



## SOT-23 Plastic-Encapsulate Transistors

### MMBT2222LT1 TRANSISTOR (NPN)

#### FEATURES

Power dissipation

$$P_{CM}: 0.3 \text{ W (Tamb=25}^{\circ}\text{C)}$$

Collector current

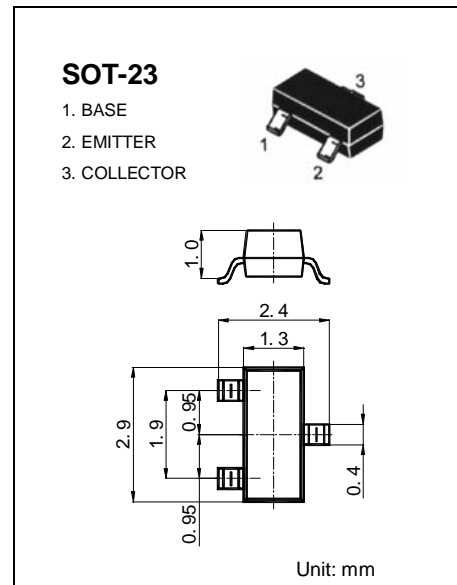
$$I_{CM}: 0.6 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO}: 60 \text{ V}$$

Operating and storage junction temperature range

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



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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=50\text{V}, I_E=0$			0.01	$\mu\text{A}$
Collector cut-off current	$I_{CEO}$	$V_{CE}=10\text{V}, I_B=0$			0.1	$\mu\text{A}$
Collector cut-off current	$I_{EBO}$	$V_{EB}=3\text{V}, I_C=0$			0.1	$\mu\text{A}$
DC current gain	$h_{FE(1)}$	$V_{CE}=10\text{V}, I_C=0.1\text{mA}$	35			
	$h_{FE(2)}$	$V_{CE}=10\text{V}, I_C=150\text{mA}$	100		300	
	$h_{FE(3)}$	$V_{CE}=10\text{V}, I_C=500\text{mA}$	30			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$			1	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$			2	V
Transition frequency	$f_T$	$V_{CE}=20\text{V}, I_C=20\text{mA}$ $f=100\text{MHz}$	250			MHz

Marking	M1B
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