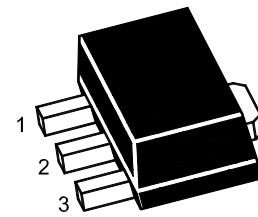




**Features**

- 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°C 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 <sup>(1)</sup> 1.3 <sup>(2)</sup>	W
Junction Temperature	$T_J$	150	°C
Storage Temperature Range	$T_{stg}$	- 65 to + 150	°C

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

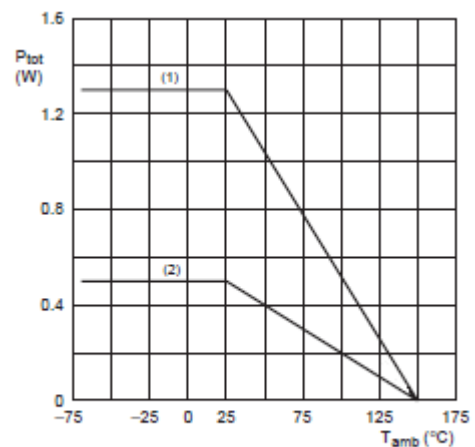
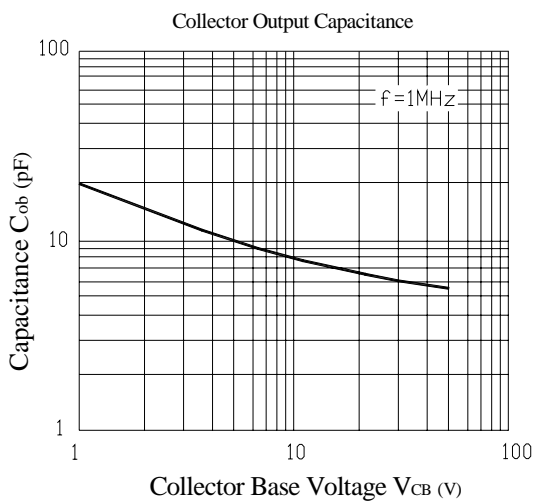
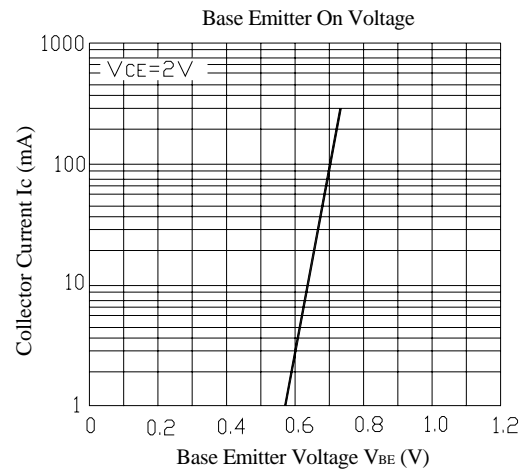
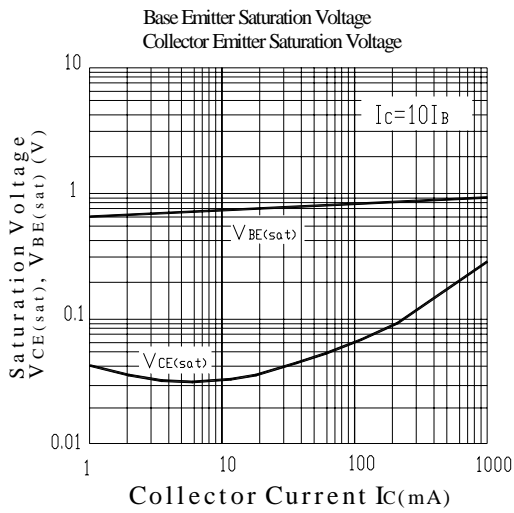
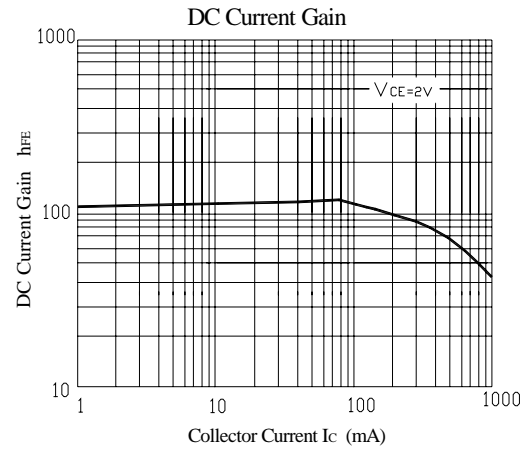
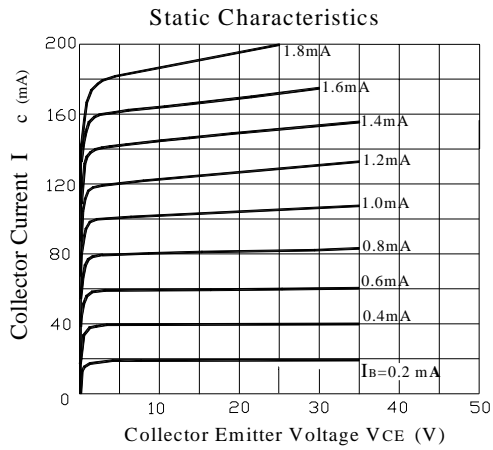
2. Device mounted on an FR4 PCB, single-sided copper, tin-plated, mounting pad for collector 6 cm<sup>2</sup>

