

Features

- Low C_{ob}
- Complementary to 2SC1576A
- Halogen Free. "Green" Device (Note 1)
- 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)

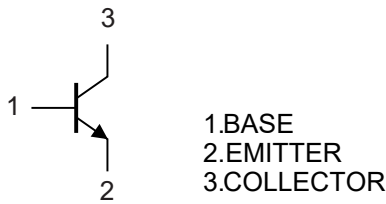
Maximum Ratings @ 25°C Unless Otherwise Specified

- 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}	60	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	7	V
Continuous Collector Current	I_C	150	mA
Power Dissipation	P_D	200	mW

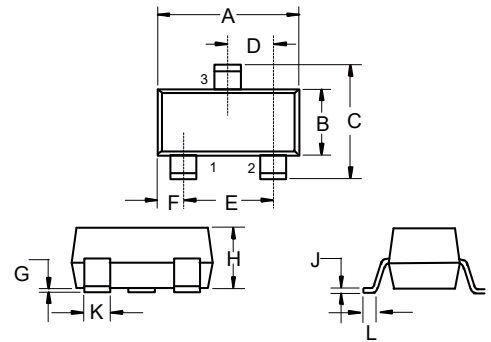
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure



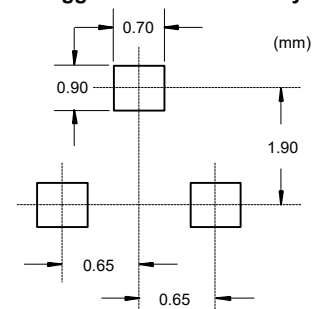
NPN Silicon Epitaxial Transistors

SOT-323



DIM	INCHES		MM		NOTE
	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	
L	0.010	0.018	0.26	0.46	

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}	60			V	I _C =50μA, I _E =0
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	50			V	I _C =1mA, I _B =0
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	7			V	I _E =50μA, I _C =0
Collector Cutoff Current	I _{CBO}			0.1	μA	V _{CB} =60V, I _E =0
Emitter Cutoff Current	I _{EBO}			0.1	μA	V _{EB} =7V, I _C =0
DC Current Gain	h _{FE}	120		560		V _{CE} =6V, I _C =1mA
Collector-Emitter Saturation Voltage	V _{CE(sat)}			0.4	V	I _C =50mA, I _B =5mA
Transition Frequency	f _T		180		MHz	V _{CE} =12V, I _C =2mA, f=30MHz
Output Capacitance	C _{ob}		2	3.5	pF	V _{CB} =12V, I _E =0, f=1MHz

