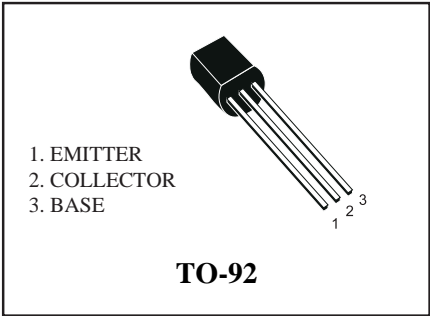


NPN Plastic-Encapsulate Transistor

(Pb) Lead(Pb)-Free

FEATURES :

- power switching applications



MAXIMUM RATINGS (TA=25°C unless otherwise noted)

Parameter	Symbol	Value	Units
Collector-Base Voltage	V _{CB0}	700	V
Collector-Emitter Voltage	V _{CEO}	400	V
Emitter-Base Voltage	V _{EBO}	9	V
Collector Current -Continuous	I _C	1.5	A
Collector Power Dissipation	P _C	0.9	W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

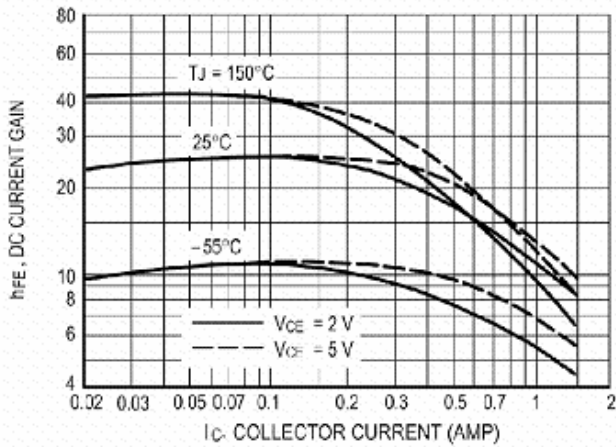
ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	Units
Collector-base breakdown voltage	V _{(BR)CBO}	I _C = 1mA, I _E =0	700			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C = 10mA, I _B =0	400			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E = 1mA, I _C =0	9			V
Collector cut-off current	I _{CBO}	V _{CB} = 700V, I _E =0			100	μA
Collector cut-off current	I _{CEO}	V _{CE} = 400V, I _B =0			50	μA
Emitter cut-off current	I _{EBO}	V _{EB} = 7V, I _C =0			10	μA
DC current gain	h _{FE}	V _{CE} = 10V, I _C = 0.4 A	20		40	
Collector-emitter saturation voltage	V _{CE(sat)1}	I _C =1.5A, I _B = 0.5A			3	V
	V _{CE(sat)2}	I _C =0.5A, I _B = 0.1A			0.8	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =0.5A, I _B =0.1A			1	V
Transition Frequency	f _T	V _{CE} =10V, I _C =100mA, f=1MHz	4			MHz
Fall time	t _f	I _C =1A			0.7	μs
Storage time	t _s	I _{B1} =-I _{B2} =0.2A			4	μs

