

## TRANSISTOR (NPN)

### FEATURES

Power dissipation

$$P_{CM}: 0.2 \text{ W (Tamb=25°C)}$$

Collector current

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

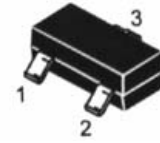
Collector-base voltage

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

Operating and storage junction temperature range

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

### SOT-23 / 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	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	20			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	12			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	3			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=10V, I_E=0$			1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=1V, I_C=0$			1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE}=10V, I_C=20mA$	50		250	
Transition frequency	$f_T$	$V_{CE}=10V, I_C=20mA$		7		GHz
Noise figure	NF	$V_{CE}=10V, I_C=7mA, f=1GHz$			2	dB

### CLASSIFICATION OF $h_{FE}$

Marking	R23	R24	R25	
Rank	Q	R	S	
Range	50-100	80-160	125-250	250-300



TYPICAL CHARACTERISTICS (T<sub>A</sub> = 25 °C)

