

RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

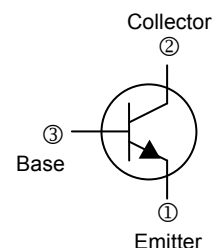
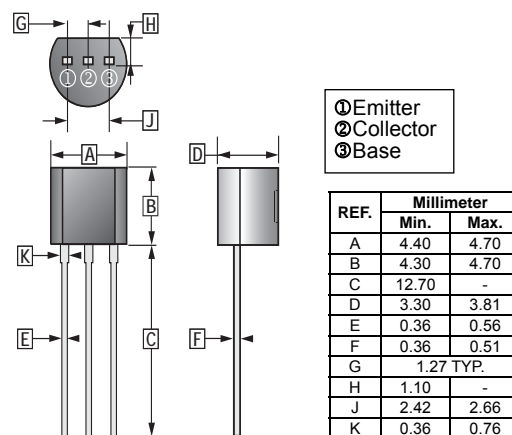
FEATURES

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

CLASSIFICATION OF h_{FE}

Product-Rank	2SC2001-M	2SC2001-L	2SC2001-K
Range	90~180	135~270	200~400

TO-2



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ C$ unless otherwise specified)

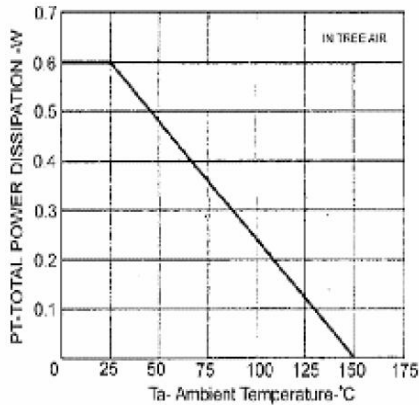
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	30	V
Collector to Emitter Voltage	V_{CEO}	25	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current - Continuous	I_C	0.7	A
Collector Power Dissipation	P_C	0.6	W
Junction, Storage Temperature	T_J, T_{STG}	150, -55~150	$^\circ C$

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ C$ unless otherwise specified)

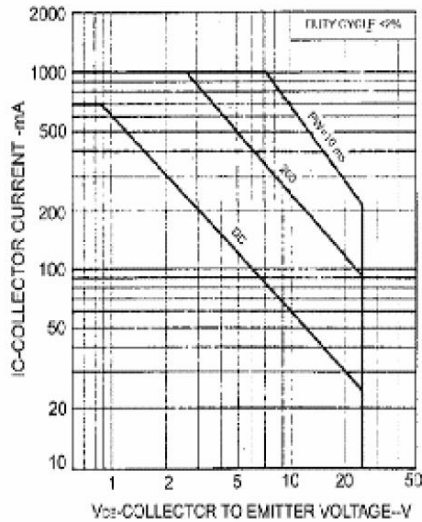
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	30	-	-	V	$I_C=100\mu A, I_E=0$
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	25	-	-	V	$I_C=10mA, I_B=0$
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	5	-	-	V	$I_E=100\mu A, I_C=0$
Collector Cut - Off Current	I_{CBO}	-	-	0.1	μA	$V_{CB}=30V, I_E=0$
Collector Cut - Off Current	I_{CEO}	-	-	0.1	μA	$V_{CE}=20V, I_B=0$
Emitter Cut - Off Current	I_{EBO}	-	-	0.1	μA	$V_{EB}=5V, I_C=0$
DC Current Gain	h_{FE}	90	-	400		$V_{CE}=1V, I_C=100mA$
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	0.6	V	$I_C=700mA, I_B=70mA$
Base to Emitter voltage	$V_{BE(sat)}$	-	-	1.2	V	$I_C=700mA, I_B=70mA$
Transition Frequency	f_T	50	-	-	MHz	$V_{CE}=6V, I_C=10mA, f=30MHz$

CHARACTERISTIC CURVES

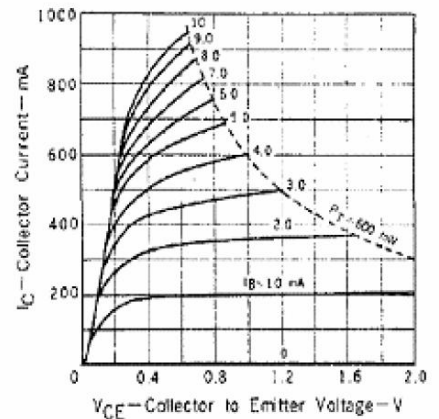
TOTAL POWER DISSIPATION VS AMBIENT TEMPERATURE



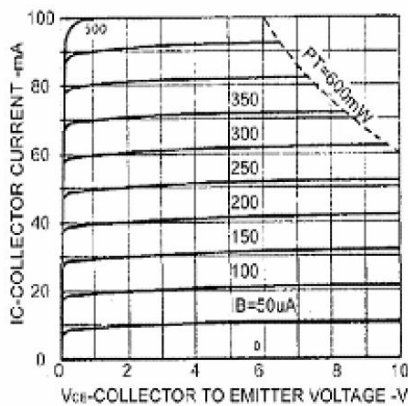
SAFE OPERATING AREA



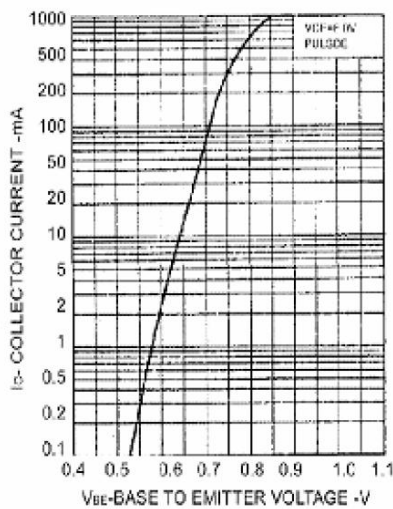
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



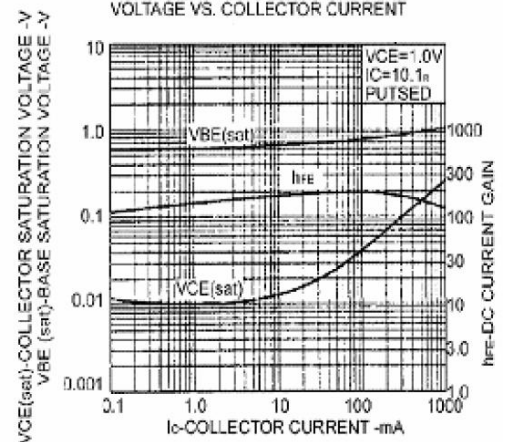
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



COLLECTOR CURRENT vs. BASE TO EMITTER VOLTAGE



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



GAIN BANDWIDTH PRODUCT vs. EMITTER CURRENT

