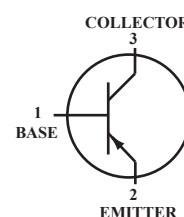


General Purpose Transistor PNP Silicon

Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Limits	Unit
Collector-Emitter Voltage	V_{CEO}	-45	V
Collector-Base voltage	V_{CBO}	-50	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector current	I_C	-500	mA
Peak Collector Current	I_{CM}	-800	mA

MARKING DIAGRAM



Thermal Characteristics

Parameter	Symbol	Limits	Unit
Total Device Dissipation, FR-5 Board (Note 1) @ $T_A = 25^\circ\text{C}$ Derate above 25°C	PD	225 1.8	mW mW/ $^\circ\text{C}$
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	556	$^\circ\text{C/W}$
Total Device Dissipation, Alumina Substrate, (Note 2) @ $T_A = 25^\circ\text{C}$ Derate above 25°C	PD	300 2.4	mW mW/ $^\circ\text{C}$
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	417	$^\circ\text{C/W}$
Junction and Storage temperature	T_J, T_{stg}	-55~+150	$^\circ\text{C}$

1. FR-5 = 1.0×0.75×0.062 in.

2. Alumina = 0.4 x 0.3 x 0.024 in. 99.5% alumina.

Electrical Characteristics (TA=25°C Unless Otherwise noted)

OFF CHARACTERISTICS

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Collector-Emitter Breakdown Voltage (IC = -10mA)	V(BR)CEO	-45	-	-	V
Collector-Base Breakdown voltage (IC = -10μA)	V(BR)CBO	-50	-	-	V
Emitter-Base Breakdown Voltage (IE = -1μA)	V(BR)EBO	-5	-	-	V
Collector Cutoff Current (VCB = -20 V) (VCB = -20 V, TJ = 150°C)	ICBO	-	-	-100 -5	nA μA
Collector-Emitter Cutoff Current (VCE = -45V, IB = 0)	ICEO	-	-	-10	μA
Emitter CutOff Current (VEB = -7V, IC = 0)	IEBO	-	-	-100	nA

ON CHARACTERISTICS

DC Current Gain (IC = -100 mA, VCE = -1.0 V) (IC = -500 mA, VCE = -1.0 V)	HFE	160 40	- -	400 -	
Collector-Emitter Saturation Voltage (IC = -500 mA, IB = -50 mA)	VCE(sat)	-	-	-0.7	V
Base-Emitter On Voltage (IC = -500 mA, VCE = -1.0 V)	VBE(on)	-	-	-1.2	V

SMALL-SIGNAL CHARACTERISTICS

Current-Gain — Bandwidth Product (IC = -10 mA, VCE = -5.0 V, f = 100 MHz)	fT	100	-	-	MHz
Output Capacitance (VCB = -10 V, f = 1.0 MHz)	Cobo	-	10	-	pF
Input Capacitance (VEB = 0.5V, IC = 0, f = 1.0MHz)	Cibo	-	34.5	-	pF

