

TRANSISTOR (NPN)

FEATURE

Power dissipation

$$P_{CM} : 0.625 \text{ W (} T_{amb}=25 \text{)}$$

Collector current

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

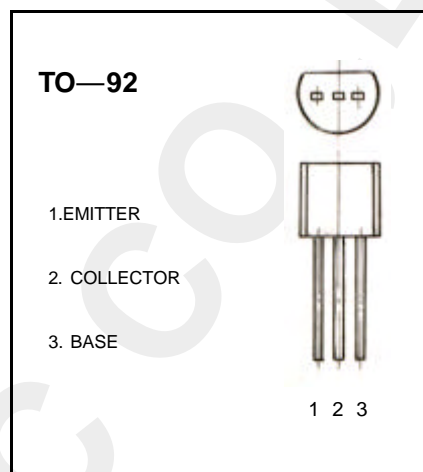
Collector-base voltage

$$V_{(BR)CBO} : 40 \text{ V}$$

Operating and storage junction temperature range

$$T_{stg} : -55 \text{ to } +150$$

$$T_J : 150$$



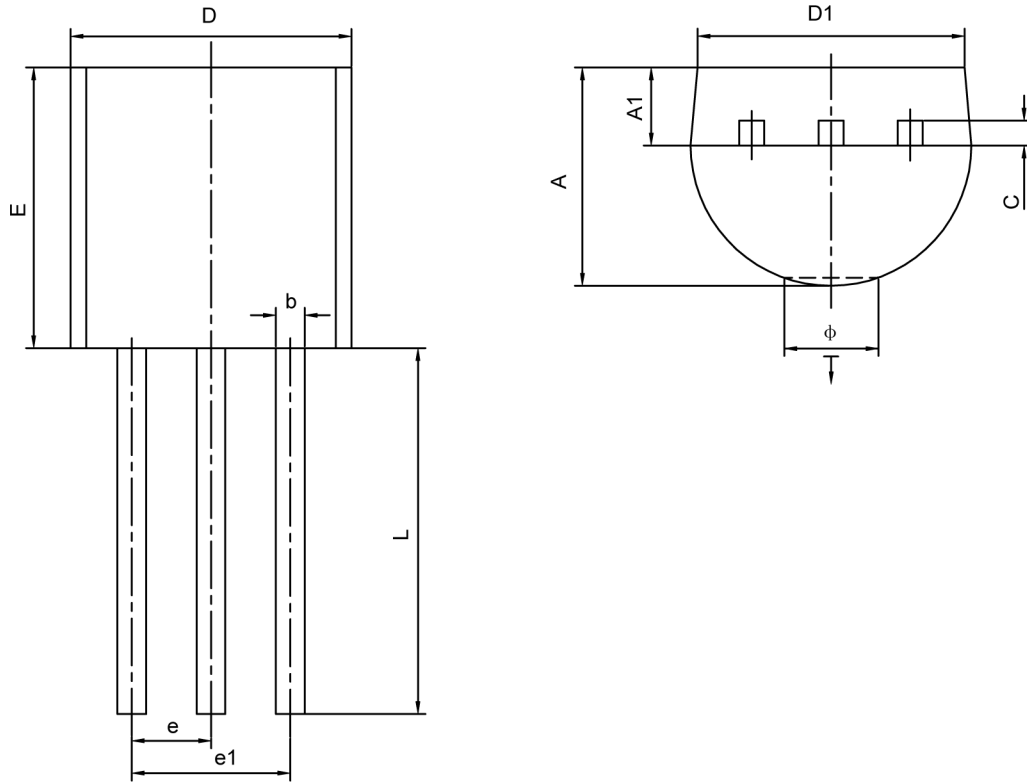
ELECTRICAL CHARACTERISTICS ($T_{amb}=25$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=0.1mA, I_E=0$	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	20			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=0.1mA, I_C=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=40V, I_E=0$			1	μA
Collector cut-off current	I_{CEO}	$V_{CE}=20V, I_B=0$			5	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=1V, I_C=1mA$	290			
	$h_{FE(2)}$	$V_{CE}=1V, I_C=100mA$	300		1000	
	$h_{FE(3)}$	$V_{CE}=10V, I_C=300mA$	300			
	$h_{FE(4)}$	$V_{CE}=1V, I_C=500mA$	300			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=600mA, I_B=20mA$			0.55	V
Transition frequency	f_T	$V_{CE}=10V, I_C=50mA$ $f=30MHz$	100			MHz

CLASSIFICATION OF h_{FE}

Rank	B	C	D
Range	300-550	500-700	650-1000

TO-92 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.400	4.700	0.173	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270TYP		0.050TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Ö		1.600		0.063
∓	0.000	0.380	0.000	0.015