

Features

- Halogen Free. "Green" Device (Note 1)
- AEC-Q101 Qualified
- 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

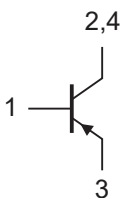
Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	-100	V
Collector-Emitter Voltage	V_{CEO}	-80	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-1	A
Power Dissipation	P_D	1.5	W

Thermal characteristics

Parameter	Symbol	Rating	Unit
Operating Junction Temperature Range	T_{OPR}	-55~+150	°C
Storage Temperature Range	T_{STR}	-55~+150	°C
Thermal Resistance from Junction to Ambient	$R_{th(j-a)}$	83.3	°C/W

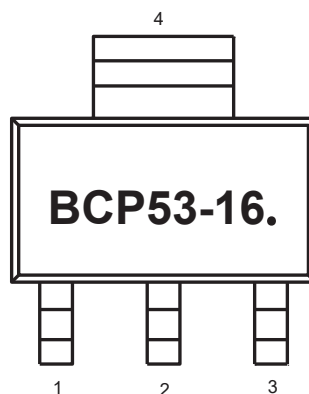
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure



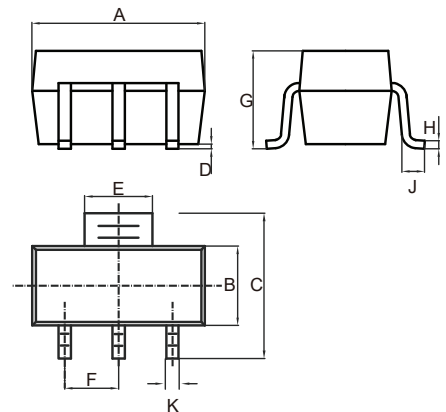
- 1.BASE
- 2,4.COLLECTOR
- 3.EMITTER

Marking Code



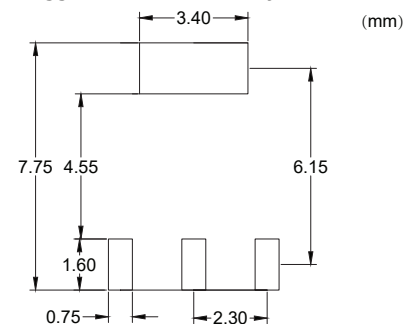
**PNP
Plastic-Encapsulate
Transistors**

SOT-223



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.248	0.264	6.30	6.70	
B	0.130	0.146	3.30	3.70	
C	0.264	0.287	6.70	7.30	
D	0.001	0.004	0.02	0.10	
E	0.114	0.122	2.90	3.10	
F	0.091		2.30		TYP.
G	---	0.071	---	1.80	
H	0.009	0.014	0.23	0.35	
J	0.030	---	0.75	---	
K	0.026	0.033	0.66	0.84	

