

# BC635/637/639

# NPN EPITAXIAL SILICON TRANSISTOR

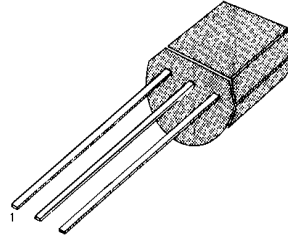
## SWITCHING AND AMPLIFIER APPLICATIONS

- Complement to BC635/638/640

## ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C)

Characteristic	Symbol	Rating	Unit	
Collector Emitter Voltage at R <sub>BE</sub> =1Kohm	: BC635 : BC637 : BC639	V <sub>CER</sub>	45 60 100	V V V
Collector Emitter Voltage	: BC635 : BC637 : BC639	V <sub>CES</sub>	45 60 100	V V V
Collector Emitter Voltage	: BC635 : BC637 : BC639	V <sub>CEO</sub>	45 60 80	V V V
Emitter Base Voltage	V <sub>EBO</sub>	5	V	
Collector Current	I <sub>C</sub>	1	A	
Peak Collector Current	I <sub>CP</sub>	1.5	A	
Base Current	I <sub>B</sub>	100	mA	
Collector Dissipation	P <sub>C</sub>	1	W	
Junction Temperature	T <sub>J</sub>	150	°C	
Storage Temperature	T <sub>STG</sub>	-65 ~ 150	°C	

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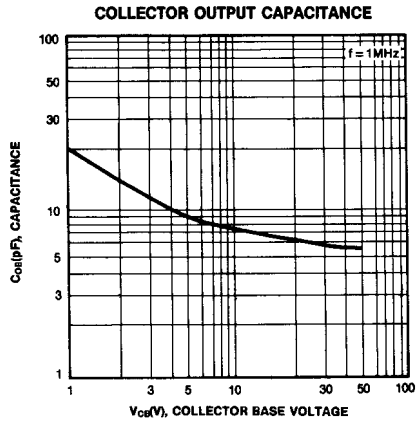
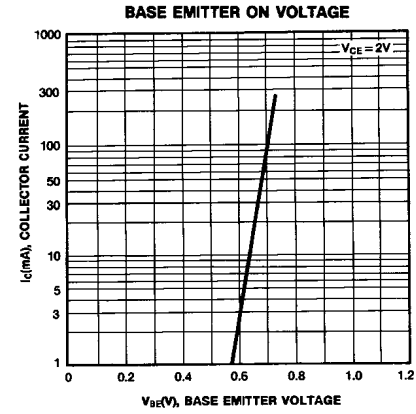
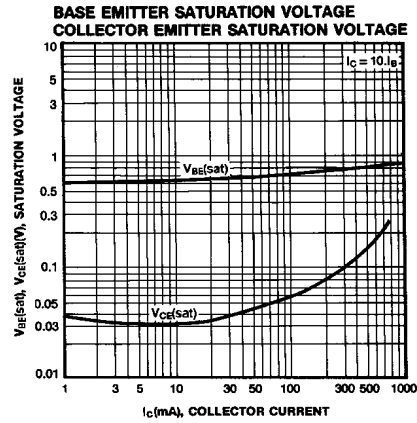
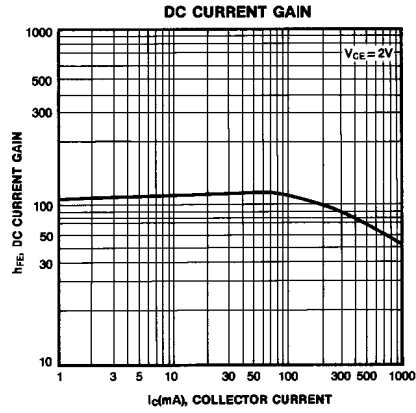
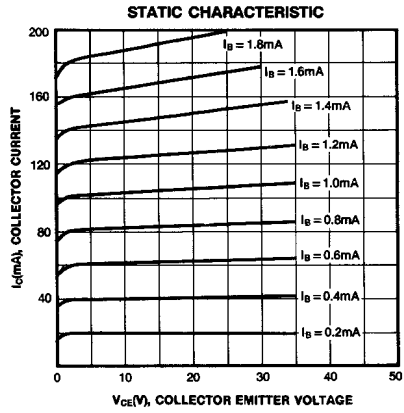


1. Emitter 2. Collector 3. Base

- PW=5ms, Duty Cycle=10%

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Emitter Breakdown Voltage	BV <sub>CEO</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =0	45			V
: BC635			60			V
: BC736			80			V
: BC639						V
Collector Cut-off Current	I <sub>CBO</sub>	V <sub>CB</sub> =30V, I <sub>E</sub> =0			0.1	μA
Emitter Cut-off Current	I <sub>EBO</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> =0			0.1	μA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =2V, I <sub>C</sub> =5mA	25			
: BC635		V <sub>CE</sub> =2V, I <sub>C</sub> =150mA	40		250	
: BC637/BC639			40		160	
Collector Emitter Saturation Voltage	V <sub>CE(sat)</sub>	V <sub>CE</sub> =2V, I <sub>C</sub> =500mA				V
Base Emitter On Voltage	V <sub>BE(on)</sub>	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA			0.5	V
Current Gain Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =2V, I <sub>C</sub> =500mA		100	1	MHz
		V <sub>CE</sub> =5V, I <sub>C</sub> =10mA, f=50MHz				



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