

## TO-92 Plastic-Encapsulated Transistors

### 2SC1674 TRANSISTOR (NPN)

#### FEATURE

Power dissipation

$$P_{CM}: 0.25 \text{ W (Tamb=25}^\circ\text{C)}$$

Collector current

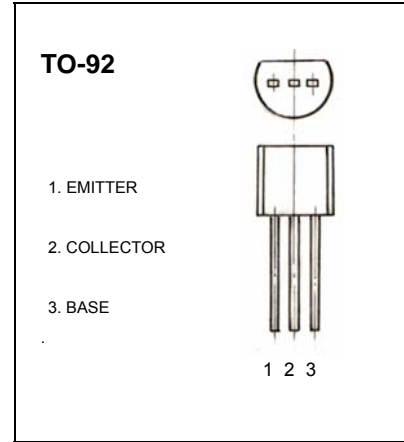
$$I_{CM}: 0.02 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO}: 30 \text{ V}$$

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	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100\mu\text{A}, I_E = 0$	30		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1 \text{ mA}, I_B = 0$	20		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100\mu\text{A}, I_C = 0$	4		V
Collector cut-off current	$I_{CBO}$	$V_{CB} = 30\text{V}, I_E = 0$		0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 3\text{V}, I_C = 0$		0.1	$\mu\text{A}$
DC current gain	$h_{FE}$	$V_{CE} = 6 \text{ V}, I_C = 1 \text{ mA}$	40	180	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10 \text{ mA}, I_B = 1 \text{ mA}$		0.3	V
Base-emitter voltage	$V_{BE(ON)}$	$V_{CE} = 6 \text{ V}, I_C = 1 \text{ mA}$		0.72	V
Transition frequency	$f_T$	$V_{CE} = 6 \text{ V}, I_C = 1 \text{ mA}$	400		MHz
Collector output capacitance	$C_{ob}$	$V_{CE} = 6\text{V}, I_E = 0, f = 1\text{MHz}$		1.5	pF
Noise figure	NF	$V_{CE} = 6\text{V}, I_C = 1\text{mA}, f = 100\text{MHz}, R_S = 50\Omega$		5	dB
Power gain	$G_P$	$V_{CE} = 6\text{V}, I_C = 1\text{mA}, f = 100\text{MHz}$	18		dB

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

Rank	Y	GR	BL
Range	40-80	60-120	90-180