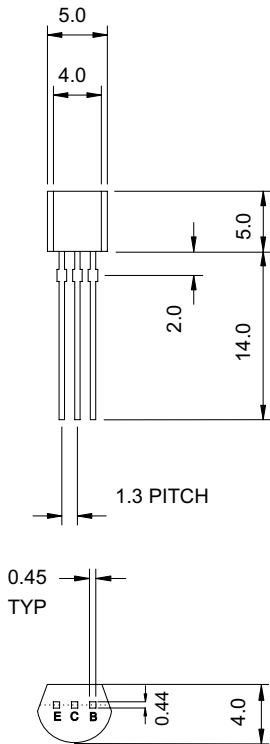


MECHANICAL DATA

Dimensions in mm



TO92

NPN EPITAXIAL PLANAR SILICON TRANSISTOR

Ideal for low voltage applications requiring low loss devices

FEATURES

- **LOW $V_{CE(SAT)}$**
- **HIGH CURRENT**
- **GAIN LINEARITY OVER FULL CURRENT RANGE**
- **LOW COST**

APPLICATIONS

- **LOW VOLTAGE BATTERY APPLICATIONS**
- **LIGHTING INVERTERS**

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

V_{CBO}	Collector – Base voltage	30V
V_{CEX}	Collector – Emitter voltage ($V_{BE} = -1.5V$)	20V
V_{CEO}	Collector – Emitter voltage ($I_B = 0$)	10V
V_{EBO}	Emitter – Base voltage	6V
I_C	Collector current	3A
$I_{C(PK)}$	Peak Collector current	5A
P_{tot}	Total Dissipation at $T_{case} = 25^{\circ}C$	750mW
T_{stg}	Storage Temperature	-55 to 150°C
T_j	Maximum Operating Junction Temperature	150°C

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

Parameter		Test Conditions		Min.	Typ.	Max.	Unit.
$V_{(BR)CEO}$	Collector – Emitter Breakdown Voltage	$I_C = 1mA$	$R_{BE} = \infty$	10			V
$V_{(BR)CEX}$	Collector – Emitter Voltage	$I_C = 1mA$	$V_{BE} = -3V$	20			V
$V_{(BR)CBO}$	Collector – Base Breakdown Voltage	$I_C = 10\mu A$	$I_E = 0$	30			V
$V_{(BR)EBO}$	Emitter – Base Breakdown Voltage	$I_C = 0$	$I_E = 10\mu A$	6			V
I_{CBO}	Collector Cut-Off Current	$V_{CB} = 20V$	$I_E = 0$			1	μA
I_{EBO}	Emitter Cut-Off Current	$I_C = 0$	$V_{BE} = 4V$			1	μA
$V_{CE(sat)*}$	Collector – Emitter Saturation Voltage	$I_C = 3A$	$I_B = 60mA$		0.3	0.4	V
h_{FE*}	DC Current Gain	$V_{CE} = 2V$	$I_C = 3A$	140	210		—
f_T	Transition frequency	$V_{CE} = 10V$	$I_C = 50mA$		200		MHz
C_{ob}	Output Capacitance	$V_{CB} = 10V$	$f = 1MHz$		30		pF

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

