

RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

### FEATURES

- Complementary to BCP3906
- Low Current
- Low Voltage

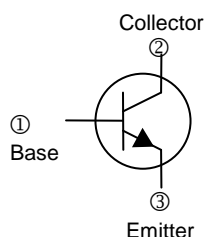
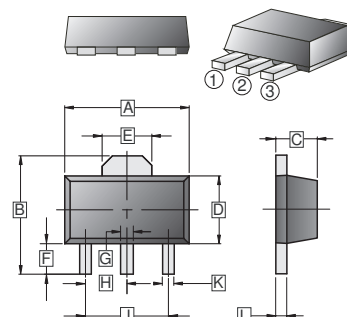
### MARKING

1A

### PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-89	1K	7' inch

### SOT-89



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.40	4.60	G	0.40	0.58
B	3.94	4.25	H	1.50	TYP
C	1.40	1.60	J	3.00	TYP
D	2.30	2.60	K	0.32	0.52
E	1.50	1.70	L	0.35	0.44
F	0.89	1.2			

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

Parameter	Symbol	Ratings	Unit
Collector-Base Voltage	V <sub>CB0</sub>	60	V
Collector-Emitter Voltage	V <sub>CEO</sub>	40	V
Emitter-Base Voltage	V <sub>EBO</sub>	6	V
Collector Current -Continuous	I <sub>C</sub>	0.2	A
Collector Power Dissipation	P <sub>C</sub>	0.5	W
Junction & Storage temperature	T <sub>J</sub> , T <sub>STG</sub>	150, -55~150	°C

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	60	-	-	V	I <sub>C</sub> =10μA, I <sub>E</sub> =0
Collector-emitter breakdown	V <sub>(BR)CEO</sub>	40	-	-	V	I <sub>C</sub> =1mA, I <sub>B</sub> =0
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	6	-	-	V	I <sub>E</sub> =10μA, I <sub>C</sub> =0
Collector cut-off current	I <sub>CB0</sub>	-	-	0.05	μA	V <sub>CB</sub> =30V, I <sub>E</sub> =0
Emitter cut-off current	I <sub>EBO</sub>	-	-	0.05	μA	V <sub>EB</sub> =6V, I <sub>C</sub> =0
Collector ut-off current	I <sub>CEX</sub>	-	-	0.05	μA	V <sub>CE</sub> =30V, V <sub>BE(off)</sub> =3V
DC current gain	h <sub>FE(1)</sub>	60	-	-		V <sub>CE</sub> =1V, I <sub>C</sub> =0.1mA
	h <sub>FE(2)</sub>	80	-	-		V <sub>CE</sub> =1V, I <sub>C</sub> =1mA
	h <sub>FE(3)</sub>	100	-	300		V <sub>CE</sub> =1V, I <sub>C</sub> =10mA
	h <sub>FE(4)</sub>	60	-	-		V <sub>CE</sub> =1V, I <sub>C</sub> =50mA
	h <sub>FE(5)</sub>	30	-	-		V <sub>CE</sub> =1V, I <sub>C</sub> =100mA
Collector-emitter saturation voltage	V <sub>CE(sat)1</sub>	-	-	0.2	V	I <sub>C</sub> =10mA, I <sub>B</sub> =1mA
	V <sub>CE(sat)2</sub>	-	-	0.3	V	I <sub>C</sub> =50mA, I <sub>B</sub> =5mA
Base-emitter saturation voltage	V <sub>BE(sat)1</sub>	0.65	-	0.85	V	I <sub>C</sub> =10mA, I <sub>B</sub> =1mA
	V <sub>BE(sat)2</sub>	-	-	0.95	V	I <sub>C</sub> =50mA, I <sub>B</sub> =5mA
Transition frequency	f <sub>T</sub>	300	-	-	MHz	V <sub>CE</sub> =20V, I <sub>C</sub> =10mA, f=100MHz
Collector Capacitance	C <sub>C</sub>	-	4	-	pF	V <sub>CB</sub> =5V, I <sub>E</sub> =0, f=1MHz
Emitter Capacitance	C <sub>E</sub>	-	8	-	pF	V <sub>EB</sub> =0.5V, I <sub>C</sub> =0, f=1MHz
Noise Figure	NF	-	5	-	dB	V <sub>CE</sub> =5V, I <sub>C</sub> =0.1mA, f=10Hz~15.7kHz, R <sub>S</sub> =1KΩ
Delay Time	T <sub>D</sub>	-	35	-	nS	I <sub>C</sub> =10mA, I <sub>B1</sub> =-I <sub>B2</sub> =1mA
Rise Time	T <sub>R</sub>	-	35	-		
Storage Time	T <sub>S</sub>	-	200	-		
Fall Time	T <sub>F</sub>	-	50	-		