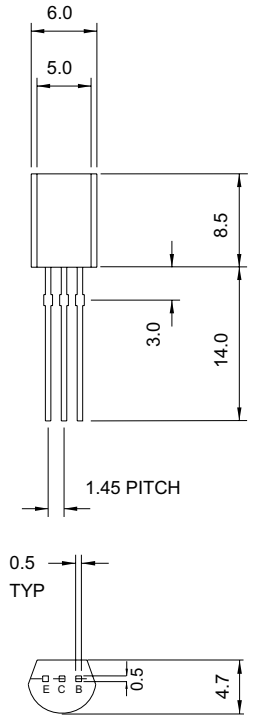


MECHANICAL DATA
Dimensions in mm



TO92(EXTENDED)

**NPN/PNP EPITAXIAL PLANAR
SILICON TRANSISTOR**

**Ideal For High current Switching
Application**

FEATURES

- **LOW $V_{CE(SAT)}$**
- **HIGH CURRENT CAPACITY AND WIDE ASO**
- **ADOPTION OF FBET, MBIT PROCESS**

APPLICATIONS

- **POWER SUPPLIES**
- **RELAY DRIVERS**
- **LAMP DRIVERS**
- **CAR APPLICATIONS**

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		1W
	(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
V_{CBO} Collector Cut–Off Current	$V_{CB} = 40V$ BCU86 $I_E = 0$			1	μA
V_{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 $I_C = 3A$	40			—
f_T Gain Bandwidth Product	$V_{CE} = 10V$ BCU86 $I_C = 50mA$		150		MHz
C_{ob} Output Capacitance	$V_{CB} = 10V$ BCU86 $f = 1MHz$		25		pF

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

Reverse Polarity for PNP, BCU87

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

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

