



Micro Commercial Components



Micro Commercial Components  
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**BC639-10**

**BC639-16**

## Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: BC639

## Maximum Ratings

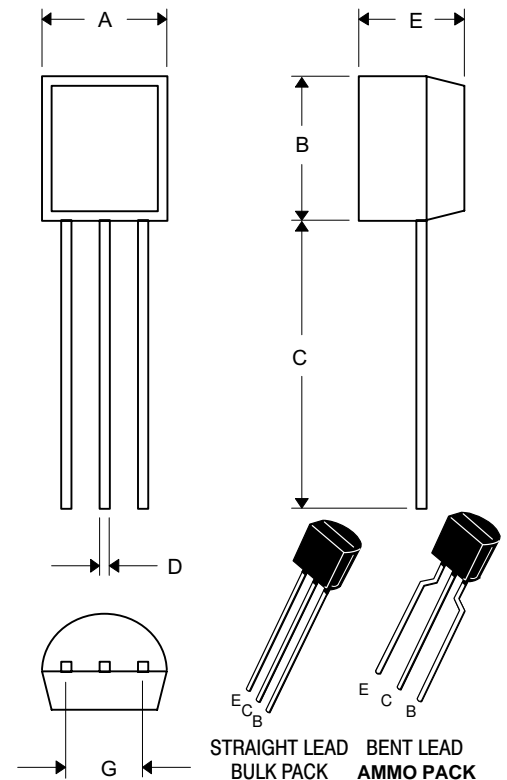
Symbol	Rating	Value	Unit
$V_{CEO}$	Collector-Emitter Voltage	80	V
$V_{CBO}$	Collector-Base Voltage	100	V
$V_{EBO}$	Emitter-Base Voltage	5.0	V
$I_C$	Collector Current	1.0	A
$P_C$	Collector Power Dissipation	1	W
$T_J$	Junction Temperature	-55 to +150	°C
$T_{STG}$	Storage Temperature	-55 to +150	°C

## Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Typ	Max	Units
<b>OFF CHARACTERISTICS</b>					
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ( $I_C=1\text{mA}, I_E=0$ )	80	---	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=100\mu\text{A}, I_E=0$ )	100	---	---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ( $I_E=100\mu\text{A}, I_C=0$ )	5.0	---	---	Vdc
$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=30\text{Vdc}, I_E=0$ )	---	---	0.1	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current ( $V_{EB}=5.0\text{Vdc}, I_C=0$ )	---	---	0.1	$\mu\text{A}$
$h_{FE}$	DC Current Gain ( $V_{CE}=2\text{Vdc}, I_C=5\text{mA}$ ) ( $V_{CE}=2\text{Vdc}, I_C=150\text{mA}$ ) ( $V_{CE}=2\text{Vdc}, I_C=150\text{mA}$ ) ( $V_{CE}=2\text{Vdc}, I_C=500\text{mA}$ )	25 63 100 25	---	---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=500\text{mA}, I_B=50\text{mA}$ )	---	---	0.5	Vdc
$V_{BE}$	Base-Emitter Voltage ( $I_C=500\text{mA}, V_{CE}=2\text{Vdc}$ )	---	---	1.0	Vdc
$f_T$	Transition Frequency ( $V_{CE}=5.0\text{Vdc}, I_C=50\text{mA}, f=100\text{MHz}$ )	100	---	---	MHz

## NPN Epitaxial Silicon Transistors

TO-92



DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.175	.185	4.45	4.70	
B	.175	.185	4.45	4.70	
C	.500	---	12.70	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	Straight Lead
	.173	.220	4.40	5.60	Bent Lead

\* For ammo packing detailed specification, click here to visit our website of product packaging for details.

