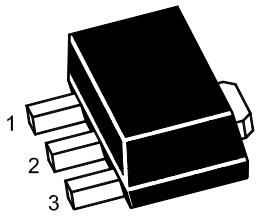
BCX53SQ

PNP Silicon Epitaxial Planar Transistor

Features

- For AF driver and output stages
- High collector current
- Low collector-emitter saturation voltage

SOT-89



1.Base 2.Collector 3.Emitter

Absolute Maximum Ratings (Ta=25℃unless otherwise specified)

Parameter	Symbol	Value	Units
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	A
Peak Collector Current	I_{CM}	-1.5	A
Total Power Dissipation	P_{tot}	0.5(1) 1.3(2)	W
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{stg}	- 65 to + 150	℃

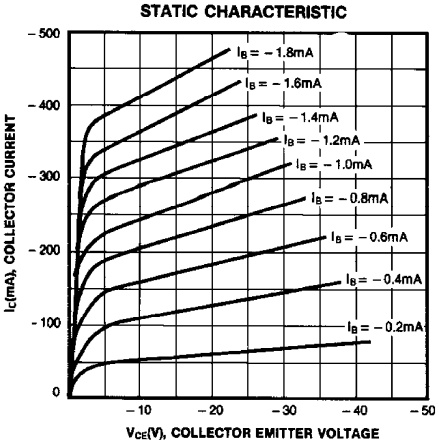
Note :1.Device mounted on an FR4 Printed-Circuit Board(PCB), single-sided copper, tin-plated and standard footprint.

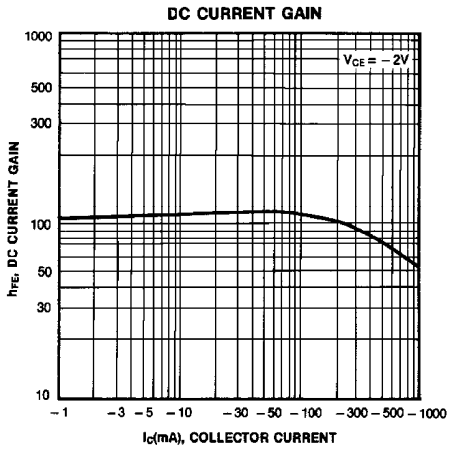
2. Device mounted on an FR4 PCB, single-sided copper, tin-plated, mounting pad for collector 6 cm^2

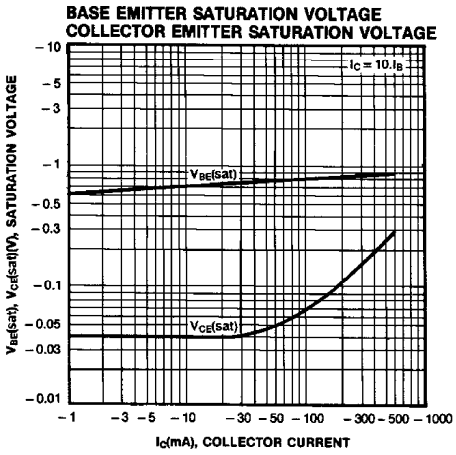
Electrical Characteristics (Ta=25℃ unless otherwise specified)

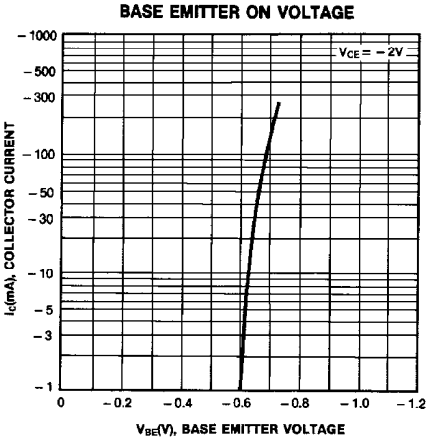
Parameter		Symbol	Min.	Typ.	Max.	Units
DC Current Gain						
at V_{CE} = -2 V, I_C = -5 mA		h_{FE}	40	-	-	-
at V_{CE} = -2 V, I_C = -150 mA	BCX53SQ-10	h_{FE}	63	-	160	-
	BCX53SQ-16	h_{FE}	100	-	250	-
at V_{CE} =- 2 V, I_C = -500m A		h_{FE}	25	-	-	-
Collector Base Cutoff Current at V_{CB} = -30 V		$-I_{CBO}$	-	-	100	nA
Emitter Base Cutoff Current at V_{EB} = -5 V		$-I_{EBO}$	-	-	100	nA
Collector Base Breakdown Voltage at I_C = -100 μA		$-V_{(BR)CBO}$	100	-	-	V
Collector Emitter Breakdown Voltage at I_C = -1 mA		$-V_{(BR)CEO}$	80	-	-	V
Emitter Base Breakdown Voltage at I_E = -100 μA		$-V_{(BR)EBO}$	5	-	-	V
Collector Emitter Saturation Voltage at I_C = -500 mA, I_B = -50 mA		$-V_{CE(sat)}$	-	-	0.5	V
Base Emitter Voltage at V_{CE} = -2 V, I_C = -500 mA		$-V_{BE}$	-	-	1	V
Transition Frequency at V_{CE} =- 5 V, I_C = -50 mA, f = 100 MHz		f_T	-	145	-	MHz
Collector Capacitance at V_{CB} =-15 V, f = 1 MHz		C_c	-	15	-	pF

