



Micro Commercial Components



Micro Commercial Components  
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# BCX56 BCX56-10 BCX56-16

## NPN Plastic-Encapsulate Transistors

### Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Power Dissipation:  $P_{CM}=0.5W$  ( $T_{amb}=25^{\circ}C$ )
- Collector Current:  $I_{CM}=1.0A$
- Collector-Base Voltage:  $V_{(BR)CBO}=100V$
- Marking : BCX56=BH, BCX56-10=BK, BCX56-16=BL
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

### Maximum Ratings

Symbol	Rating	Value	Unit
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	100	V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	80	V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	5	V
$I_C$	Collector Current DC	1.0	A
$P_C$	Collector Power Dissipation	0.5(Note1)	W
		0.95(Note2)	
		1.35(Note3)	
$T_J$	Junction Temperature Range	-55 to +150	$^{\circ}C$
$T_{STG}$	Storage Temperature Range	-55 to +150	$^{\circ}C$

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

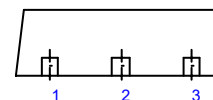
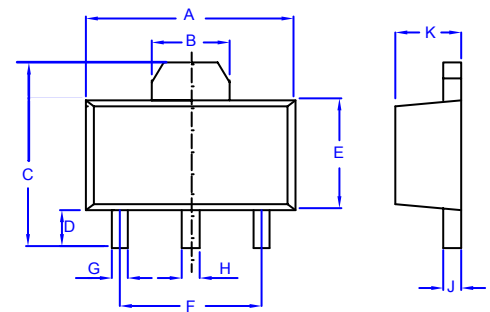
### Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Typ	Max	Units
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#### OFF CHARACTERISTICS

$V_{CBO}$	Collector-Base Voltage ( $I_C=100\mu A$ , $I_E=0$ )	100	---	---	Vdc	
$V_{CEO}$	Collector-Emitter Voltage ( $I_C=10mA$ , $I_B=0$ )	80	---	---	Vdc	
$V_{EBO}$	Emitter-Base Voltage ( $I_E=10\mu A$ , $I_C=0$ )	5.0	---	---	Vdc	
$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=30V$ , $I_E=0$ )	---	---	0.1	$\mu A$	
$I_{EBO}$	Emitter Cutoff Current ( $V_{EB}=5.0V$ , $I_C=0$ )	---	---	0.1	$\mu A$	
$h_{FE(1)}$	DC Current Gain ( $V_{CE}=2.0V$ , $I_C=150mA$ )	BCX56	63	---	250	---
		BCX56-10	63	---	160	---
		BCX56-16	100	---	250	---
$h_{FE(2)}$	DC Current Gain ( $V_{CE}=2.0V$ , $I_C=5.0mA$ )	40	---	---	---	
$h_{FE(3)}$	DC Current Gain ( $V_{CE}=2.0V$ , $I_C=500mA$ )	25	---	---	---	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=500mA$ , $I_B=50mA$ )	---	---	0.5	Vdc	
$V_{BE}$	Base-Emitter Voltage ( $I_C=500mA$ , $V_{CE}=2.0V$ )	---	---	1.0	Vdc	
$f_T$	Transition Frequency ( $V_{CE}=100V$ , $I_C=50mA$ , $f=100MHz$ )	130	---	---	MHz	

