

TRANSISTOR (NPN)

FEATURES

Power dissipation

$$P_{CM}: 0.2 \text{ W (Tamb=25°C)}$$

Collector current

$$I_{CM}: 0.1 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO}: 20 \text{ V}$$

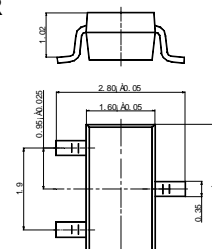
Operating and storage junction temperature range

$$T_J, T_{stg}: -55\text{°C to }+150\text{°C}$$

SOT-23-3L



1. BASE
2. EMITTER
3. COLLECTOR



ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	20			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	12			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	3			V
Collector cut-off current	I_{CBO}	$V_{CB}=10\text{V}, I_E=0$			1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=1\text{V}, I_C=0$			1	μA
DC current gain	h_{FE}	$V_{CE}=10\text{V}, I_C=20\text{mA}$	50		300	
Transition frequency	f_T	$V_{CE}=10\text{V}, I_C=20\text{mA}$	6			GHz
Noise figure	NF	$V_{CE}=10\text{V}, I_C=7\text{mA}, f=1\text{GHz}$			2	dB

CLASSIFICATION OF h_{FE}

Marking	R23	R24	R25
Rank	Q	R	S
Range	50-100	80-160	125-250