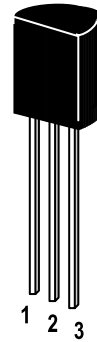


# ST BC635 / BC637 / BC639

## NPN Silicon Epitaxial Planar Transistor

Medium Power Transistors

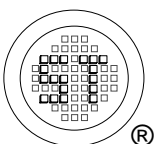
for driver stages of audio / video amplifiers



1. Emitter 2. Collector 3. Base  
TO-92 Plastic Package  
Weight approx. 0.19g

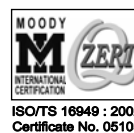
### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	BC635	45
		BC637	60
		BC639	100
Collector Emitter Voltage	$V_{CEO}$	BC635	45
		BC637	60
		BC639	80
Emitter Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	1	A
Peak Collector Current	$I_{CM}$	1.5	A
Base Current	$I_B$	100	mA
Peak Base Current	$I_{BM}$	200	mA
Power Dissipation	$P_{tot}$	830	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_s$	- 55 to + 150	$^\circ\text{C}$



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ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001:2004  
Certificate No. 71116



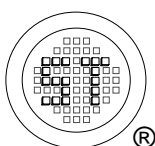
ISO 9001:2000  
Certificate No. 0506098

Dated : 15/03/2007

# ST BC635 / BC637 / BC639

## Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $V_{CE} = 2\text{ V}$ , $I_C = 5\text{ mA}$ at $V_{CE} = 2\text{ V}$ , $I_C = 150\text{ mA}$ at $V_{CE} = 2\text{ V}$ , $I_C = 500\text{ mA}$	$h_{FE}$	40	-	-
	$h_{FE}$	40	250	-
	$h_{FE}$	40	160	-
	$h_{FE}$	25	-	-
Collector Cutoff Current at $V_{CB} = 30\text{ V}$	$I_{CBO}$	-	100	nA
Emitter Cutoff Current at $V_{EB} = 5\text{ V}$	$I_{EBO}$	-	100	nA
Collector Base Breakdown Voltage at $I_C = 100\text{ }\mu\text{A}$	$V_{(BR)CBO}$	45 60 100	- - -	V
Collector Emitter Breakdown Voltage at $I_C = 10\text{ mA}$	$V_{(BR)CEO}$	45 60 80	- - -	V
Emitter Base Breakdown Voltage at $I_E = 10\text{ }\mu\text{A}$	$V_{(BR)EBO}$	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
Gain Bandwidth Product at $V_{CE} = 5\text{ V}$ , $I_C = 50\text{ mA}$ , $f = 100\text{ MHz}$	$f_T$	100	-	MHz



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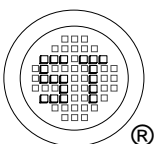
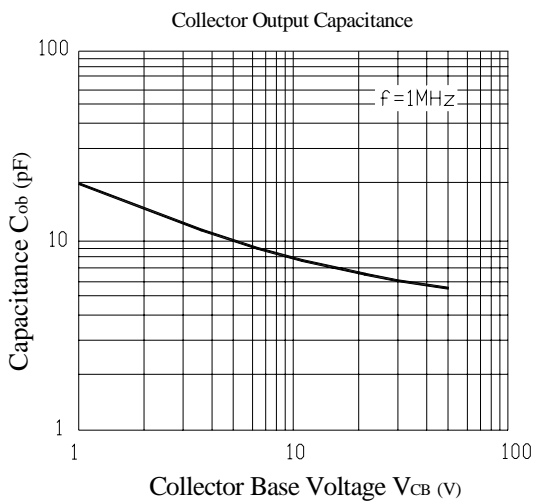
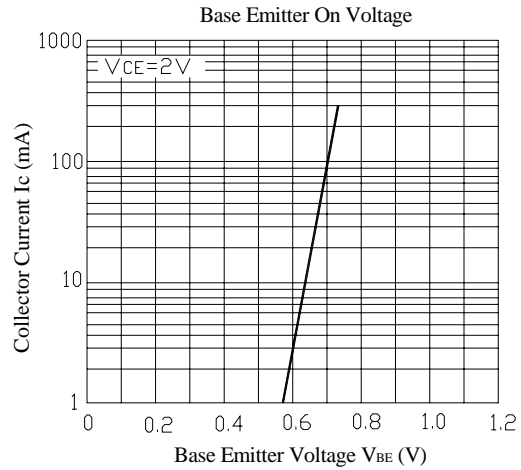
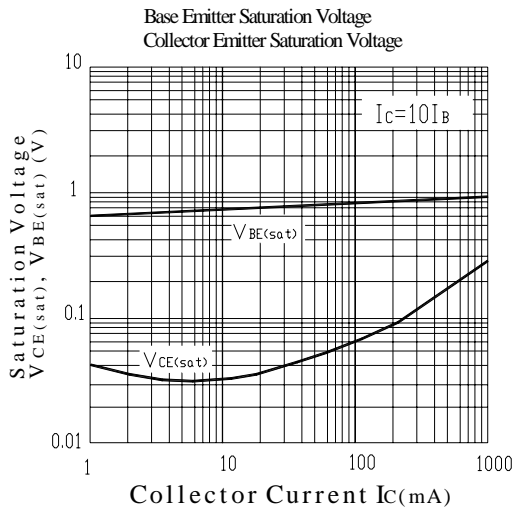
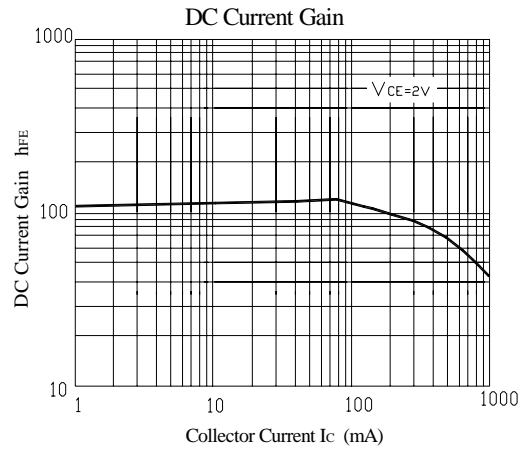
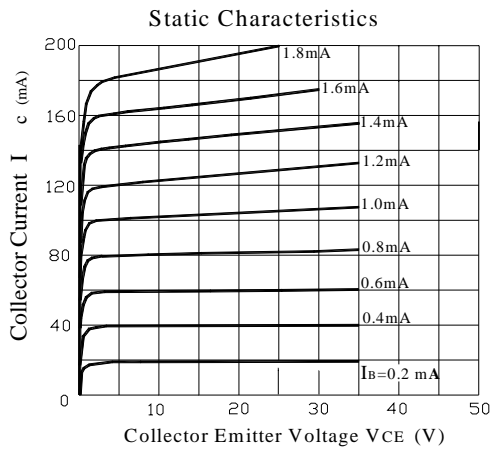


ISO 14001:2004  
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ISO 9001:2000  
Certificate No. 0506098

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ISO 14001:2004  
Certificate No. 7116



ISO 9001:2000  
Certificate No. 0506098