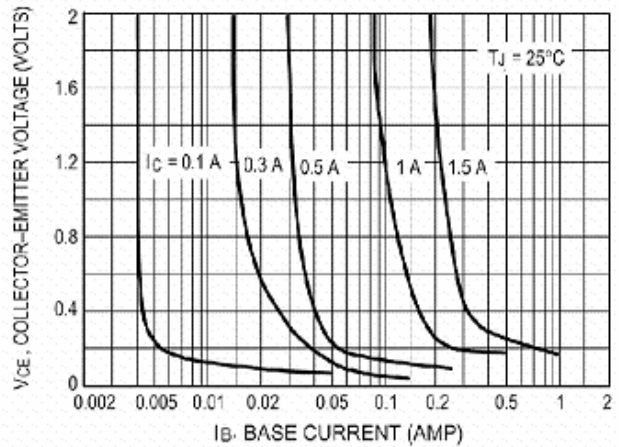
CLASSIFICATION OF h_{FE}

Rank				
Range	20-25	25-30	30-35	35-40

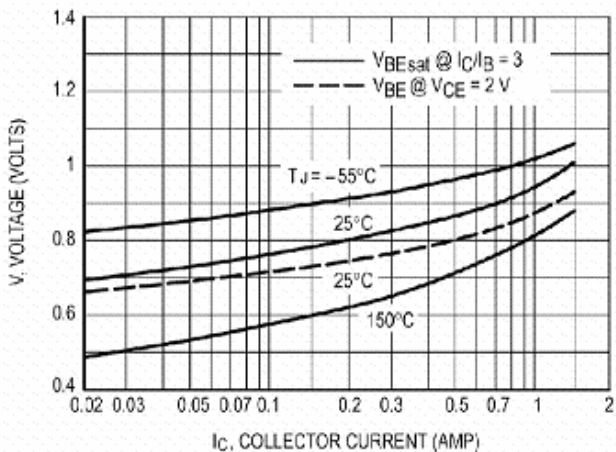
Typical Characteristics



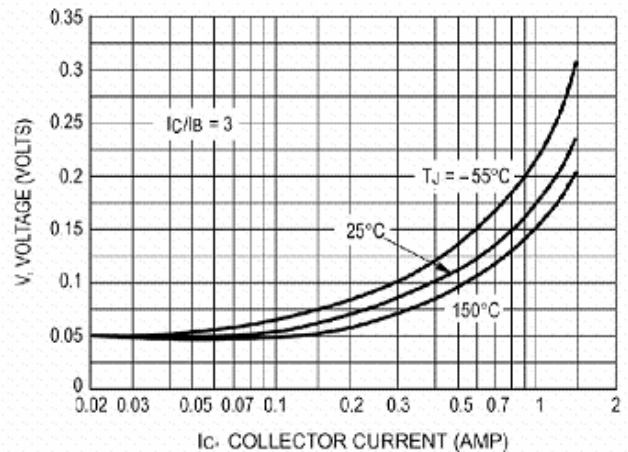
DC Current Gain



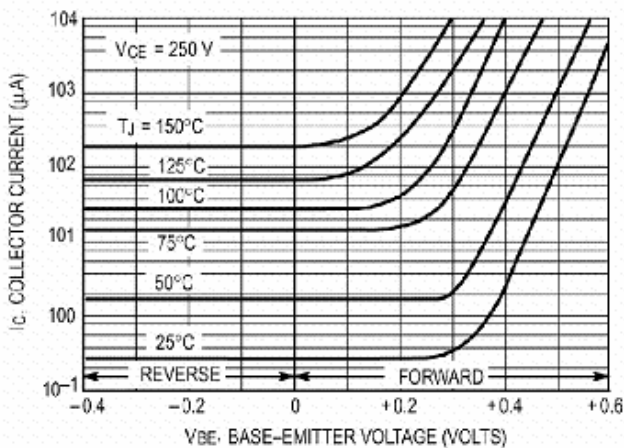
Collector Saturation Region



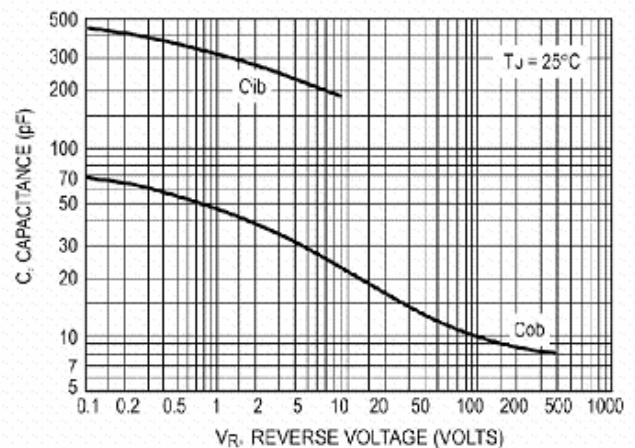
Base-Emitter Voltage



Collector-Emitter Saturation Region



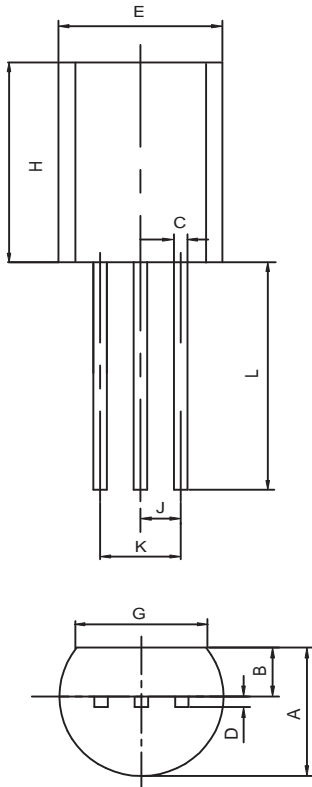
Collector Cutoff Region



Capacitance

TO-92 Outline Dimensions

unit:mm



TO-92		
Dim	Min	Max
A	3.30	3.70
B	1.10	1.40
C	0.38	0.55
D	0.36	0.51
E	4.40	4.70
G	3.43	-
H	4.30	4.70
J	1.270TYP	
K	2.44	2.64
L	14.10	14.50