

Transistors

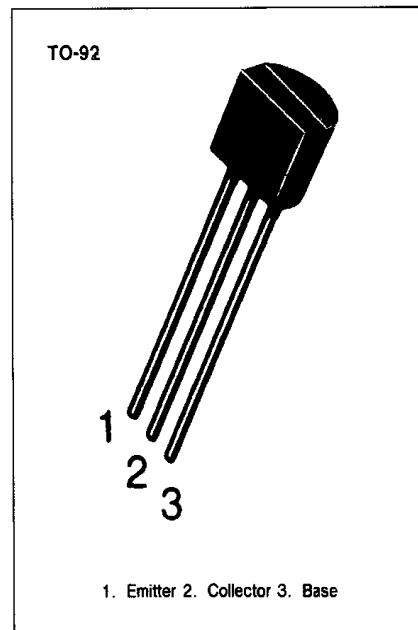
2SC2001

GENERAL PURPOSE APPLICATIONS HIGH TOTAL POWER DISSIPATION (PT=600 mW)

High h_{FE} and LOW $V_{CE(sat)}$

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	30	V
Collector-Emitter Voltage	V_{CEO}	25	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	700	mA
Base Current	I_B	150	mA
Collector Dissipation	P_C	600	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55~150	$^\circ\text{C}$



ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
* Base Emitter Voltage	V_{BE}	$V_{CE}=6V, I_C=10mA$	600	640	700	mV
Collector Cutoff Current	I_{CBO}	$V_{CB}=30V, I_E=0$			100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=5V, I_C=0$			100	nA
* DC Current Gain	h_{FE1}	$V_{CE}=1V, I_C=100mA$	90	200	400	
	h_{FE2}	$V_{CE}=1V, I_C=700mA$	50	140		
* Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=700mA, I_B=70mA$		0.2	0.6	V
* Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=700mA, I_B=70mA$		0.95	1.2	V
Output Capacitance	C_{ob}	$V_{CB}=6V, I_E=0, f=1MHz$		13	25	pF
Current Gain Bandwidth Product	f_T	$V_{CE}=6V, I_E=10mA$	50	170		MHz

* Pulse test: $PW \leq 350 \mu s$, duty cycle $\leq 2\%$ Pulsed

h_{FE1} CLASSIFICATION

Classification	O	Y	G
h_{FE1}	90-180	135-270	200-400