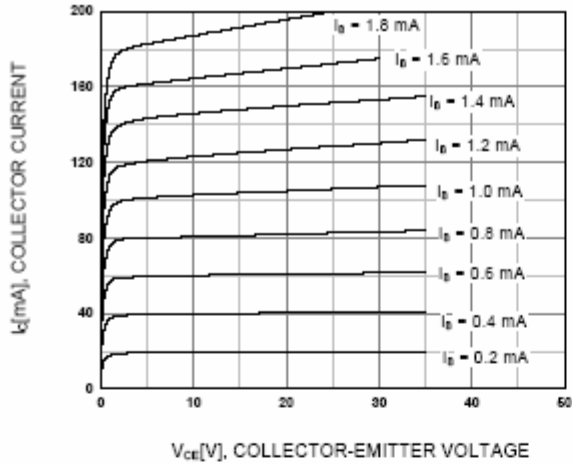


Figure 1. Static Characteristic

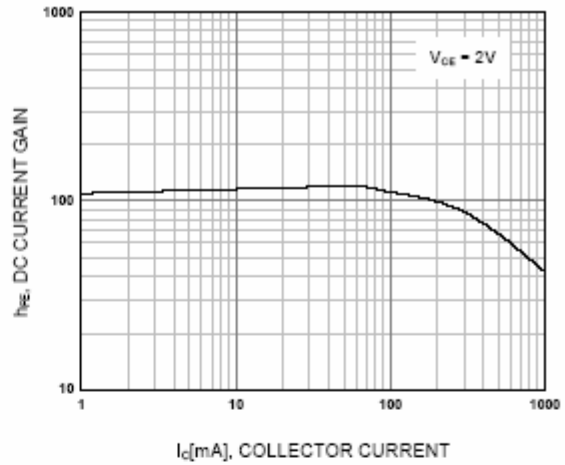


Figure 2. DC current Gain

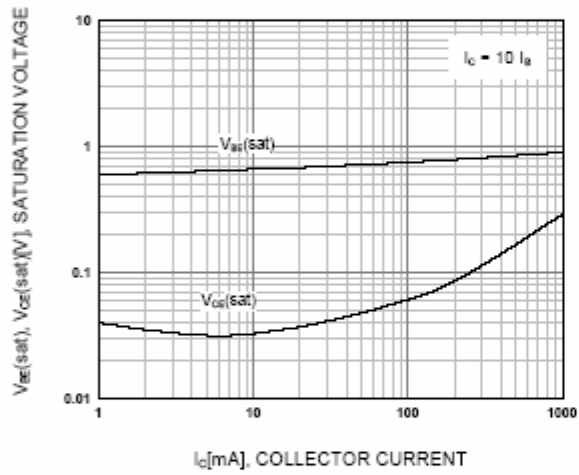


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emmitter Saturation Voltage

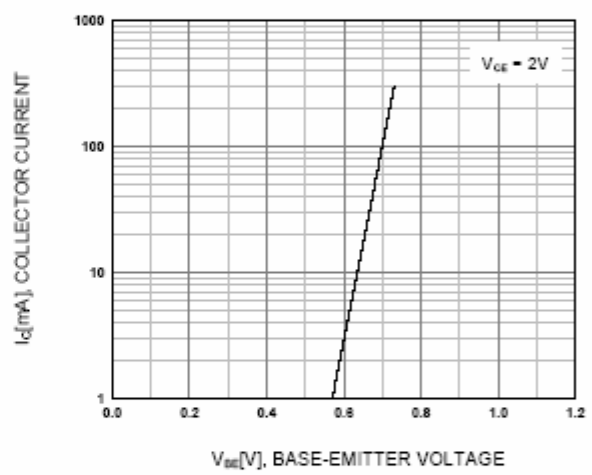


Figure 4. Base-Emitter On Voltage

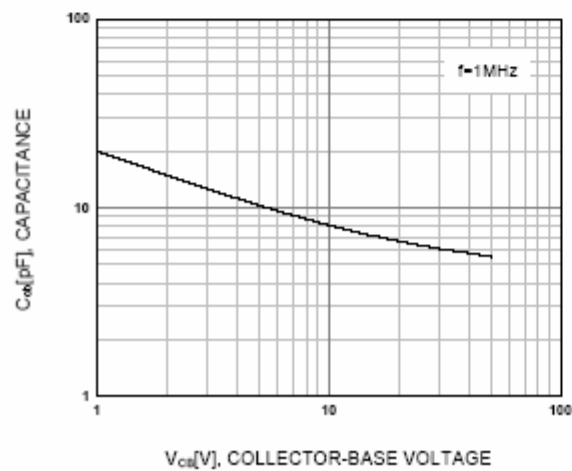


Figure 5. Collector Output Capacitance



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## Ordering Information :

Device	Packing
Part Number-AP	Ammo Packing: 20Kpcs/Carton
Part Number-BP	Bulk: 100Kpcs/Carton

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

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