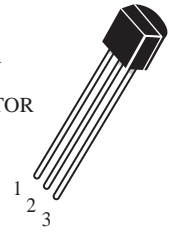


High-Voltage NPN Transistors
(Pb) Lead(Pb)-Free

 1. EMITTER
 2. BASE
 3. COLLECTOR

TO-92
ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V _{CEO}	200	V _{dc}
Collector-Base Voltage	V _{CBO}	200	V _{dc}
Emitter-Base Voltage	V _{EBO}	6.0	V _{dc}
Collector Current	I _C	500	mA _{dc}
Total Device Dissipation T _A =25°C	P _D	0.625	W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min	Max	Unit
Collector-Emitter Breakdown Voltage (I _C = 1.0 mA _{dc} , I _B =0)	V _{(BR)CEO}	200	-	V _{dc}
Collector-Base Breakdown Voltage (I _C = 100 uA _{dc} , I _E =0)	V _{(BR)CBO}	200	-	V _{dc}
Emitter-Base Breakdown Voltage (I _E = 100 uA _{dc} , I _C =0)	V _{(BR)EBO}	6.0	-	V _{dc}
Collector Cutoff Current (V _{CB} = 160V _{dc} , I _E =0)	I _{CBO}	-	0.1	μA
Emitter Cutoff Current (V _{EB} = 4.0V _{dc} , I _C =0)	I _{EBO}	-	0.1	μA

Electrical Characteristics (T_A=25°C unless otherwise noted) (Continued)

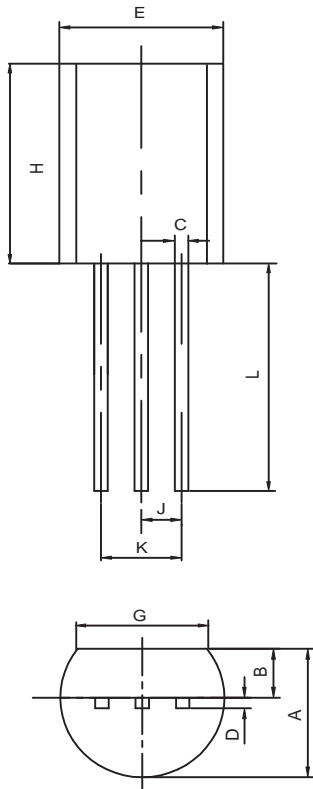
Characteristics	Symbol	Min	Max	Unit
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On Characteristics

DC Current Gain (I _C = 1.0 mA, V _{CE} = 10Vdc) (I _C = 10 mA, V _{CE} = 10Vdc) (I _C = 30 mA, V _{CE} = 10Vdc)	HFE(1) HFE(2) HFE(3)	25 40 40	-	-
Collector-Emitter Saturation Voltage (I _C = 20 mA, I _B = 2.0 mA)	V _{CE(sat)}	-	0.4	Vdc
Base-Emitter Saturation Voltage (I _C = 20 mA, I _B = 2.0 mA)	V _{BE(sat)}	-	0.9	Vdc
Transition Frequency (I _C = 10 mA, V _{CE} = 20 Vdc, f = 100MHz)	f _T	50	-	MHz

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