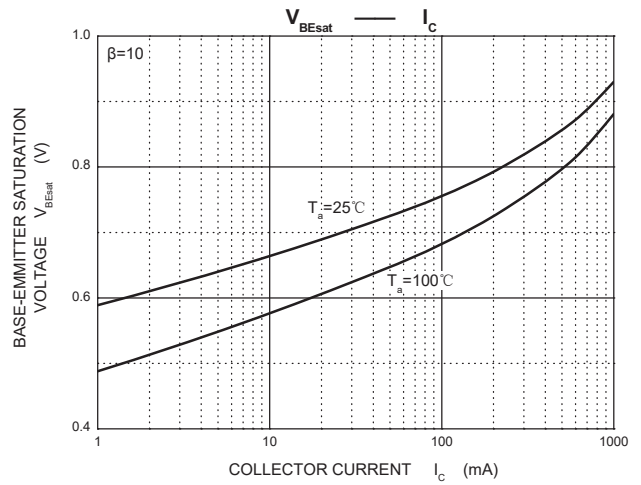
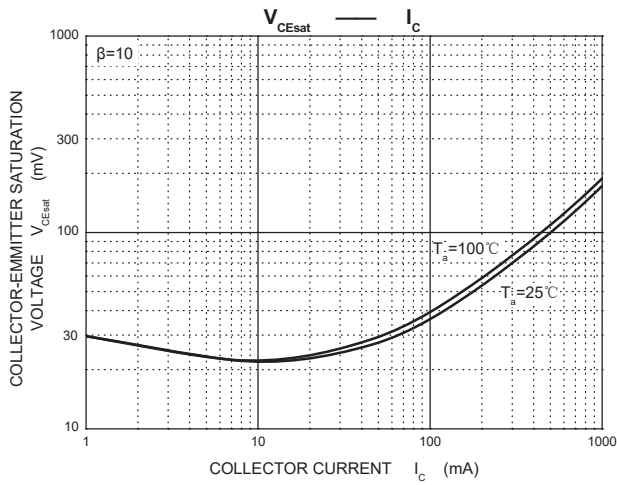
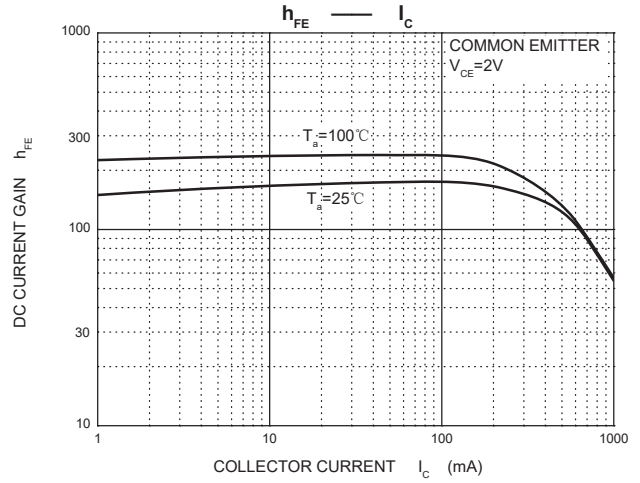
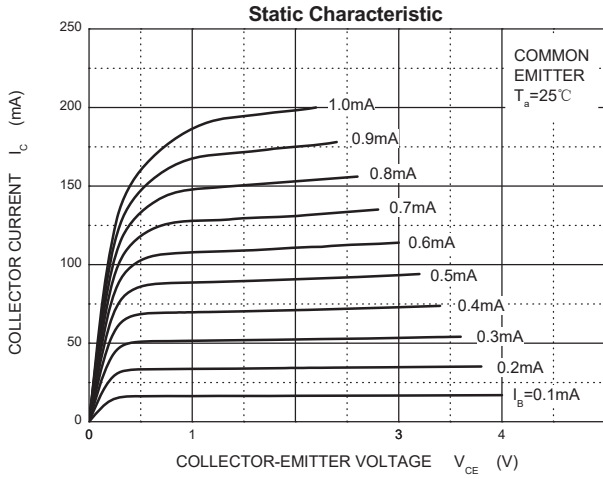
### SOT-89