Electrical Characteristics Curves

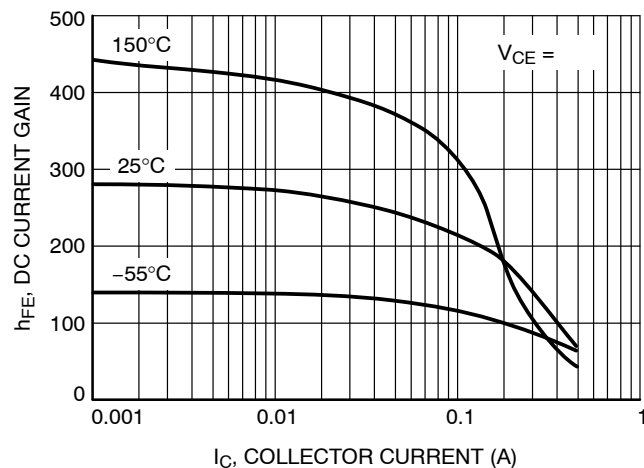


Figure 1. DC Current Gain vs. Collector Current

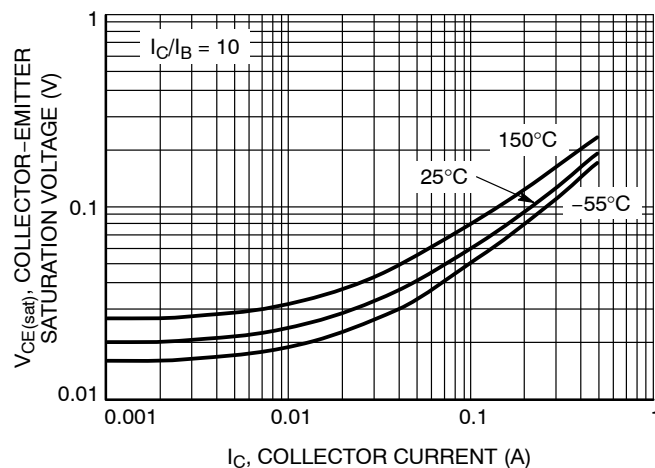


Figure 2. Collector Emitter Saturation Voltage vs. Collector Current

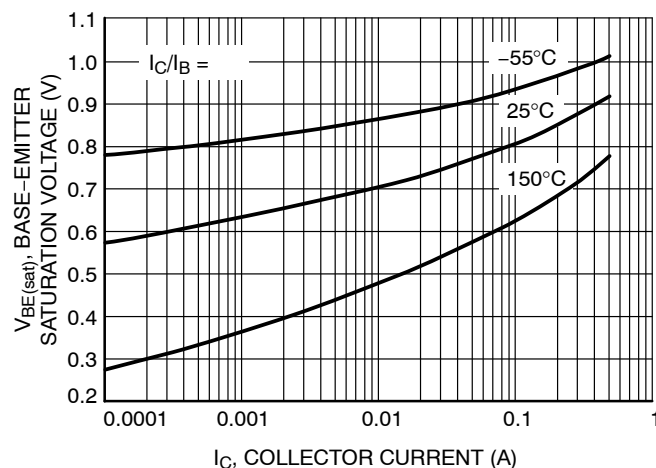


Figure 3. Base Emitter Saturation Voltage vs. Collector Current

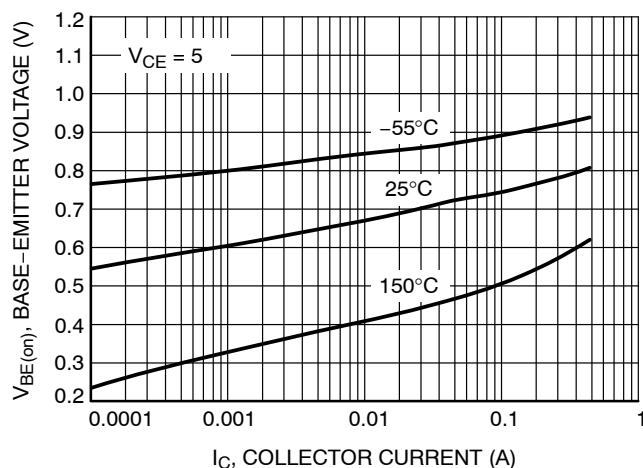


Figure 4. Base Emitter Voltage vs. Collector Current

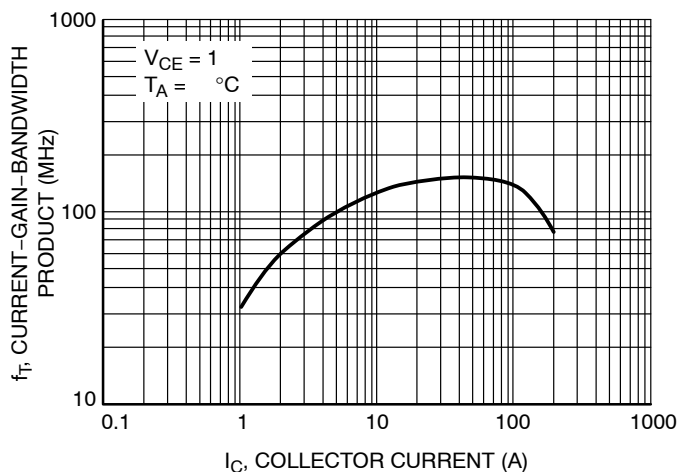


Figure 5. Current Gain Bandwidth Product vs. Collector Current

Electrical Characteristics Curves(Con.)

