Features

- Halogen Free. “Green” Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

PNP
Plastic Encapsulate Transistor

Maximum Ratings

- Operating Junction Temperature Range: -55℃ to +150℃
- Storage Temperature Range: -55℃ to +150℃
- Thermal Resistance: 250 ℃/W Junction to Ambient

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	-100	V
Collector-Emitter Voltage	V_{CEO}	-80	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-1.0	A
Collector Power Dissipation	P_C	500	mW(Note2)
		950	mW(Note3)
		1350	mW(Note4)

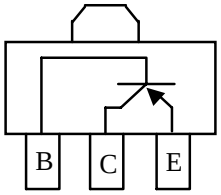
Note: 1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

2.Device mounted on an FR4 Printed-Circuit Board (PCB), single-sided copper, t in-plated and standard footprint.

3.Device mounted on an FR4 PCB, single-sided copper, tin-plated, mounting pad for collector 1 cm^2.

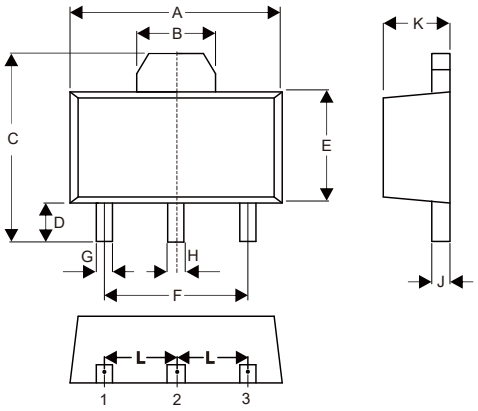
4.Device mounted on an FR4 PCB, single-sided copper, tin-plated, mounting pad for collector 6 cm^2.

Internal Structure



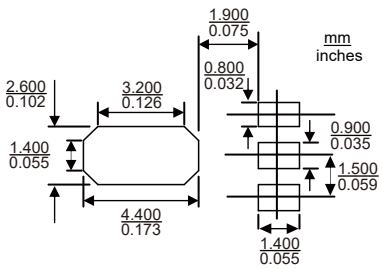
Marking:
BCX53=AH,
BCX53-10=AK
BCX53-16=AL

SOT-89



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.169	0.185	4.30	4.70	
B	0.061		1.55		TYP.
C	0.154	0.171	3.91	4.35	
D	0.031	0.047	0.80	1.20	
E	0.089	0.104	2.25	2.65	
F	0.118		3.00		TYP.
G	0.013	0.020	0.33	0.52	
H	0.015	0.021	0.38	0.53	
J	0.014	0.017	0.35	0.44	
K	0.055	0.063	1.40	1.60	
L	0.059		1.50		TYP.

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-100			V	I_C=-100μA, I_E=0
Collector-Emitter Breakdown Voltage(Note5)	$V_{(BR)CEO}$	-80			V	I_C=-10mA, I_B=0
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			V	I_E=-100μA, I_C=0
Collector Cutoff Current	I_{CBO}			-0.1	μA	V_{CB}=-30V, I_E=0
Emitter-Base Cutoff Current	I_{EBO}			-0.1	μA	V_{EB}=-5V, I_C=0
DC Current Gain(Note5	h_{FE1}	63				V_{CE}=-2V, I_C=-5mA
DC Current Gain(Note5) BCX53	h_{FE2}	63		250		V_{CE}=-2V, I_C=-150mA
DC Current Gain(Note5) BCX53-10		63		160		
DC Current Gain(Note5) BCX53-16		100		250		
DC Current Gain(Note5)	h_{FE3}	40				V_{CE}=-2V, I_C=-500mA
Collector-Emitter Saturation Voltage(Note5)	$V_{CE(sat)}$			-0.5	V	I_C=-500mA, I_B=-50mA
Base-Emitter Saturation Voltage(Note5)	$V_{BE(sat)}$			-1.0	V	I_C=-500mA, V_{CE}=-2.0V
Transition Frequency	f_T		50		MHz	V_{CE}=-5V, I_C=-10mA, f=100MHz

Note:

