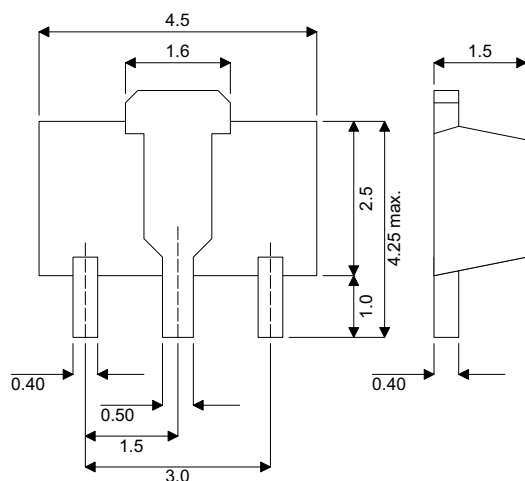


MECHANICAL DATA

Dimensions in mm



SOT89

NPN/PNP EPITAXIAL PLANAR SILICON TRANSISTOR

**Ideal For High current Switching
Application**

FEATURES

- LOW $V_{CE(SAT)}$
- HIGH CURRENT CAPACITY AND WIDE ASO
- FAST SWITCHING SPEED

APPLICATIONS

- VOLTAGE REGULATORS
- RELAY DRIVERS
- LAMP DRIVERS
- ELECTRICAL EQUIPMENT

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

		BCU86	BCU87
V_{CBO}	Collector – Base voltage	60V	– 60V
V_{CEO}	Collector – Emitter voltage ($I_B = 0$)	50V	– 50V
V_{EBO}	Emitter – Base voltage	6V	– 6V
I_C	Collector current	3A	– 3A
I_{CP}	Collector Current (Pulse)	6A	– 6A
P_C	Collector Dissipation	500mW	
	(Mounted on Ceramic Board (250mm ² x 0.8mm))	1.5W	
T_j	Junction Temperature	150°C	
T_{stg}	Storage Temperature	–55 to 150°C	

DYNAMICS CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit.
$V_{(BR)CEO}$ Collector – Emitter Base Breakdown Voltage	$I_C = 1mA$ BCU86 $R_{BE} = 0$	50			V
$V_{(BR)CBO}$ Collector – Base Breakdown Voltage	$I_C = 10\mu A$ BCU86 $I_E = 0$	60			V
$V_{(BR)EBO}$ Emitter Base Breakdown Voltage	$I_C = 0$ BCU86 $I_E = 10\mu A$	6			V
I_{CBO} Collector Cut-Off Current	$V_{CB} = 40V$ BCU86 $I_E = 0$			1	μA
I_{EBO} Emitter Cut-Off Current	$V_{BE} = 4V$ BCU86 $I_C = 0$			1	μA
h_{FE1}^* DC Current Gain	$V_{CE} = 2V$ BCU86 $I_C = 100mA$	100*		560*	—
h_{FE2}^* DC Current Gain	$V_{CE} = 2V$ BCU86 $I_C = 3A$	35			—
f_T Transition frequency	$V_{CE} = 10V$ BCU86 $I_C = 50mA$		150		MHz
C_{ob} Output Capacitance	$V_{CB} = 10V$ BCU86 $f = 1MHz$		25		pF
t_{on} Turn – On Time	See specified test circuit BCU86		70		ns
t_{stg} Storage Time	See specified test circuit BCU86		650		
t_f Fall Time	See specified test circuit BCU86		35		

* Pulse test $t_p = 300\mu s$, $\delta \leq 2\%$

Reverse Polarity for PNP

* The BCU86 / BCU87 are classified by 100mA h_{FE} as follows:

100 R 200 140 S 280 200 T 400 280 U 560

