

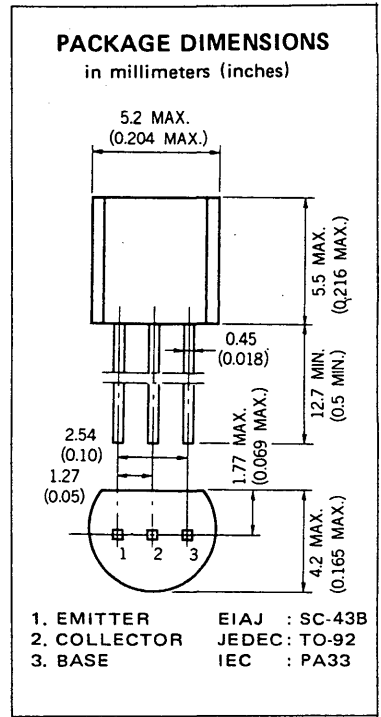
**DESCRIPTION** The 2SC2001 is designed for use in output stage of portable RADIO and cassette type tape recorder, general purpose applications.

**FEATURES**

- High total power dissipation.  
 $P_T$  : 600 mW
- High  $h_{FE}$  and low  $V_{CE(sat)}$   
 $h_{FE}$  ( $I_C = 100$  mA) : 200 TYP.  
 $V_{CE(sat)}$  (700 mA) : 0.20 V TYP.

**ABSOLUTE MAXIMUM RATINGS**

- Maximum Temperatures
- Storage Temperature ..... -55 to +150 °C
  - Junction Temperature ..... +150 °C Maximum
- Maximum Power Dissipation ( $T_a = 25$  °C)
- Total Power Dissipation ..... 600 mW
- Maximum Voltages and Currents ( $T_a = 25$  °C)
- $V_{CBO}$  Collector to Base Voltage ..... 30 V
  - $V_{CEO}$  Collector to Emitter Voltage ..... 25 V
  - $V_{EBO}$  Emitter to Base Voltage ..... 5.0 V
  - $I_C$  Collector Current ..... 700 mA
  - $I_B$  Base Current ..... 150 mA



**ELECTRICAL CHARACTERISTICS ( $T_a = 25$  °C)**

SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
$h_{FE1}^*$	DC Current Gain	90	200	400	-	$V_{CE} = 1.0$ V, $I_C = 100$ mA
$h_{FE2}^*$	DC Current Gain	50	140		-	$V_{CE} = 1.0$ V, $I_C = 700$ mA
$C_{ob}$	Collector to Base Capacitance		13	25	pF	$V_{CB} = 6.0$ V, $I_E = 0$ $f = 1.0$ MHz
$f_T$	Gain Bandwidth Product	50	170		MHz	$V_{CE} = 6.0$ V, $I_E = -10$ mA
$V_{BE}^*$	Base to Emitter Voltage	600	640	700	mV	$V_{CE} = 6.0$ V, $I_C = 10$ mA
$V_{CE(sat)}^*$	Collector Saturation Voltage		0.2	0.6	V	$I_C = 700$ mA, $I_B = 70$ mA
$V_{BE(sat)}^*$	Base Saturation Voltage		0.95	1.2	V	$I_C = 700$ mA, $I_B = 70$ mA
$I_{CBO}$	Collector Cutoff Current			100	nA	$V_{CB} = 30$ V, $I_E = 0$
$I_{EBO}$	Emitter Cutoff Current			100	nA	$V_{EB} = 5.0$ V, $I_C = 0$

\* Pulsed PW  $\leq 350$   $\mu$ s, duty cycle  $\leq 2.0$  %

Classification of  $h_{FE1}$

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

$h_{FE}$  Test Conditions :  $V_{CE} = 1.0$  V,  $I_C = 100$  mA