5.Pulse Test

Curve Characteristics

Fig. 1 - Static Characteristics

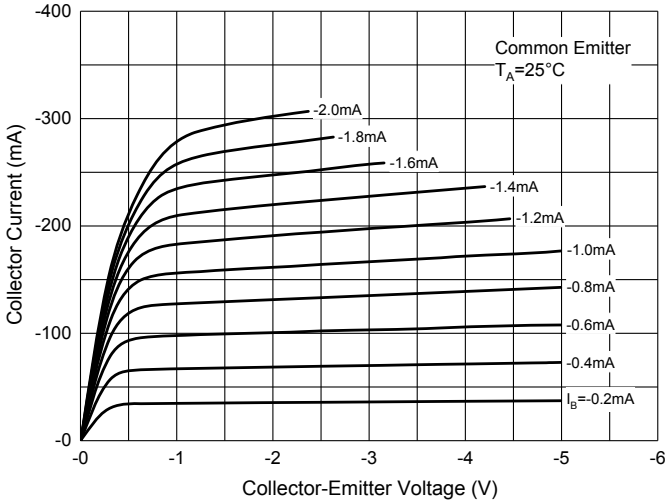


Fig. 2 - DC Current Gain Characteristics

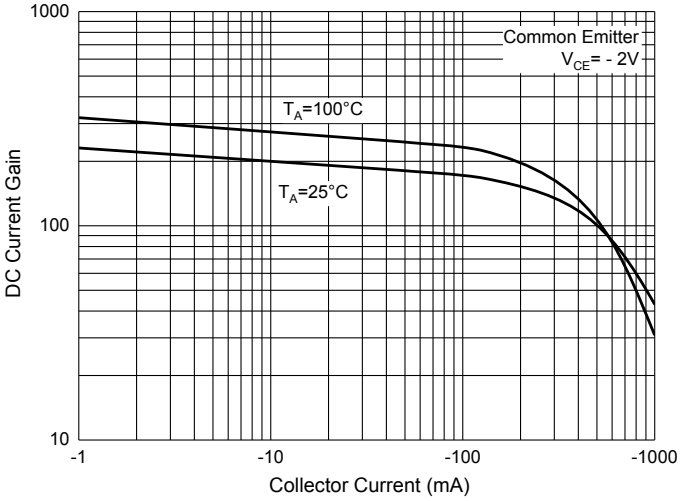


Fig. 3 - Base-Emitter Saturation Voltage Characteristics

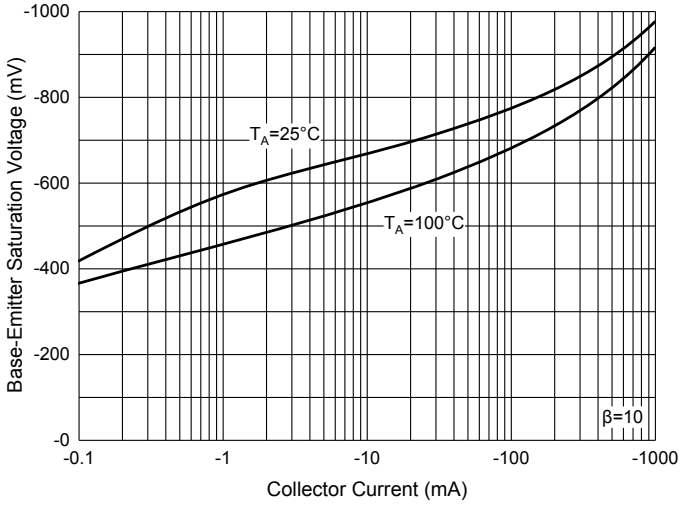


Fig. 4 - Collector-Emitter Saturation Voltage Characteristics

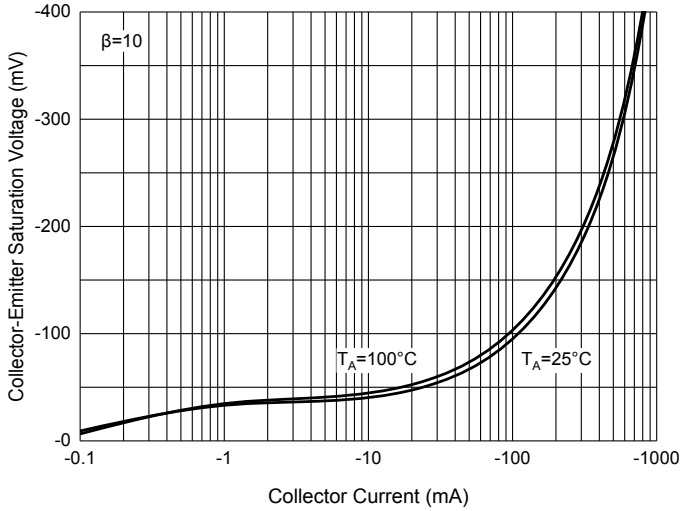


Fig. 5 - Base-Emitter Voltage Characteristics

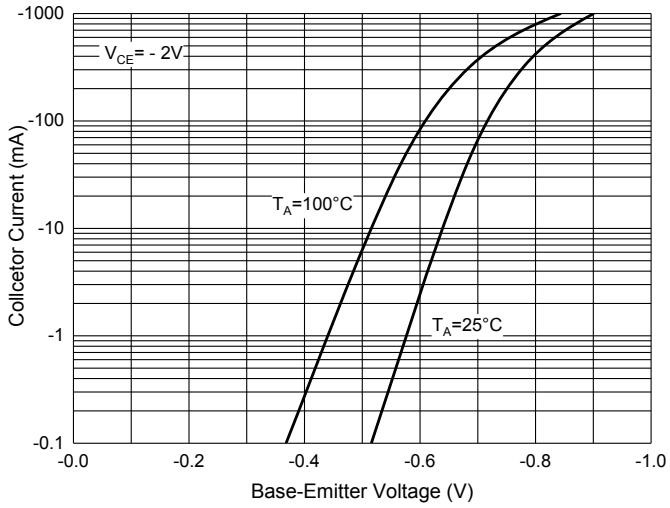
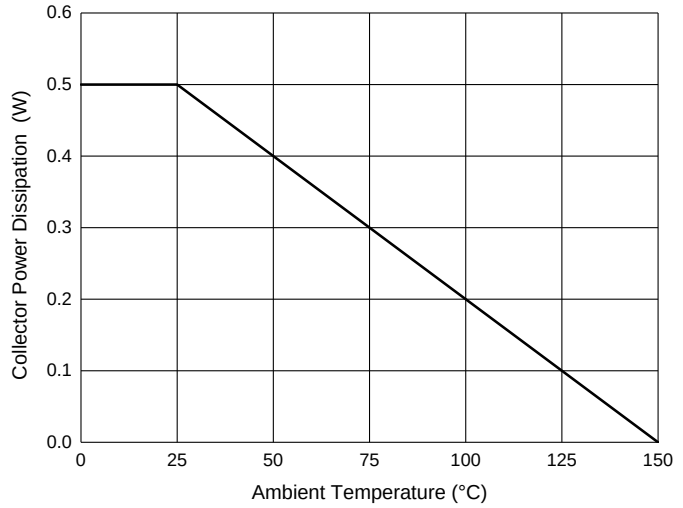


Fig. 6 - Collector Power Derating Curve



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