

TRANSISTOR (NPN)
Plastic-Encapsulate Transistor
FEATURES

Power dissipation

$$P_{CM}: 0.4W (T_{amb}=25^{\circ}C)$$

Collector current

$$I_{CM}: 0.1A$$

Collector-base voltage

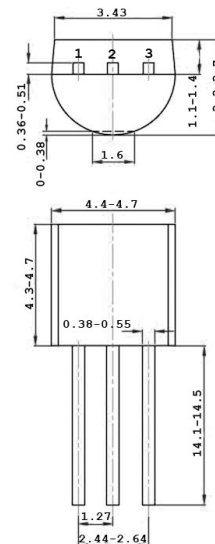
$$V_{(BR)CBO}: 50V$$

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	$V_{(BR)CBO}$	$I_C=100 \mu A, I_E=0$	50		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=0.1mA, I_B=0$	45		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100 \mu A, I_C=0$	5		V
Collector cut-off current	I_{CBO}	$V_{CB}=50V, I_E=0$		0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE}=35V, I_B=0$		0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=3V, I_C=0$		0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=5V, I_C=1mA$	60	1000	
Collector-emitter saturation voltage	V_{CEsat}	$I_C=100mA, I_B=5mA$		0.3	V
Base-emitter saturation voltage	V_{BEsat}	$I_C=100mA, I_B=5mA$		1	V
Transition frequency	f_r	$V_{CE}=5V, I_C=10mA$ $f=30MHz$	150		MHz

CLASSIFICATION OF $h_{FE(1)}$

Rank	A	B	C	D
Range	60-150	100-300	200-600	400-1000