



## TO-92L Plastic-Encapsulate Transistors

**2SC1383** TRANSISTOR (NPN)

**2SC1384**

### FEATURE

Power dissipation

$$P_{CM}: 1 \text{ W (Tamb=25°C)}$$

Collector current

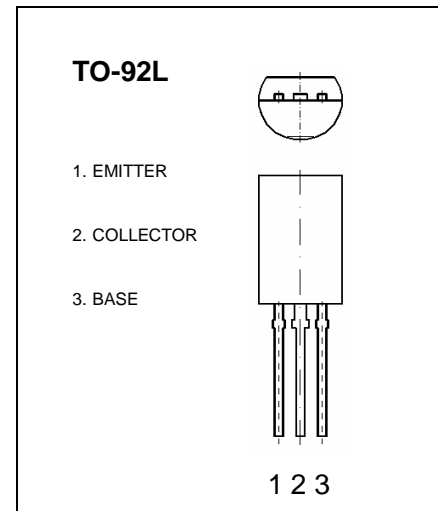
$$I_{CM}: 1 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO}: \begin{array}{ll} 2SC1383: & 30 \text{ V} \\ 2SC1384: & 50 \text{ V} \end{array}$$

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	MAX	UNIT
Collector-base breakdown voltage <b>2SC1383</b> <b>2SC1384</b>	$V_{(BR)CBO}$	$I_C = 10\mu\text{A}, I_E = 0$	30 50		V
Collector-emitter breakdown voltage <b>2SC1383</b> <b>2SC1384</b>	$V_{(BR)CEO}$	$I_C = 2\text{mA}, I_B = 0$	25 50		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 10\mu\text{A}, I_C = 0$	5		V
Collector cut-off current	$I_{CBO}$	$V_{CB} = 20\text{V}, I_E = 0$		0.1	$\mu\text{A}$
DC current gain	$h_{FE(1)}$	$V_{CE} = 10\text{V}, I_C = 500\text{mA}$	85	340	
	$h_{FE(2)}$	$V_{CE} = 5\text{V}, I_C = 1\text{A}$	50		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500\text{mA}, I_B = 50\text{mA}$		0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500\text{mA}, I_B = 50\text{mA}$		1.2	V
Transition frequency	$f_T$	$V_{CE} = 10\text{V}, I_C = 50\text{mA}$	100		MHz

### CLASSIFICATION OF $h_{FE(1)}$

Rank	Q	R	S
Range	85-170	120-240	170-340