Classification of h_{FE}

Rank	A	B	C
Range	120-270	180-390	270-560
Marking	BQ	BR	BS

Curve Characteristics

Fig. 1 - Static Characteristics

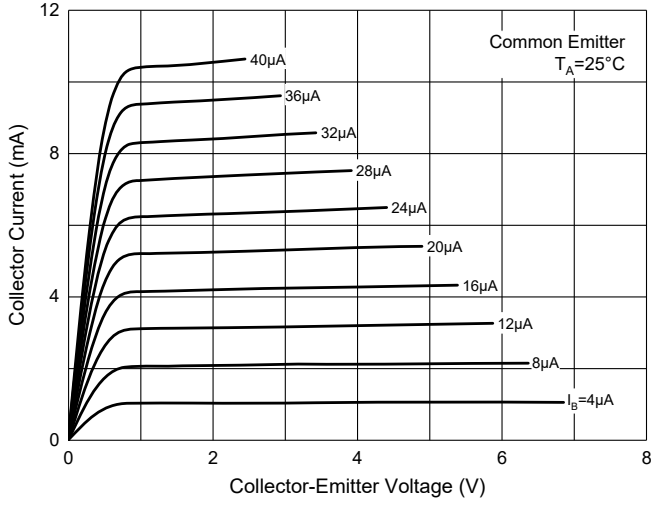


Fig. 2 - DC Current Gain Characteristics

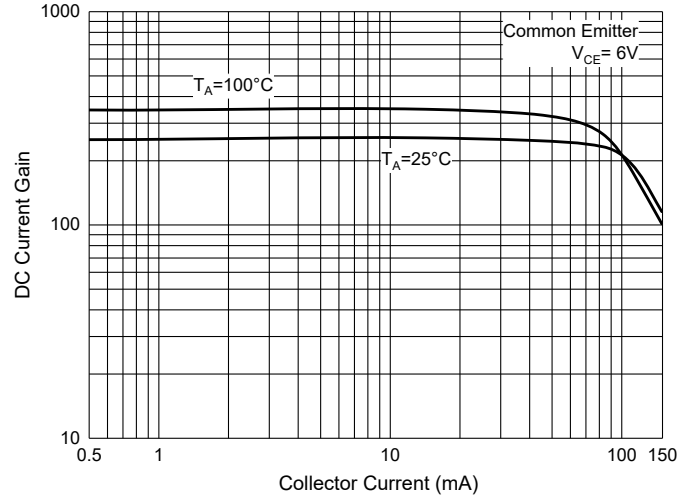


Fig. 3 - Base-Emitter Saturation Voltage Characteristics

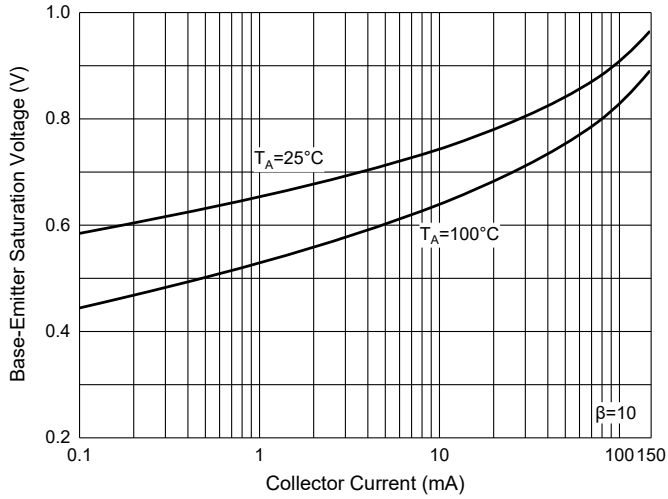


Fig. 4 - Collector-Emitter Saturation Voltage Characteristics

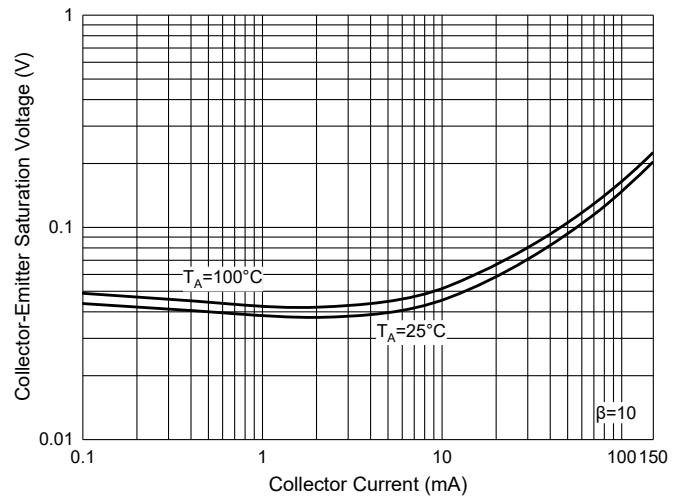


Fig. 5 - Base-Emitter Voltage Characteristics

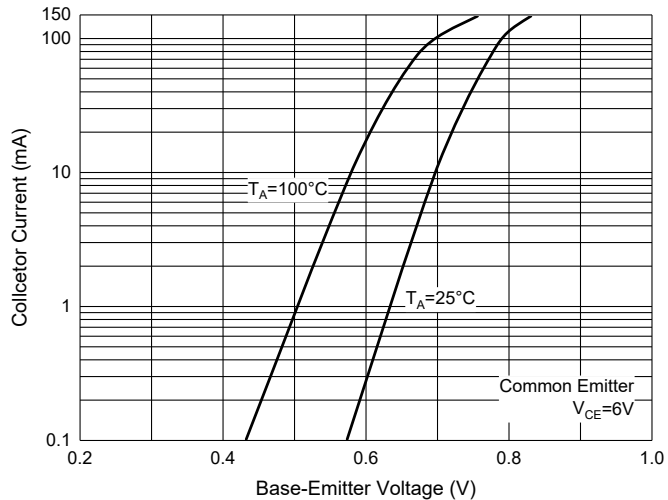
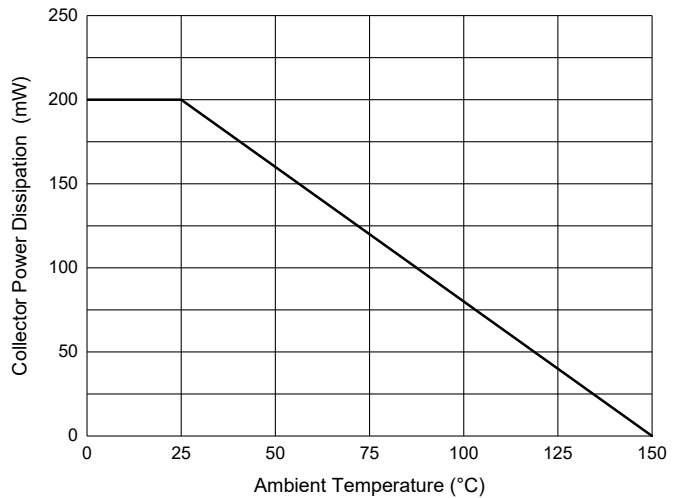


Fig. 6 - Collector Power Derating Curve



Ordering Information

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

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