

RoHS Compliant Product

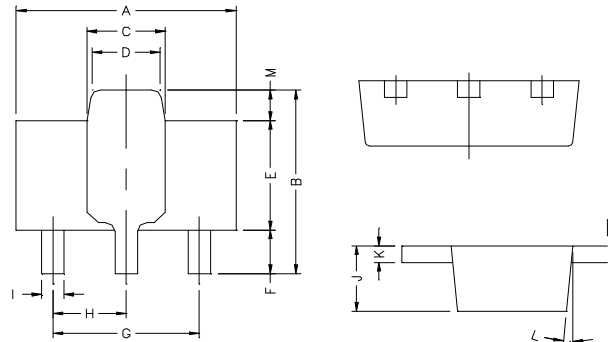
SOT-89

**FEATURES**

- Low saturation voltage
- High speed switching time
- Complementary to 2SA1213

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

Symbol	Parameter	Value	Units
V <sub>CBO</sub>	Collector-Base Voltage	50	V
V <sub>CEO</sub>	Collector-Emitter Voltage	50	V
V <sub>EBO</sub>	Emitter-Base Voltage	5	V
I <sub>C</sub>	Collector Current -Continuous	2	A
P <sub>C</sub>	Collector Power Dissipation	500	mW
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55-150	°C



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.4	4.6	G	3.00	REF.
B	4.05	4.25	H	1.50	REF.
C	1.50	1.70	I	0.40	0.52
D	1.30	1.50	J	1.40	1.60
E	2.40	2.60	K	0.35	0.41
F	0.89	1.20	L	5° TYP.	
			M	0.70 REF.	

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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =100µA, I <sub>E</sub> =0	50			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =0	50			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =100µA, I <sub>C</sub> =0	5			V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =50V, 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>FE1</sub>	V <sub>CE</sub> =2V, I <sub>C</sub> =500mA	70		240	
	h <sub>FE2</sub>	V <sub>CE</sub> =2V, I <sub>C</sub> =2A	40			
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =1A, I <sub>B</sub> =50mA			0.5	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =1A, I <sub>B</sub> =50mA			1.2	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =2V, I <sub>C</sub> =500mA		120		MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz		30		pF
Switching Time	Turn on Time	t <sub>on</sub>		0.1		µs
	Storage Time	t <sub>stg</sub>	V <sub>CC</sub> =30V, I <sub>C</sub> =1A, I <sub>B1</sub> =-I <sub>B2</sub> =0.05A	1.0		
	Fall Time	t <sub>f</sub>		0.1		

**CLASSIFICATION OF h<sub>FE(1)</sub>**

Rank	O	Y
Range	70-140	120-240
Marking	MO	MY

**Typical Characteristics**

