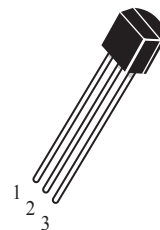


PNP Transistors

 Lead(Pb)-Free

TO-92

1. EMITTER
2. BASE
3. COLLECTOR



ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Rating	Symbol	2N5401	Unit
Collector-Emitter Voltage	V _{CEO}	-150	V _{dc}
Collector-Base Voltage	V _{CBO}	-160	V _{dc}
Emitter-Base Voltage	V _{EBO}	-5.0	V _{dc}
Collector Current	I _C	600	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}	-150	-	V _{dc}
Collector-Base Breakdown Voltage (I _C = -100 µA _{dc} , I _E =0)	V _{(BR)CBO}	-160	-	V _{dc}
Emitter-Base Breakdown Voltage (I _E = -10 µA _{dc} , I _C =0)	V _{(BR)EBO}	-5.0	-	V _{dc}
Collector Cutoff Current (V _{CB} = -120 V _{dc} , I _E =0)	I _{CBO}	-	-0.05	µA _{dc}
Emitter Cutoff Current (V _{EB} = -4.0 V _{dc} , I _C =0)	I _{EBO}	-	-0.05	µA _{dc}

2N5401



ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ unless otherwise noted) (Continued)

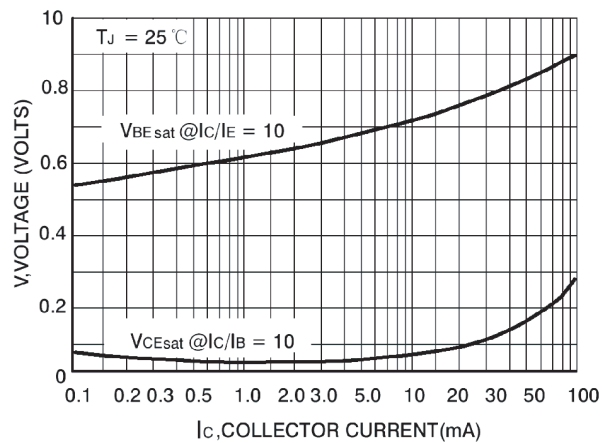
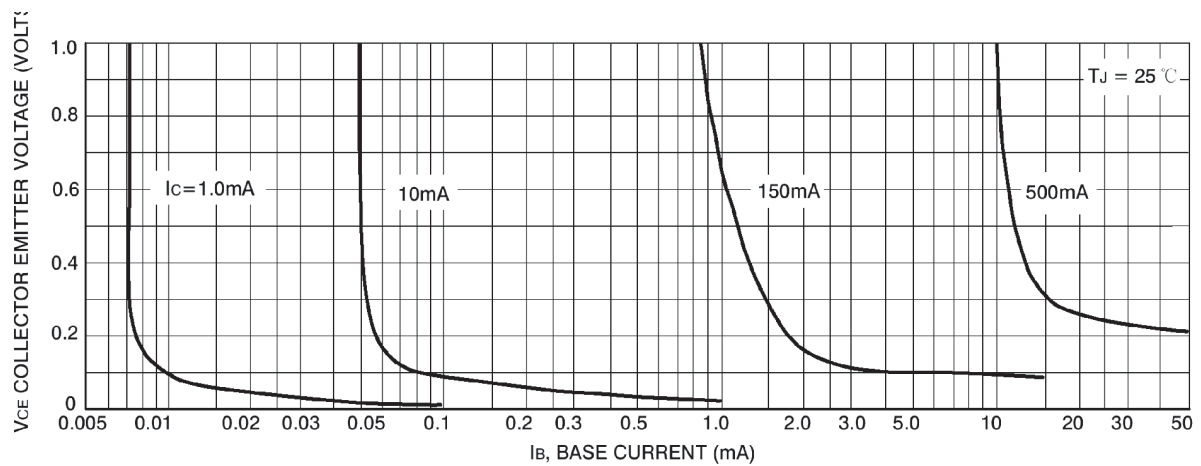
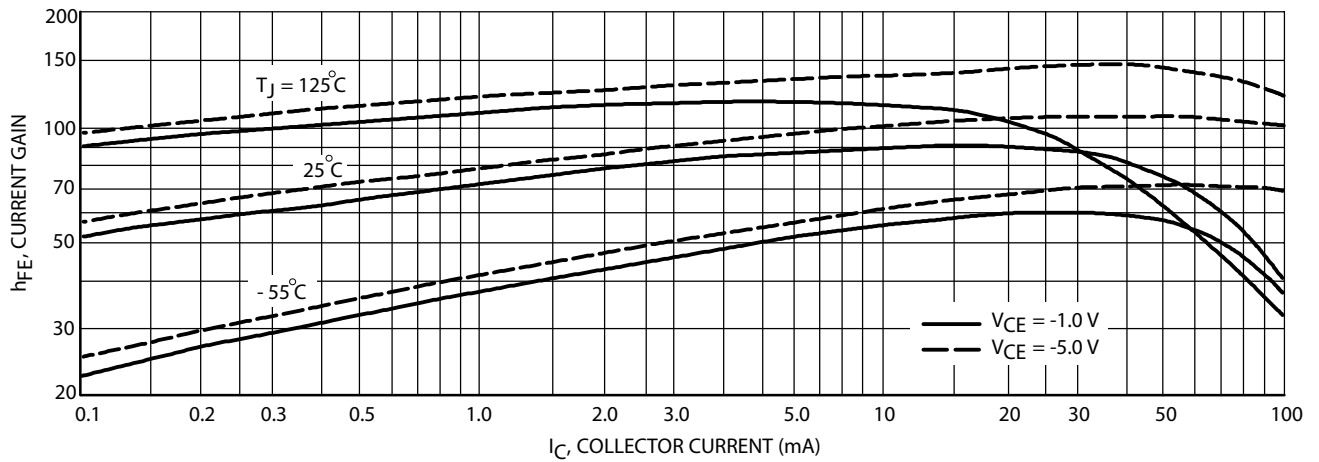
Characteristics	Symbol	Min	TYP	Max	Unit
-----------------	--------	-----	-----	-----	------