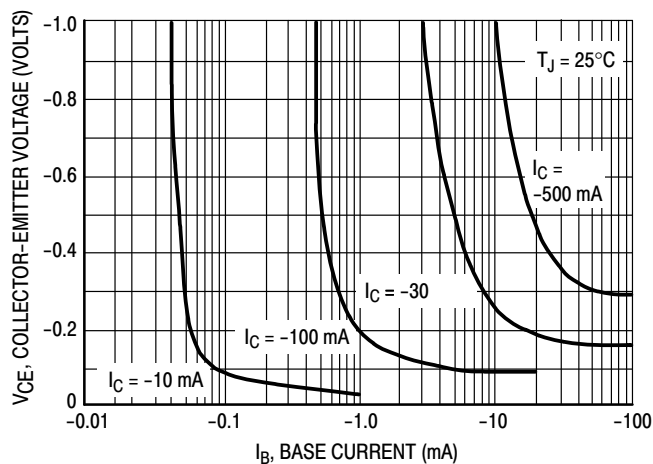


Figure 6. Saturation Region

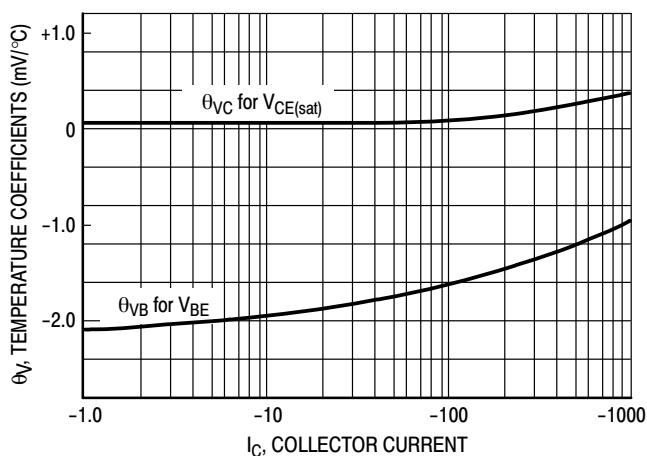


Figure 7. Temperature Coefficients

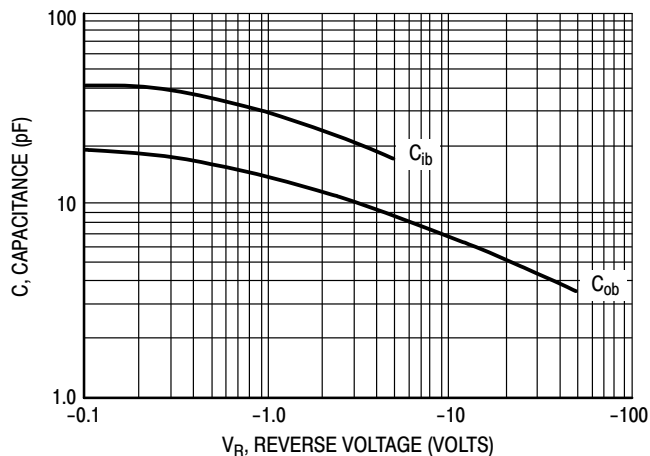
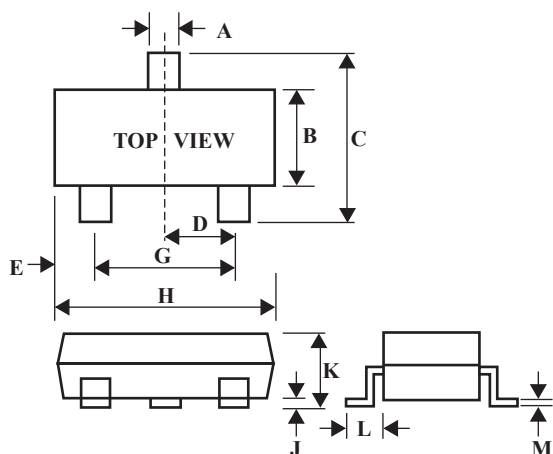


Figure 8. Capacitances

SOT-23 Package Outline Dimension



SOT-23		
Dim	Min	Max
A	0.35	0.51
B	1.19	1.40
C	2.10	2.64
D	0.85	1.05
E	0.46	1.00
G	1.70	2.10
H	2.70	3.10
J	0.01	0.13
K	0.89	1.12
L	0.30	0.69
M	0.076	0.25