



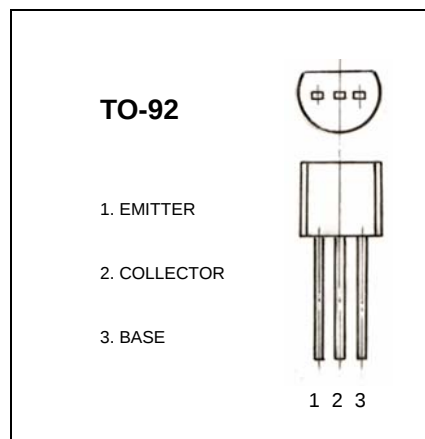
POWER SKY (H.K.) LTD.

TO-92 Plastic-Encapsulate Transistors

2SC2001 TRANSISTOR (NPN)

FEATURES

- High h_{FE} and low $V_{CE(sat)}$
 $h_{FE}(I_C=100mA) : 200(Typ)$
 $V_{CE(sat)}(700mA): 0.2V (Typ)$



MAXIMUM RATINGS($T_A=25^{\circ}C$ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	700	mA
P_C	Collector Power Dissipation	600	mW
T_j	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature	-55-150	$^{\circ}C$

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	30		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	25		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	5		V
Collector cut-off current	I_{CBO}	$V_{CB}=30V, I_E=0$		0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE}=20V, I_B=0$		0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$		0.1	μA
DC current gain	h_{FE}	$V_{CE}=1V, I_C=100mA$	90	400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=700mA, I_B=70mA$		0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=700mA, I_B=70mA$		1.2	V
Transition frequency	f_T	$V_{CE}=6V, I_C=10mA$ $f=30MHz$	50		MHz

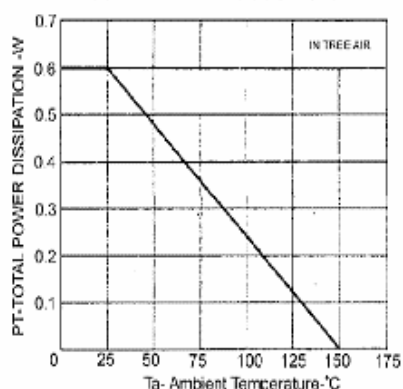
CLASSIFICATION OF h_{FE}

Rank	M	L	K
Range	90-180	135-270	200-400

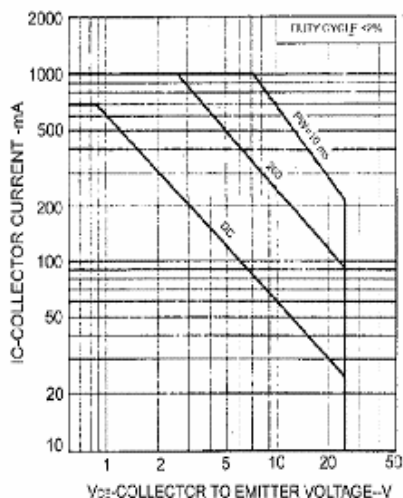
Typical Characteristics

2SC2001

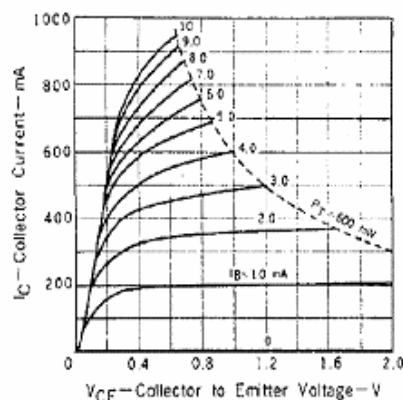
TOTAL POWER DISSIPATION VS
AMBIENT TEMPERATURE



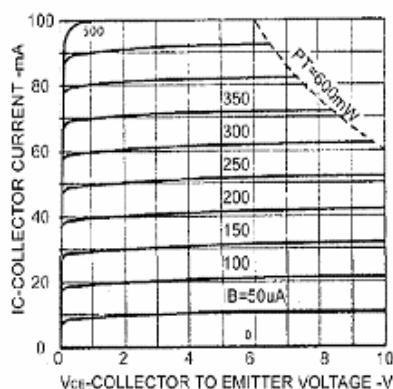
SAFE OPERATING AREA



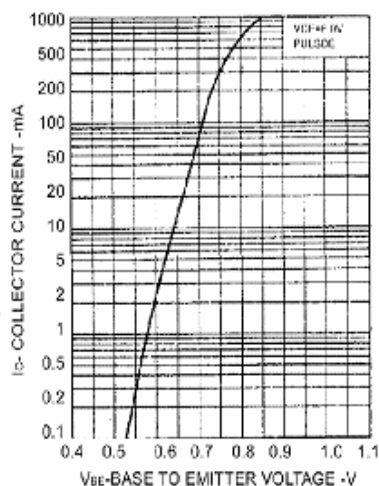
COLLECTOR CURRENT vs.
COLLECTOR TO EMITTER VOLTAGE



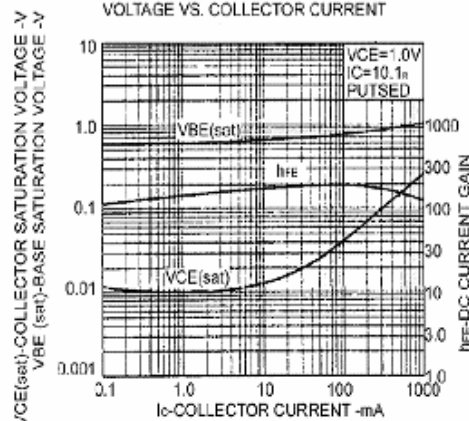
COLLECTOR CURRENT vs.
COLLECTOR TO EMITTER VOLTAGE



COLLECTOR CURRENT vs.
BASE TO EMITTER VOLTAGE



DC CURRENT GAIN
BASE AND COLLECTOR SATURATION
VOLTAGE VS. COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT
vs. EMITTER CURRENT

