

**TRANSISTOR (NPN)**
**Plastic-Encapsulate Transistor**
**FEATURES**

Power dissipation

$$P_{CM}: 0.625W (T_{amb}=25^{\circ}C)$$

Collector current

$$I_{CM}: 0.6A$$

Collector-base voltage

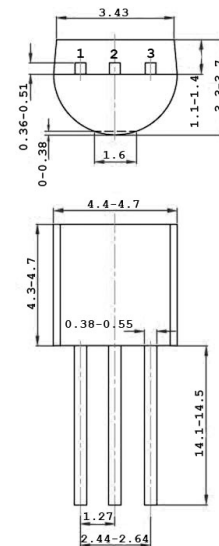
$$V_{(BR)CBO}: 180V$$

Operating and storage junction temperature range

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

**TO-92**

1. EMITTER
2. BASE
3. COLLECTOR



UNIT:mm

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

**ELECTRICAL CHARACTERISTICS**

Parameters	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100 \mu A, I_E=0$	180		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	160		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10 \mu A, I_C=0$	6		V
Collector cut-off current	$I_{CBO}$	$V_{CB}=120V, I_E=0$		0.05	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4V, I_C=0$		0.05	$\mu A$
DC current gain	$h_{FE(1)}$	$V_{CE}=5V, I_C=1mA$	80		
	$h_{FE(2)}$	$V_{CE}=5V, I_C=10mA$	80	250	
	$h_{FE(3)}$	$V_{CE}=5V, I_C=50mA$	50		
Collector-emitter saturation voltage	$V_{CEsat}$	$I_C=50mA, I_B=5mA$		0.5	V
Base-emitter saturation voltage	$V_{BEsat}$	$I_C=50mA, I_B=5mA$		1	V
Transition frequency	$f_r$	$V_{CE}=5V, I_C=10mA$ $f=30MHz$	100		MHz

**CLASSIFICATION OF  $h_{FE(2)}$** 

Rank	LH	MH	VH
Range	60-130	130-180	180-245