

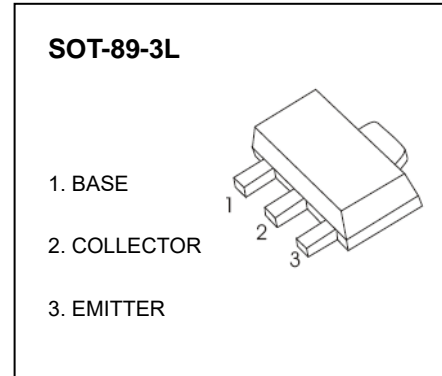
### SOT-89-3L Plastic-Encapsulate Transistors

#### 2SC4132U TRANSISTOR (NPN)

##### ■ Features

- High breakdown voltage
- Low collector output capacitance
- High transition frequency Ft=80MHz)

**MARKING: CBQ**



##### ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
collector-base voltage	V <sub>CB0</sub>	120	V
collector-emitter voltage	V <sub>CEO</sub>	120	V
emitter-base voltage	V <sub>EB0</sub>	5	V
collector current	I <sub>C</sub>	2	A
	I <sub>CP</sub>	3	A *1
CollectorPower Dissipation	P <sub>C</sub>	0.5	W *2
		2	W
Junction Temperature	T <sub>J</sub>	150	°C
storage Temperature	T <sub>stg</sub>	-55 to 150	°C

\*1 Single pulse pw=10ms

\*2 When mounted on a 40X40X0.7 mm ceramic board.

##### ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	BV <sub>CB0</sub>	I <sub>C</sub> =50μA	120			V
collector-emitter breakdown voltage	BV <sub>CEO</sub>	I <sub>C</sub> =1mA	120			V
Emitter-base breakdown voltage	BV <sub>EB0</sub>	I <sub>E</sub> =50μA	5			V
Collector cutoff current	I <sub>CB0</sub>	V <sub>CB</sub> =100V			1	μA
Emitter out current	I <sub>EB0</sub>	V <sub>EB</sub> =4V			1	μA
Emitter-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> /I <sub>B</sub> =1A/0.1A			0.5	V
DC current transfer ratio	h <sub>FE</sub>	V <sub>CE</sub> /I <sub>C</sub> =5V/0.1A	120		270	
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =5V, I <sub>E</sub> =-0.1A, f=30MHz		80		MHz
Output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0A, f=1MHz		20		pF

### Typical Characteristics

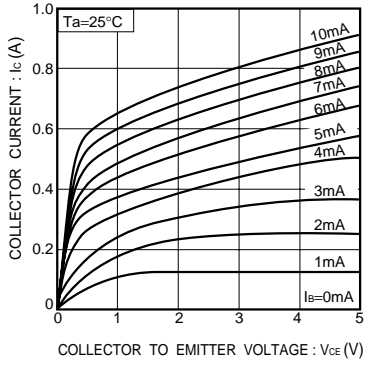


Fig.1 Ground emitter output characteristics

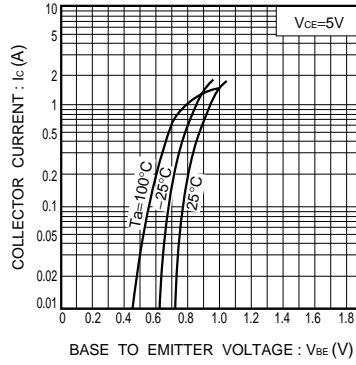


Fig.2 Ground emitter propagation characteristics

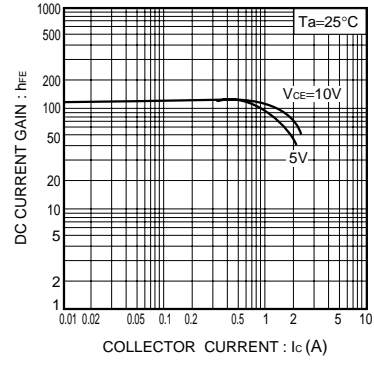


Fig.3 DC current gain vs. collector current ( I )

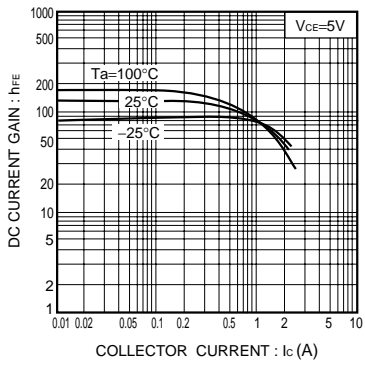


Fig.4 DC current gain vs. collector current (II)

