

Features

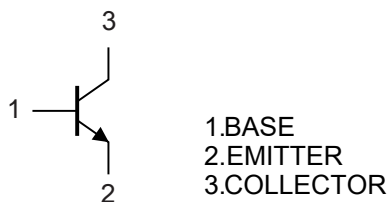
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings @ 25°C Unless Otherwise Specified

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 625°C/W Junction to Ambient

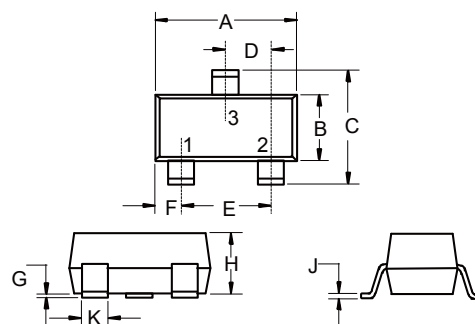
Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	45	V
Emitter-Base Voltage	V_{EBO}	5	V
Continuous Collector Current	I_C	500	mA
Power Dissipation	P_D	200	mW

Internal Structure



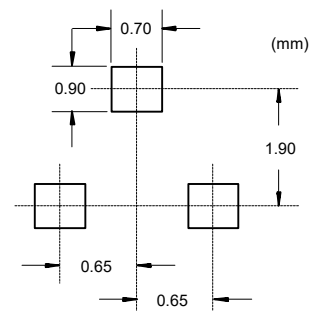
**NPN Silicon
General Purpose
Transistors**

SOT-323



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.071	0.087	1.80	2.20	
B	0.045	0.053	1.15	1.35	
C	0.083	0.096	2.10	2.45	
D	0.026		0.65		TYP.
E	0.047	0.055	1.20	1.40	
F	0.012	0.016	0.30	0.40	
G	0.000	0.004	0.00	0.10	
H	0.035	0.044	0.90	1.10	
J	0.002	0.010	0.05	0.25	
K	0.006	0.016	0.15	0.40	

Suggested Solder Pad Layout



Electrical Characteristics @ T_A=25°C Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	V _{(BR)CBO}	50			V	I _C =10μA, I _E =0
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	45			V	I _C =10mA, I _B =0
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	5			V	I _E =1μA, I _C =0
Collector Cutoff Current	I _{CBO}			0.1	μA	V _{CB} =20V, I _E =0
Emitter Cutoff Current	I _{EBO}			0.1	μA	V _{EB} =5V, I _C =0
DC Current Gain	h _{FE(1)}	100		600		V _{CE} =1V, I _C =100mA
	h _{FE(2)}	40				V _{CE} =1V, I _C =500mA
Collector-Emitter Saturation Voltage	V _{CE(sat)}			0.7	V	I _C =500mA, I _B =50mA
Base-Emitter Saturation Voltage	V _{BE(sat)}			1.2	V	I _C =500mA, I _B =50mA
Base-Emitter Voltage	V _{BE}			1.2	V	V _{CE} =1V, I _C =500mA
Transition Frequency	f _T	100			MHz	V _{CE} =5V, I _C =10mA, f=100MHz
Collector Capacitance	C _C			5	pF	V _{CB} =10V, I _E =0, f=1MHz

Classification of h_{FE(1)}

Rank	BC817-16W	BC817-25W	BC817-40W
Range	100-250	160-400	250-600
Marking	6A	6B	6C