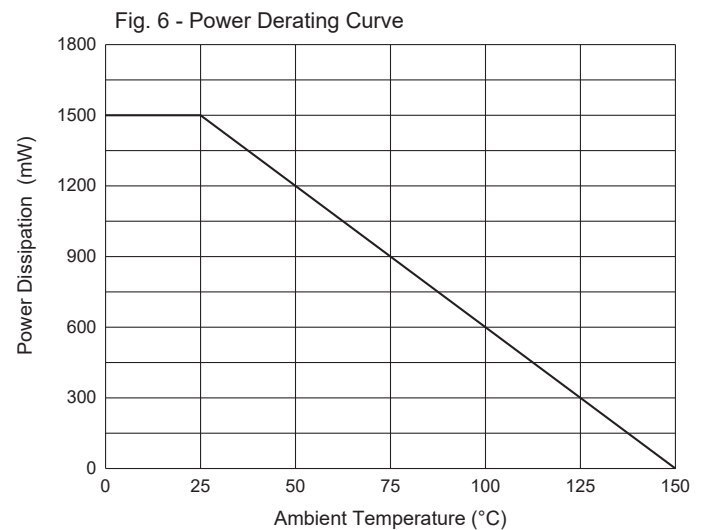
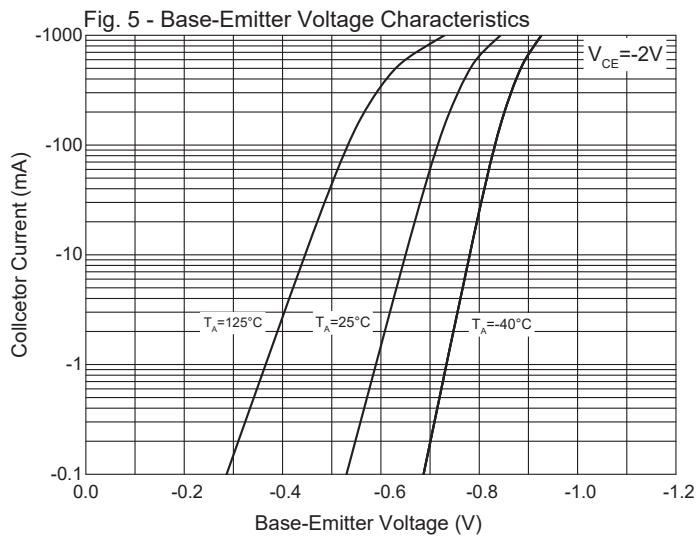
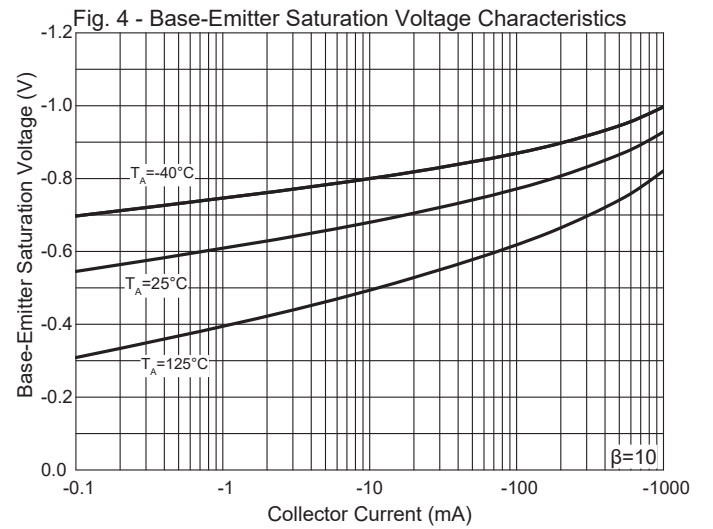
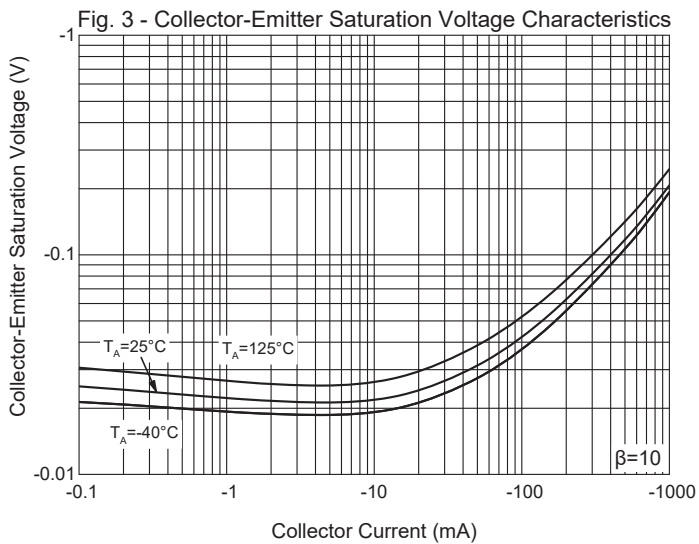
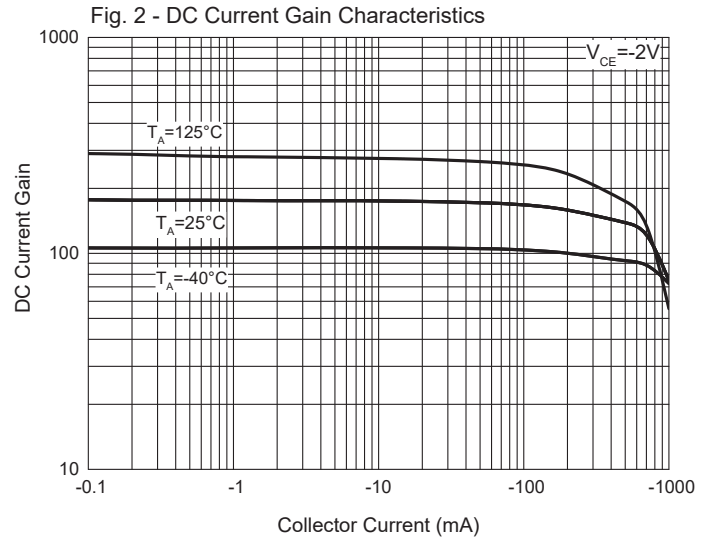
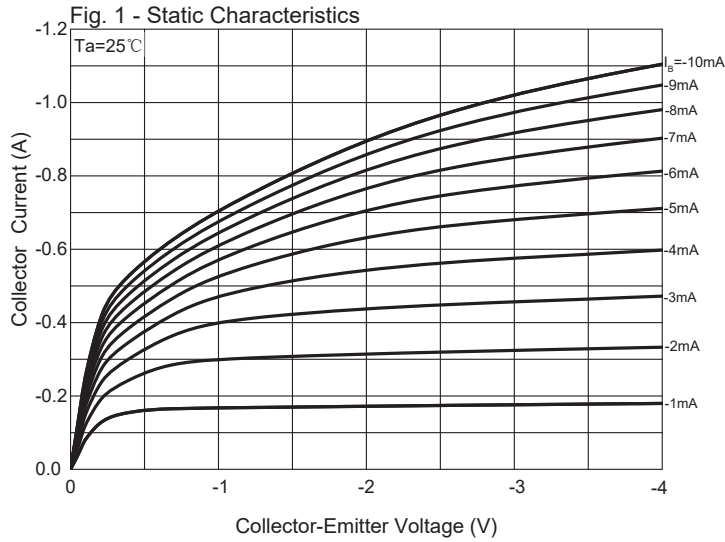
Suggested Solder Pad Layout