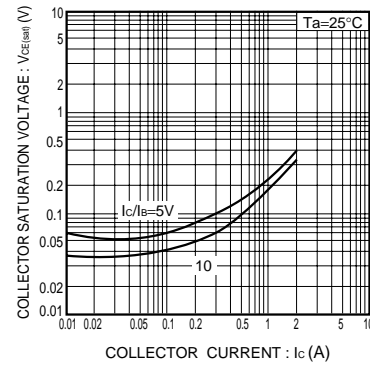


Fig.5 Collector-emitter saturation voltage vs. collector current

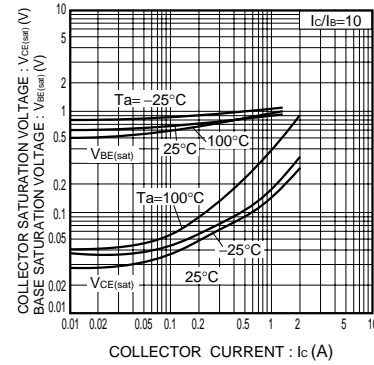


Fig.6 Collector-emitter saturation Base-emitter saturation vs. collector current

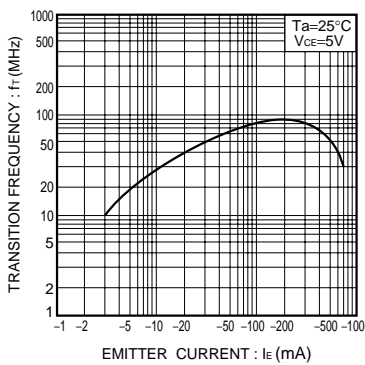


Fig.7 Gain bandwidth product vs. emitter current

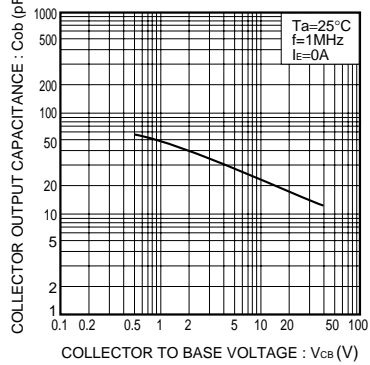


Fig.8 Collector output capacitance vs. collector-base voltage

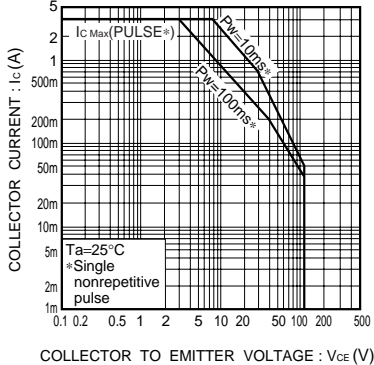
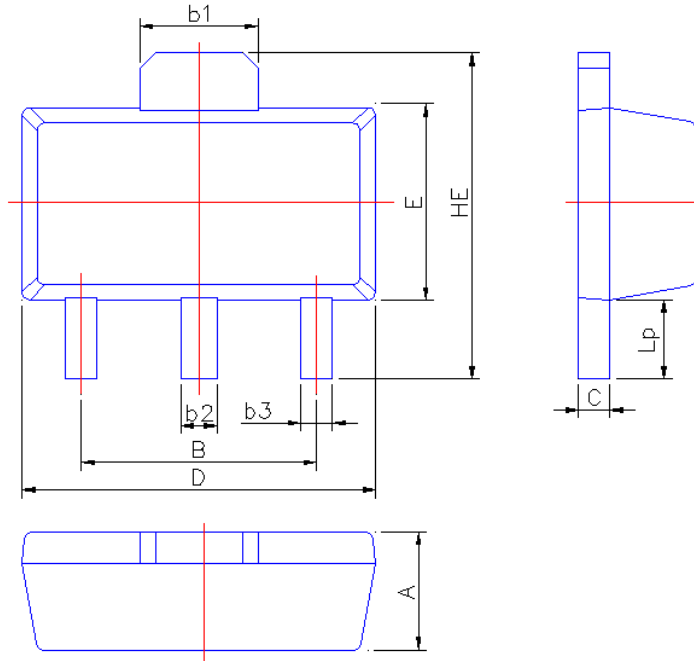


Fig.9 Safe operating area

### SOT-89 PACKAGE OUTLINE



Symbol	Dimension in Millimeters	
	Min	Max
A	1.40	1.60
B	2.95	3.05
b1	1.45	1.70
b2	0.45	0.56
b3	0.35	0.50
C	0.35	0.50
D	4.40	4.60
E	2.35	2.55
HE	3.90	4.40
Lp	0.90	1.10