C1815

TO-92 Plastic-Encapsulate Transistors

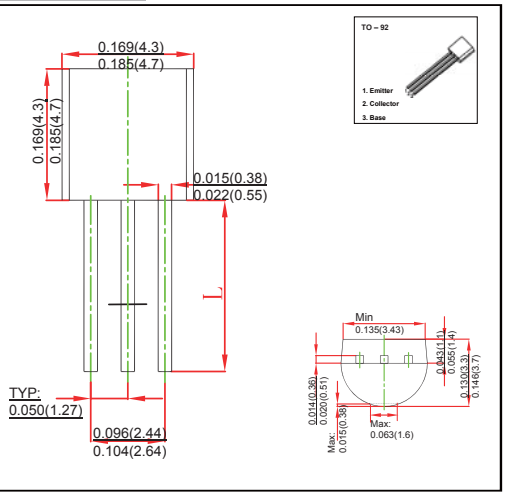
FEATURES

- TRANSISTOR (NPN)
- Excellent hFE linearity

MECHANICAL DATA

- Case style:TO-92 molded plastic
- Mounting position:any

TO-92



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector Base Voltage	60	V
V_{CEO}	Collector Emitter Voltage	50	V
V_{EBO}	Emitter Base Voltage	5	V
I_C	Collector Current-Continuous	150	mA
P_C	Collector Power Dissipation	400	mW
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55 ~ +150	°C
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	312	°C/W

ELECTRICAL CHARACTERISTICS Ta =25℃ unless otherwise specified

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C = 100μA, I_E = 0	60			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C = 0.1mA, I_B = 0	50			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E = 100μA, I_C = 0	5			V
I_{CBO}	Collector cut-off current	V_{CB} = 60V, I_E = 0			100	nA
I_{CEO}	Collector cut-off current	V_{CE} = 30V, I_B = 0			100	nA
I_{EBO}	Emitter cut-off current	V_{EB} = 5V, I_C = 0			100	nA
$h_{FE(1)}$	DC current gain	V_{CE} = 5V, I_C = 1mA	70		700	
$h_{FE(2)}$		V_{CE} = 6V, I_C = 2mA	70			
$V_{CE(sat)}$	Collector-emitter saturation voltage	I_C = 100mA, I_B = 10mA			0.25	V
$V_{BE(sat)}$	Base-emitter saturation voltage	I_C = 100mA, I_B = 10mA			1	V
f_T	Transition frequency	V_{CE}=10V, I_C=1mA, f=30MHz	80			MHz
C_{ob}	Collector Output Capacitance	V_{CB} = 10V, I_E = 0, f = 1MHz			3.5	pF
NF	Noise Figure	V_{CE} = 6V, I_C = 0.1mA, f = 1KHz, R_G = 10K			10	dB

Classification OF $h_{FE(1)}$

Rank	O	Y	GR	BL
Range	70-140	120-240	200-400	350-700

RATINGS AND CHARACTERISTIC CURVES

Typical Characterisitics