

TRANSISTOR (NPN)
Plastic-Encapsulate Transistor
FEATURES

Power dissipation

$$P_{CM}: 0.75W (T_{amb}=25^{\circ}C)$$

Collector current

$$I_{CM}: 0.2A$$

Collector-base voltage

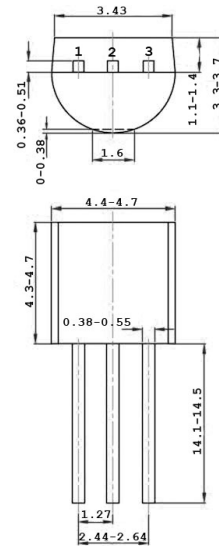
$$V_{(BR)CBO}: 600V$$

Operating and storage junction temperature range

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

TO-92

1. EMITTER
2. COLLECTOR
3. BASE



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	$V_{(BR)CBO}$	$I_C=100 \mu A, I_E=0$	600		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	400		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100 \mu A, I_C=0$	7		V
Collector cut-off current	I_{CBO}	$V_{CB}=600V, I_E=0$		100	μA
Collector cut-off current	I_{CEO}	$V_{CE}=400V, I_B=0$		200	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=7V, I_C=0$		100	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=20V, I_C=20mA$	10	70	
	$h_{FE(2)}$	$V_{CE}=10V, I_C=0.25mA$	5		
Collector-emitter saturation voltage	V_{CEsat}	$I_C=50mA, I_B=10mA$		0.5	V
Base-emitter saturation voltage	V_{BEsat}	$I_C=50mA, I_B=10mA$		1.2	V
Base-emitter voltage	V_{BE}	$I_E=100mA$		1.1	V
Transition frequency	f_T	$V_{CE}=20V, I_C=20mA, f=1MHz$	8		MHz
Fall time	t_f	$I_C=50mA, I_{B1}=-I_{B2}=5mA, V_{CC}=45V$		0.3	μS
Storage time	t_s			1.5	μS

CLASSIFICATION OF $h_{FE(1)}$

Rank						
Range	10-14	14-17	17-20	20-23	23-26	26-29