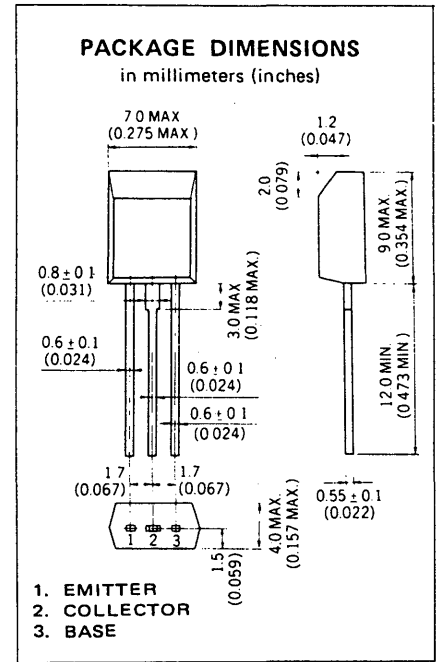


DESCRIPTION The 2SB733 is designed for use in driver and output stages of audio frequency amplifiers.

- FEATURES**
- High Total Power Dissipation $P_T : 1.0 \text{ W}$ ($T_a = 25^\circ \text{C}$)
 - High D.C. Current Gain $h_{FE} : 300 \text{ TYP.}$ ($I_C = -100 \text{ mA}$)
 - Low Collector Saturation Voltage
 $V_{CE(sat)} : -0.27 \text{ V TYP.}$ ($I_C = -1.0 \text{ A}$)
 - Complementary to the NEC 2SD773 NPN Transistor.

ABSOLUTE MAXIMUM RATINGS

- Maximum Temperatures
- Storage Temperature $-55 \text{ to } +150^\circ \text{C}$
 - Junction Temperature 150°C Maximum
- Maximum Power Dissipation ($T_a = 25^\circ \text{C}$)
- Total Power Dissipation 1.0 W
- Maximum Voltages and Current ($T_a = 25^\circ \text{C}$)
- V_{CBO} Collector to Base Voltage -20 V
 - V_{CEO} Collector to Emitter Voltage -16 V
 - V_{EBO} Emitter to Base Voltage -6.0 V
 - I_C Collector Current -1.0 A



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

SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
h_{FE1}	DC Current Gain	135	300	600	—	$V_{CE} = -2.0 \text{ V}, I_C = -100 \text{ mA}$
h_{FE2}	DC Current Gain	100			—	$V_{CE} = -1.0 \text{ V}, I_C = -1.0 \text{ A}$
f_T	Gain Bandwidth Product	50			MHz	$V_{CE} = -2.0 \text{ V}, I_E = 10 \text{ mA}$
C_{ob}	Output Capacitance		27	60	pF	$V_{CB} = -10 \text{ V}, I_E = 0, f = 1.0 \text{ MHz}$
I_{CBO}	Collector Cutoff Current			-100	nA	$V_{CB} = -16 \text{ V}, I_E = 0$
I_{EBO}	Emitter Cutoff Current			-100	nA	$V_{EB} = -6.0 \text{ V}, I_C = 0$
V_{BE}	Base to Emitter Voltage	-0.55	-0.60	-0.65	V	$V_{CE} = -6.0 \text{ V}, I_C = -5.0 \text{ mA}$
$V_{CE(sat)}$	Collector Saturation Voltage		-0.27	-0.40	V	$I_C = -1.0 \text{ A}, I_B = -50 \text{ mA}$
$V_{BE(sat)}$	Base Saturation Voltage		-0.94	-1.20	V	$I_C = -1.0 \text{ A}, I_B = -50 \text{ mA}$

Classification of h_{FE1}

Rank	L ₂	K ₃	K ₄	U ₄	U ₅
Range	135 - 270	200 - 320	250 - 400	300 - 480	360 - 600

Test Conditions : $V_{CE} = -2.0 \text{ V}, I_C = -100 \text{ mA}$

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