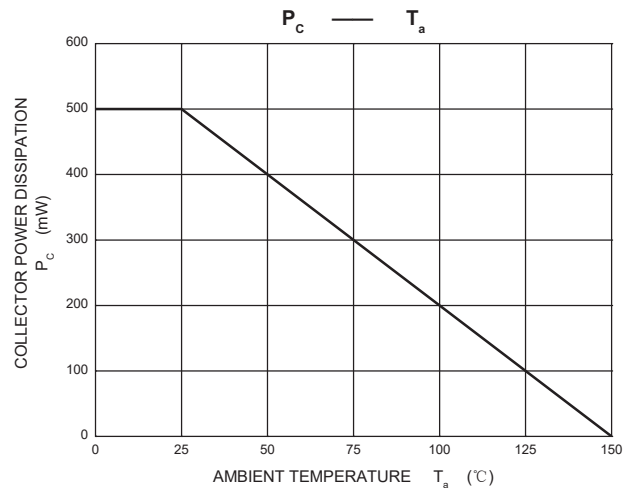
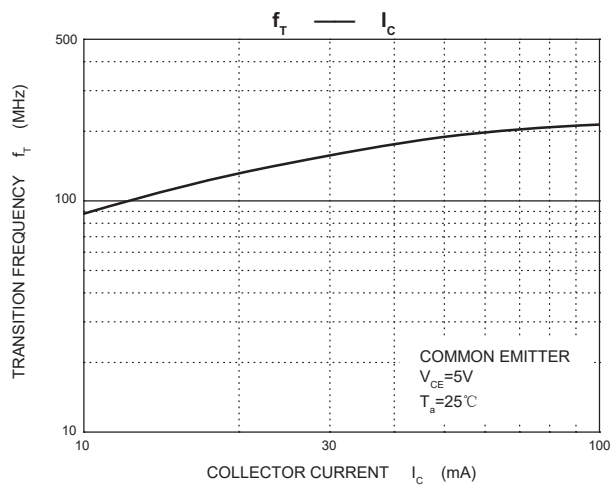
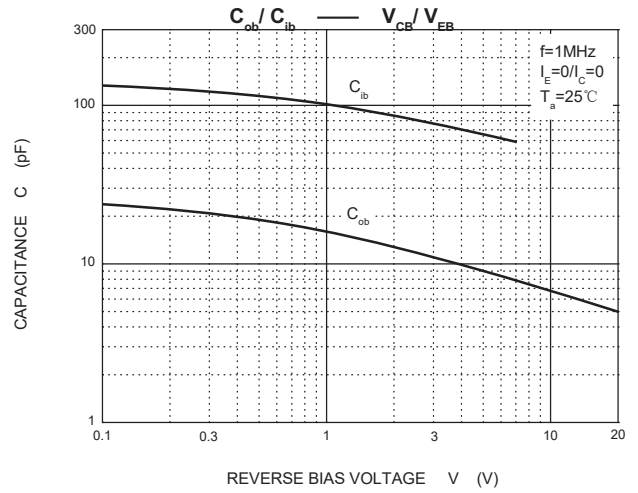
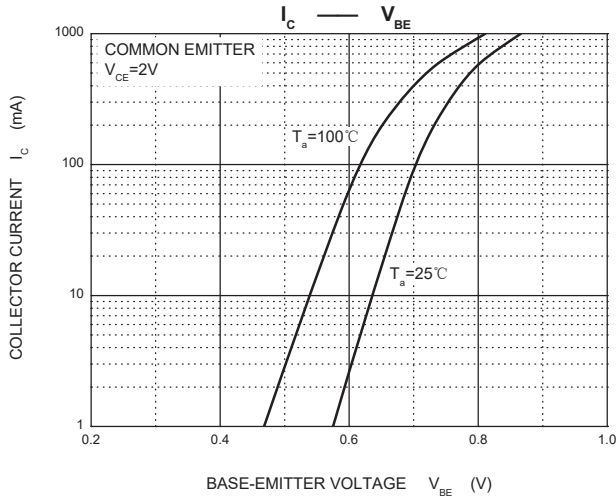
1. BASE  
2. COLLECTOR  
3. EMITTER

DIM	DIMENSIONS				NOTES
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.173	.181	4.39	4.60	
B	.061	-----	1.55	-----	REF.
C	.154	.165	3.91	4.25	
D	.031	.039	0.80	1.00	
E	.092	.100	2.34	2.54	
F	.118	-----	3.00	-----	TYP
G	.013	.019	0.33	0.48	
H	.015	.021	0.38	0.53	
J	.015	.016	0.38	0.41	
K	.055	.063	1.40	1.60	

## Typical Characteristics



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### Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 1Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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