NEC

NPN SILICON TRANSISTOR 2SC2003

DESCRIPTION

The 2SC2003 is designed for use in driver stage of high voltage

audio equipments.

FEATURES

• High total power dissipation.

P−

: 600 mW

• High hee and high voltage.

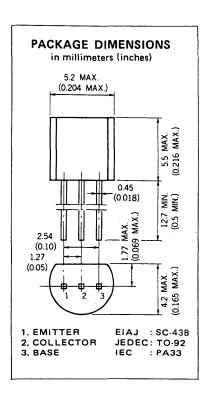
 $h_{FE} (I_C = 50 \text{ mA}) : 200 \text{ TYP}.$

VCEC

: 80 V

ABSOLUTE MAXIMUM RATINGS

Maximum Temperatures Storage Temperature -55 to +150 °C Junction Temperature +150 °C Maximum Maximum Power Dissipation (Ta = 25 °C) Total Power Dissipation 600 Maximum Voltages and Currents (Ta = 25 °C) V V_{CBO} Collector to Base Voltage80 V_{CEO} Collector to Emitter Voltage 80 ٧ V_{EBO} Emitter to Base Voltage 5.0 ٧. mΑ Base Current 60 I_B



ELECTRICAL CHARACTERISTICS (Ta = 25 °C)

SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
hFE1*	DC Current Gain	90	200	400	-	V _{CE} = 1.0 V, I _C = 50 mA
hFE2*	DC Current Gain	30	80		_	$V_{CE} = 2.0 \text{ V, } I_{C} = 300 \text{ mA}$
Cob	Collector to Base Capacitance		7.0	15	pF	$V_{CB} = 6.0 \text{ V, } I_E = 0$ f = 1.0 MHz
fT	Gain Bandwidth Product	50	140		MHz	$V_{CE} = 6.0 \text{ V}, I_{E} = -10 \text{ mA}$
VBE*	Base to Emitter Voltage	600	645	700	mV	$V_{CE} = 6.0 \text{ V, } I_{C} = 10 \text{ mA}$
VCE(sat)*	Collector Saturation Voltage		0.15	0.6	V	IC = 300 mA, IB = 30 mA
VBE(sat)*	Base Saturation Voltage		0.86	1.2	V	IC = 300 mA, IB = 30 mA
Ісво	Collector Cutoff Current			100	nΑ	V _{CB} = 80 V, I _E = 0
IEBO	Emitter Cutoff Current			100	nΑ	VEB = 5.0 V, IE = 0

^{*}Pulsed PW \leq 350 μ s, duty cycle \leq 2.0 %.

Classification of hFE1

Rank	M	L	К
Range	90 – 180	135 – 270	200 – 400

 h_{FE} Test Conditions : $V_{CE} = 1.0 \text{ V}$, $I_{C} = 50 \text{ mA}$

TYPICAL CHARACTERISTICS (Ta = 25 °C unless otherwise noted)

