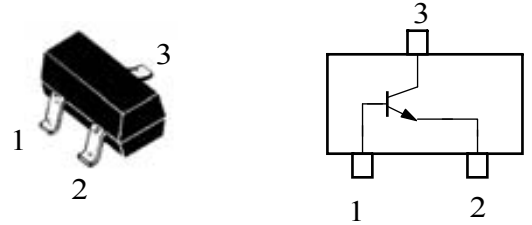


NPN- silicon high frequency transistor 225mW,100mA,25V

Features

Designed for VHF/UHF Amplifier applications

Marking: 3EM



SOT-23

Maximum Ratings

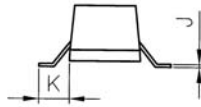
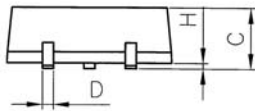
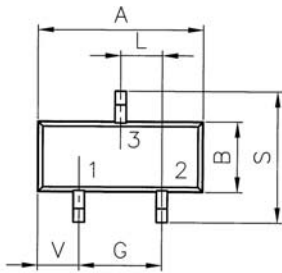
PARAMETER	SYMBOL	MAXIMUM VALUE	UNIT
Collector-emitter voltage ($I_B=0$)	V_{CEO}	25	V
Collector-base voltage ($I_E=0$)	V_{CBO}	30	V
Emitter-base voltage ($I_C=0$)	V_{EBO}	3	V
Collector current	I_C	100	mA
Collector Power Dissipation ($T_A=25^\circ\text{C}$)*	P_{tot}	225	mW
Thermal Resistance ,Junction to Ambient	$R_{(th)ja}$	556	$^\circ\text{C}/\text{W}$
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$

*The device is mounted on a printed circuit board

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector- Emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}$, $I_B=0$	25	—	—	V
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}$, $I_E=0$	30	—	—	V
Emitter - base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}$, $I_C=0$	3	—	—	V
DC current gain ¹⁾	h_{FE}	$V_{CE}=10\text{V}$, $I_C=4\text{mA}$	60	—	—	—
Collector cut-off current	I_{CBO}	$V_{CB}=25\text{V}$, $I_E=0$	—	—	100	nA
Collector-Emitter Saturation Voltage ¹⁾	$V_{CE(sat)}$	$I_C=4\text{mA}$, $I_B=0.4\text{mA}$	—	—	0.5	V
Base-Emitter On Voltage ¹⁾	$V_{BE(sat)}$	$I_C=4\text{mA}$, $V_{CE}=10\text{V}$	—	—	0.95	V
Transit frequency	f_T	$I_C=4\text{mA}$, $V_{CE}=10\text{V}$, $f=100\text{MHz}$	650	—	—	MHz

¹⁾ Pulse:Pulse width 300us , Duty ratio $\leq 2\%$



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Unit: mm

SYMBOL	min	max
A	2.80	3.04
B	1.20	1.40
C	0.89	1.13
D	0.30	0.50
G	1.78	2.04
H	0.01	0.10
J	0.08	0.18
K	0.45	0.60
L	0.89	1.02
S	2.10	2.50
V	0.42	0.60