Curve Characteristics

Fig. 1 - Static Characteristics

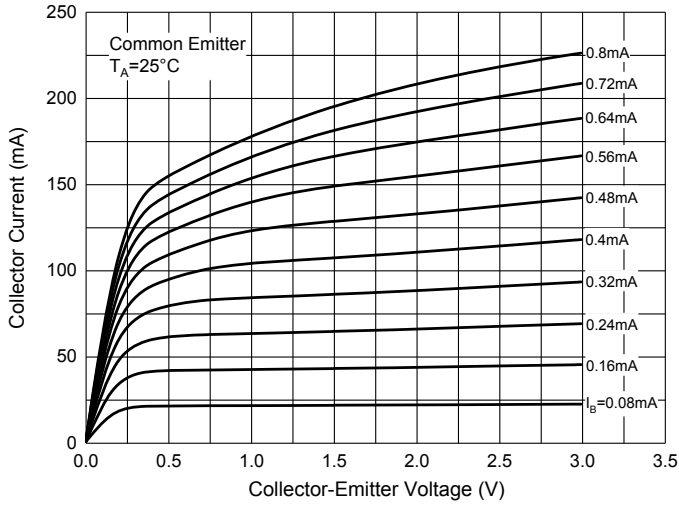


Fig. 2 - DC Current Gain Characteristics

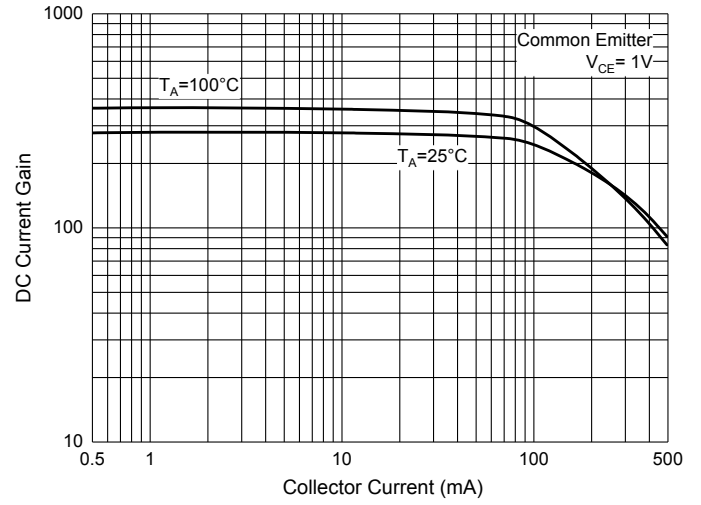


Fig. 3 - Base-Emitter Saturation Voltage Characteristics

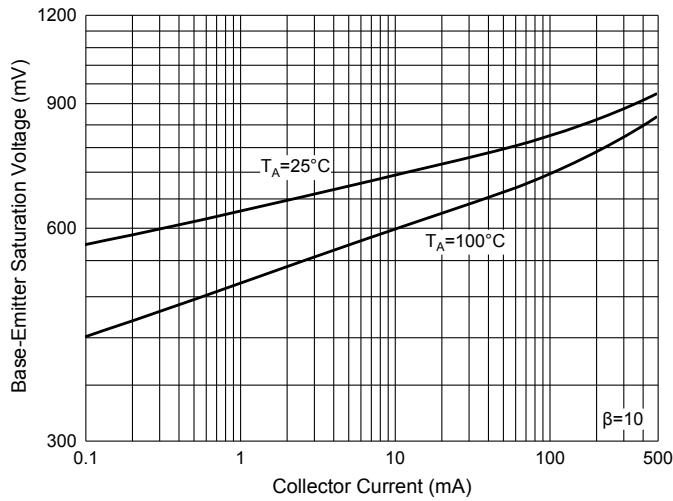


Fig. 4 - Collector-Emitter Saturation Voltage Characteristics

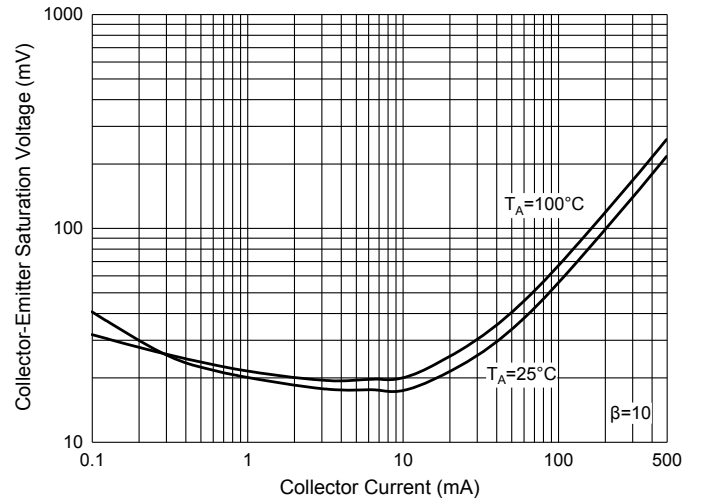


Fig. 5 - Base-Emitter Voltage Characteristics

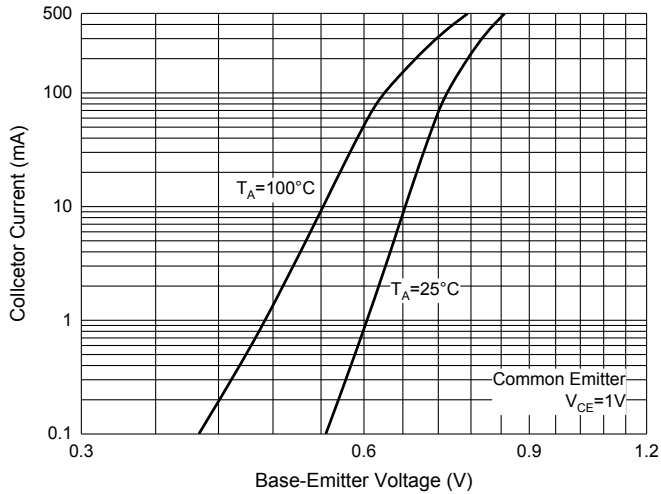
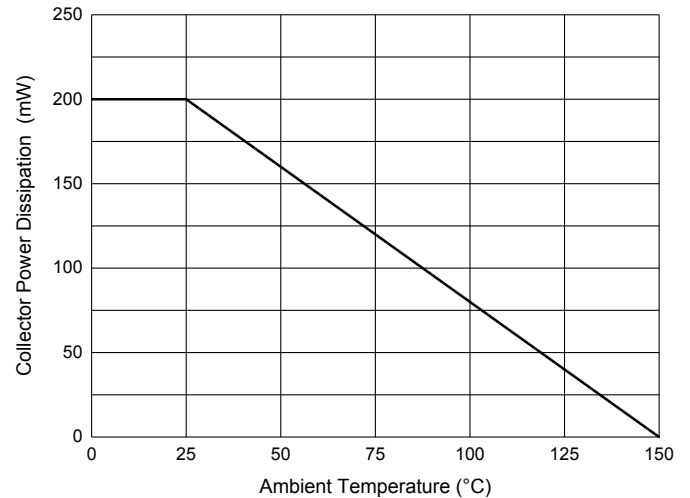


Fig. 6 - Collector Power Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

Note : Adding "-HF" Suffix for Halogen Free, eg. Part Number-TP-HF

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