ON CHARACTERISTICS

DC Current Gain ($I_C = -1.0/1.0\text{ mA}$, $V_{CE} = -5.0\text{ V}$)	$h_{FE} (1)$	80	-	-	-
DC Current Gain ($I_C = -10\text{ mA}$, $V_{CE} = -5.0\text{ V}$)	$h_{FE} (2)$	80	-	250	-
$I_C = -50\text{ mA}$, $V_{CE} = -5.0\text{ V}$	$h_{FE} (3)$	50	-	-	-
Collector-Emitter Saturation Voltage ($I_C = -25\text{ mA}$, $I_B = -5.0\text{ mA}$)	$V_{CE(sat)}$	-	-	-0.5	Vdc
Base-Emitter Saturation Voltage ($I_C = -50\text{ mA}$, $I_B = -5.0\text{ mA}$)	$V_{BE(sat)}$	-	-	-1.0	Vdc
Current-Gain-Bandwidth Product ($I_C = 10\text{ mA}$, $V_{CE} = -5.0\text{ V}$, $f = 30\text{ MHz}$)	f_T	100	-	-	MHz

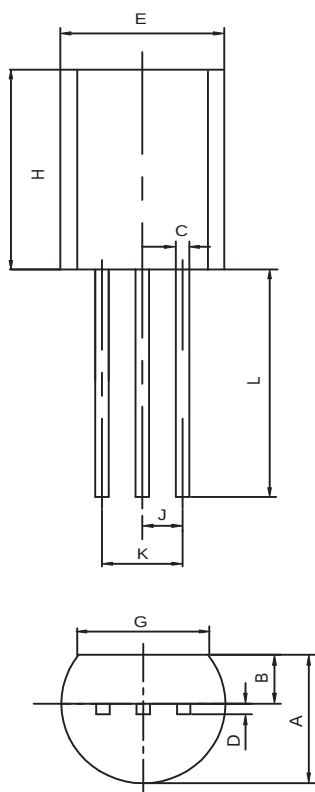
Classification of $h_{FE}(2)$

Rank	A	B	C
Range	80-160	120-180	150-250



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