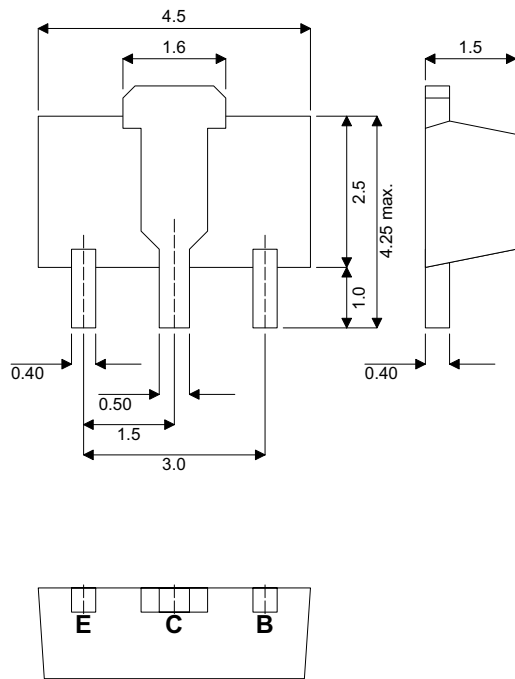


MECHANICAL DATA

Dimensions in mm



SOT89

NPN EPITAXIAL PLANAR SILICON TRANSISTOR

Ideal for high current driver applications requiring low loss devices

FEATURES

- LOW $V_{CE(SAT)}$
- HIGH CURRENT
- HIGH ENERGY RATING

APPLICATIONS

- ANY HIGH CURRENT DRIVER APPLICATIONS REQUIRING EFFICIENT LOW LOSS DEVICES

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

V_{CEO}	Collector – Emitter voltage	20V
V_{CBO}	Collector – Base voltage	60V
V_{EBO}	Emitter – Base voltage	6V
I_C	Collector current	5A
$I_{C(PK)}$	Peak Collector current	8A
P_{tot}	Total Dissipation at $T_{case} = 25^{\circ}C$	0.9W
T_{stg}	Storage Temperature	-55 to 150°C
T_j	Maximum Operating Junction Temperature	150°C

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit.
I_{CBO}	Collector cut-off current $V_{\text{CB}} = 50\text{V}$ $I_{\text{E}} = 0$			1.0	μA
I_{EBO}	Emitter cut-off current $V_{\text{EB}} = 5\text{V}$ $I_{\text{C}} = 0$			1.0	μA
$V_{\text{CE(sat)}}^*$	Collector – Emitter saturation voltage $I_{\text{C}} = 3\text{A}$ $I_{\text{B}} = 60\text{mA}$			0.5	V
$V_{\text{BE(sat)}}^*$	Base – Emitter saturation voltage $I_{\text{C}} = 3\text{A}$ $I_{\text{B}} = 60\text{mA}$	0.6		1.5	V
h_{FE}^*	DC current gain $V_{\text{CE}} = 2\text{V}$ $I_{\text{C}} = 0.5\text{A}$	100		560	—
		$V_{\text{CE}} = 2\text{V}$ $I_{\text{C}} = 3\text{A}$	75		
f_{T}	Transition frequency $V_{\text{CE}} = 10\text{V}$ $I_{\text{C}} = 50\text{mA}$		120		MHz
C_{ob}	Output capacitance $V_{\text{CB}} = 10\text{V}$ $f = 1\text{MHz}$		45		pF

* Pulse test $t_{\text{p}} = 300\mu\text{s}$, $\delta \leq 2\%$