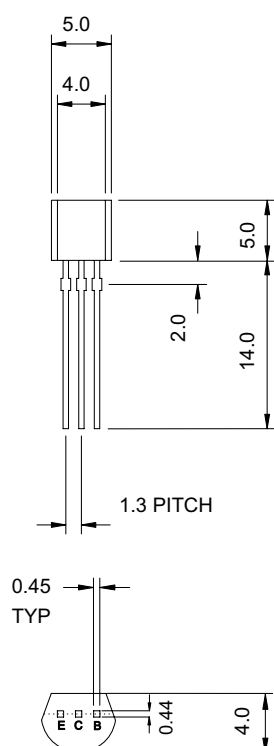


MECHANICAL DATA

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 $150^{\circ}C$
T_j	Maximum Operating Junction Temperature	$150^{\circ}C$

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