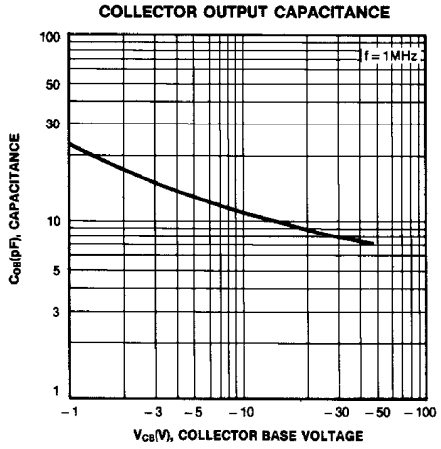
Typical Characteristic Curves

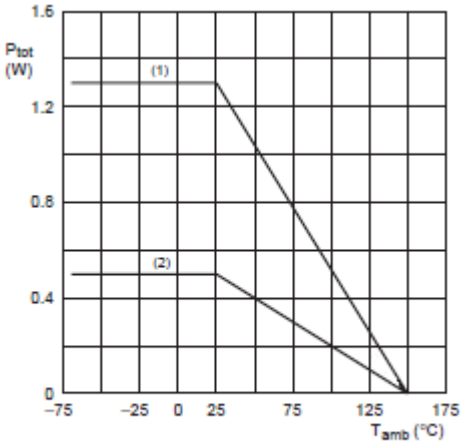












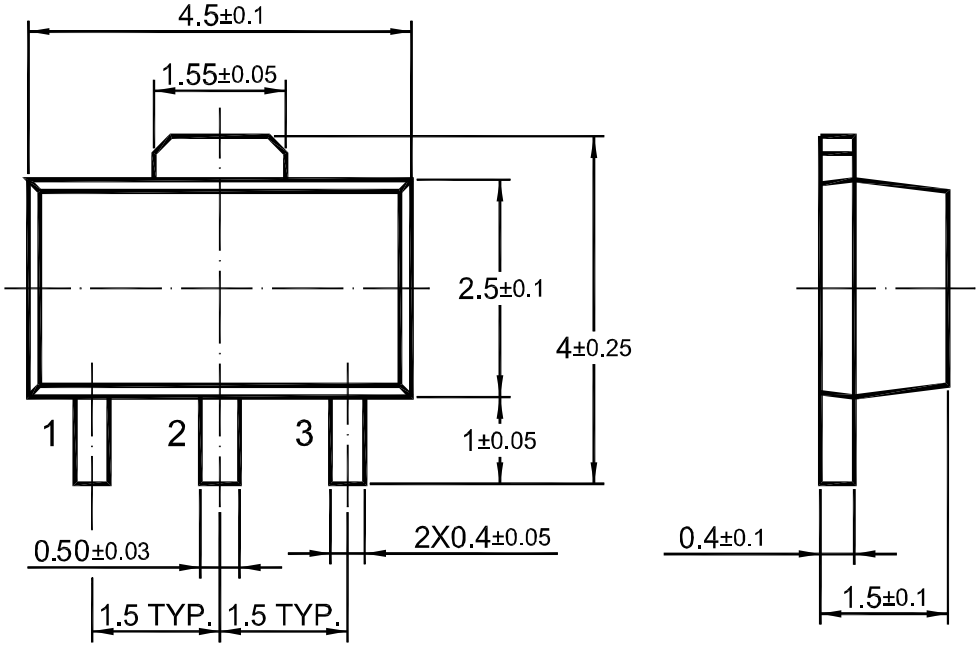
(1) FR4 PCB, mounting pad for collector 6 cm²
(2) FR4 PCB, standard footprint

Power derating curves

Package Outline

SOT-89

Dimensions in mm



Ordering information

Device	Package	Shipping
BCX53SQ	SOT-89	1000PCS/Reel&Tape