voltage (Note 2)	$V_{CE(SAT)}$	—	—	100 400	mV	$I_C = 10\text{mA}, I_B = 0.5\text{mA}$ $I_C = 100\text{mA}, I_B = 5.0\text{mA}$
Base-Emitter Saturation Voltage (Note 2)	$V_{BE(SAT)}$	—	755	—	mV	$I_C = 10\text{mA}, I_B = 0.5\text{mA}$
Base-Emitter Voltage (Note 2)	V_{BE}	580	665	700	mV	$V_{CE} = 5.0\text{V}, I_C = 2.0\text{mA}$
Collector Cutoff Current (Note 2)	I_{CBO} I_{CBO}	—	—	15 5.0	nA μA	$V_{CB} = 30\text{V}, I_E = 0$ $V_{CB} = 30\text{V}, T_j = 125^\circ\text{C}$
Emitter Cutoff Current (Note 2)	I_{EBO}	—	—	100	nA	$V_{EB} = 5.0\text{V}, I_C = 0$
Gain Bandwidth Product	f_T	100	—	—	MHz	$V_{CE} = 5.0\text{V}, I_C = 10\text{mA},$ $f = 100\text{MHz}$
Collector-Base Capacitance	C_{CBO}	—	—	1.5	pF	$V_{CB} = 10\text{V}, f = 1.0\text{MHz}$
Emitter-Base Capacitance	C_{EBO}	—	11	—	pF	$V_{EB} = 0.5\text{V}, f = 1.0\text{MHz}$

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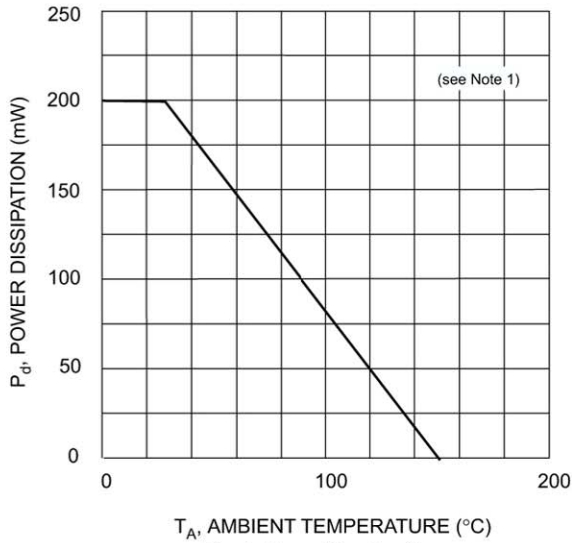


Fig. 1, Power Derating Curve

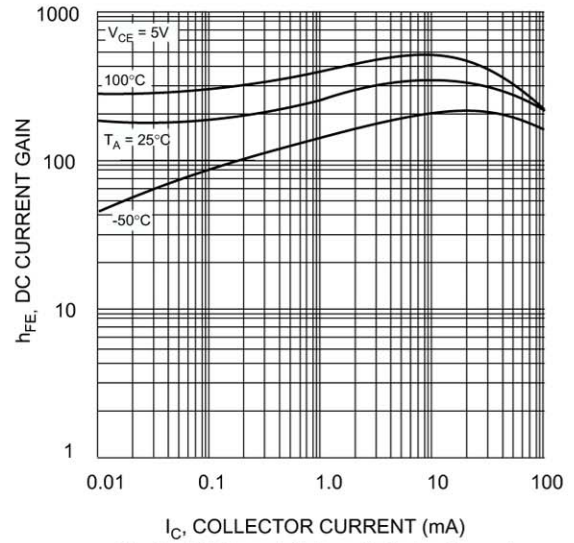


Fig. 2, DC Current Gain vs Collector Current

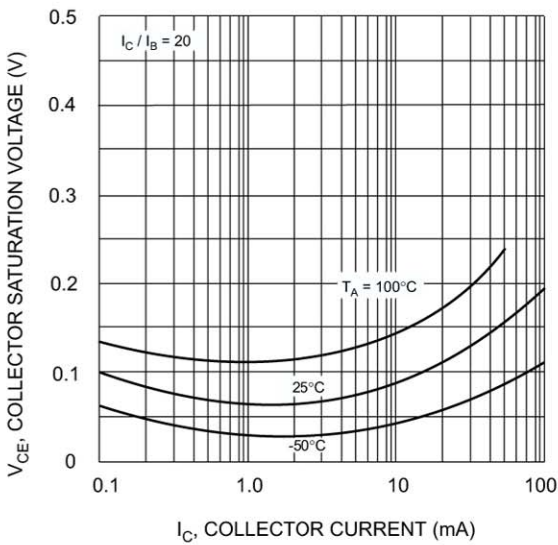


Fig. 3, Collector Saturation Voltage vs Collector Current

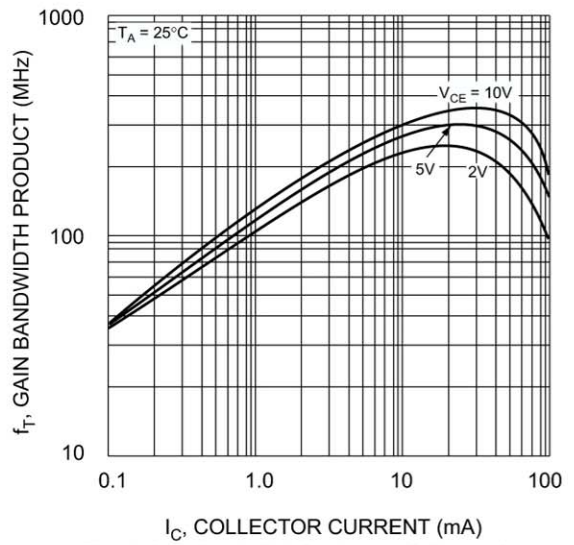


Fig. 4, Gain Bandwidth Product vs Collector Current

Notes: 1. Device mounted on FR4 printed circuit board.

