

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

## FEATURES

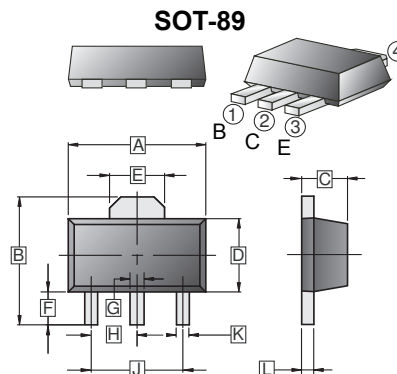
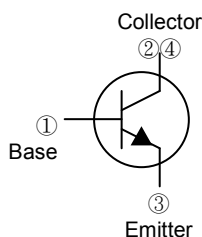
- Low Collector-Emitter Saturation Voltage
- High Breakdown Voltage

## MARKING

A44

## PACKAGE INFORMATION

Package	MPQ	Reel Size
SOT-89	1K	7 inch



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	2.25	2.60	K	0.32	0.52
E	1.55 TYP.		L	0.35	0.44
F	0.89	1.20			

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

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V <sub>CB0</sub>	400	V
Collector-Emitter Voltage	V <sub>CEO</sub>	400	V
Emitter-Base Voltage	V <sub>EBO</sub>	6	V
Collector Current-Continuous	I <sub>C</sub>	200	mA
Collector Current-Pulsed	I <sub>CM</sub>	300	mA
Collector Power Dissipation	P <sub>C</sub>	500	mW
Thermal Resistance from Junction to Ambient	R <sub>θJA</sub>	250	°C / W
Junction and 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 Condition
Collector-Base Breakdown Voltage	V <sub>(BR)CBO</sub>	400	-	-	V	I <sub>C</sub> =100μA, I <sub>E</sub> =0
Collector-Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	400	-	-	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>	-	-	0.1	μA	V <sub>CB</sub> =400V, I <sub>E</sub> =0
Emitter Cut-Off Current	I <sub>EBO</sub>	-	-	0.1	μA	V <sub>EB</sub> =4V, I <sub>C</sub> =0
DC Current Gain <sup>1</sup>	h <sub>FE</sub>	40	-	-	V	V <sub>CE</sub> =10V, I <sub>C</sub> =1mA
		50	-	200		V <sub>CE</sub> =10V, I <sub>C</sub> =10mA
		45	-	-		V <sub>CE</sub> =10V, I <sub>C</sub> =50mA
		40	-	-		V <sub>CE</sub> =10V, I <sub>C</sub> =100mA
Collector-Emitter Saturation Voltage <sup>1</sup>	V <sub>CE(sat)</sub>	-	-	0.4	V	I <sub>C</sub> =1mA, I <sub>B</sub> =0.1mA
		-	-	0.5		I <sub>C</sub> =10mA, I <sub>B</sub> =1mA
		-	-	0.75		I <sub>C</sub> =50mA, I <sub>B</sub> =5mA
Base-Emitter Saturation Voltage <sup>1</sup>	V <sub>BE(sat)</sub>	-	-	0.75	V	I <sub>C</sub> =10mA, I <sub>B</sub> =1mA
Collector output capacitance	C <sub>ob</sub>	-	-	7	P <sub>F</sub>	V <sub>CB</sub> =20V, I <sub>E</sub> =0, f=1MHz
Emitter input capacitance	C <sub>ib</sub>	-	-	130		V <sub>BE</sub> =0.5V, I <sub>C</sub> =0, f=1MHz

Note:

1. Pulse test: pulse width ≤300μs, duty cycle ≤ 2.0%.

**TYPICAL CHARACTERISTIC CURVES**