**Electrical Characteristics** (Ta=25°C unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Units
DC Current Gain					
at $V_{CE} = 2\text{ V}$ , $I_C = 5\text{ mA}$	$h_{FE}$	40	-	-	-
at $V_{CE} = 2\text{ V}$ , $I_C = 150\text{ mA}$	BCX56SQ-10 $h_{FE}$	63	-	160	-
	BCX56SQ-16 $h_{FE}$	100	-	250	-
at $V_{CE} = 2\text{ V}$ , $I_C = 500\text{ mA}$	$h_{FE}$	25	-	-	-
Collector Base Cutoff Current at $V_{CB} = 30\text{ V}$	$I_{CBO}$	-	-	100	nA
Emitter Base Cutoff Current at $V_{EB} = 5\text{ V}$	$I_{EBO}$	-	-	100	nA
Collector Base Breakdown Voltage at $I_C = 100\text{ }\mu\text{A}$	$V_{(BR)CBO}$	100	-	-	V
Collector Emitter Breakdown Voltage at $I_C = 1\text{ mA}$	$V_{(BR)CEO}$	80	-	-	V
Emitter Base Breakdown Voltage at $I_E = 100\text{ }\mu\text{A}$	$V_{(BR)EBO}$	5	-	-	V
Collector Emitter Saturation Voltage at $I_C = 500\text{ mA}$ , $I_B = 50\text{ mA}$	$V_{CE(sat)}$	-	-	0.5	V
Base Emitter Voltage at $V_{CE} = 2\text{ V}$ , $I_C = 500\text{ mA}$	$V_{BE}$	-	-	1	V
Transition Frequency at $V_{CE} = 5\text{ V}$ , $I_C = 50\text{ mA}$ , $f = 100\text{ MHz}$	$f_T$	100	-	-	MHz
Collector Capacitance at $V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$	$C_c$	-	6	-	pF



**Typical Characteristic Curves**



(1) FR4 PCB, mounting pad for collector 6 cm<sup>2</sup>  
(2) FR4 PCB, standard footprint

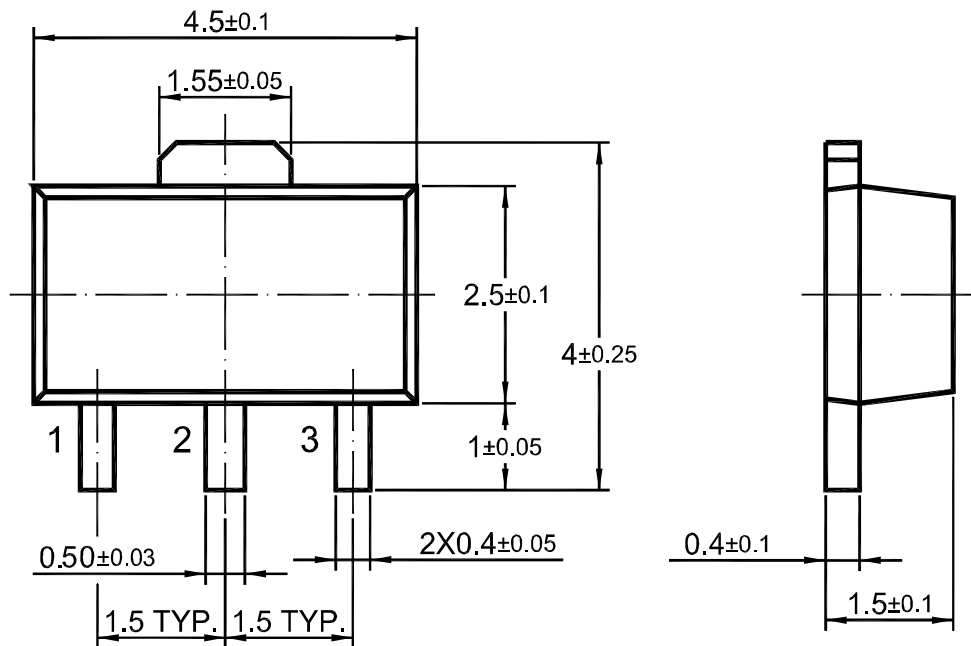
Power derating curves



**Package Outline**

SOT-89

Dimensions in mm



**Ordering information**

Device	Package	Shipping
BCX56SQ	SOT-89	1000PCS/Reel&Tape