Electrical Characteristics @ $T_A=25^{\circ}\text{C}$ Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-100			V	$I_C=-100\mu\text{A}, I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-80			V	$I_C=-10\text{mA}, I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			V	$I_E=-100\mu\text{A}, I_C=0$
Collector-Base Cutoff Current	I_{CBO}			-100	nA	$V_{CB}=-30\text{V}, I_E=0$
Emitter-Base Cutoff Current	I_{EBO}			-100	nA	$V_{EB}=-5\text{V}, I_C=0$
DC Current Gain	h_{FE1}	63				$V_{CE}=-2\text{V}, I_C=-5\text{mA}$
	h_{FE2}	100		250		$V_{CE}=-2\text{V}, I_C=-150\text{mA}$
	h_{FE3}	40				$V_{CE}=-2\text{V}, I_C=-500\text{mA}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-0.5	V	$I_C=-500\text{mA}, I_B=-50\text{mA}$
Base-Emitter Voltage	V_{BE}			-1	V	$V_{CE}=-2\text{V}, I_C=-500\text{mA}$
Transition Frequency	f_T	100			MHz	$V_{CE}=-10\text{V}, I_C=-50\text{mA}, f=30\text{MHz}$

Curve Characteristics



Ordering Information

Device	Packing
BCP53-16HE3-TP	Tape&Reel: 2.5Kpcs/Reel

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