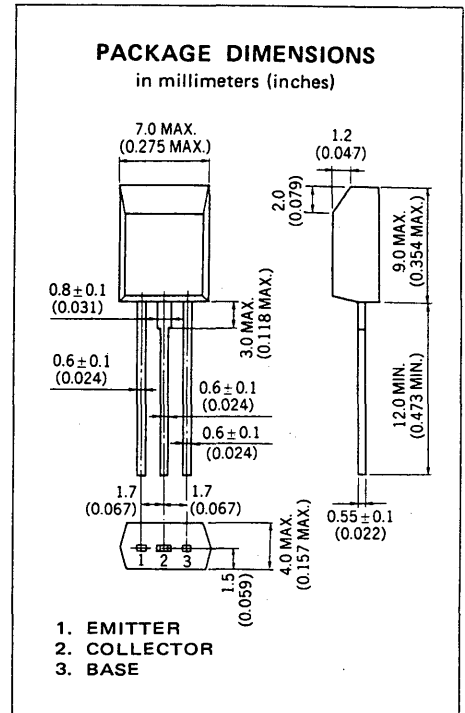


**DESCRIPTION** The 2SD774 is designed for use in driver and output stages of audio frequency amplifiers.

- FEATURES**
- High Total Power Dissipation  $P_T : 1.0 \text{ W}$  ( $T_a = 25^\circ \text{C}$ )
  - High Voltage  $V_{CE} : 50 \text{ V MIN.}$
  - Complementary to the NEC 2SB734 PNP Transistor.

**ABSOLUTE MAXIMUM RATINGS**

- Maximum Temperatures
- Storage Temperature . . . . .  $-55 \text{ to } +150^\circ \text{C}$
  - Junction Temperature . . . . .  $150^\circ \text{C Maximum}$
- Maximum Power Dissipation ( $T_a = 25^\circ \text{C}$ )
- Total Power Dissipation . . . . .  $1.0 \text{ W}$
- Maximum Voltages and Current ( $T_a = 25^\circ \text{C}$ )
- $V_{CBO}$  Collector to Base Voltage . . . . .  $100 \text{ V}$
  - $V_{CEO}$  Collector to Emitter Voltage . . . . .  $50 \text{ V}$
  - $V_{EBO}$  Emitter to Base Voltage . . . . .  $6.0 \text{ V}$
  - $I_C$  Collector Current . . . . .  $1.0 \text{ A}$



**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	70			—	$V_{CE} = 1.0 \text{ V}, I_C = 1.0 \text{ A}$
$f_T$	Gain Bandwidth Product	50	95		MHz	$V_{CE} = 2.0 \text{ V}, I_E = -10 \text{ mA}$
$C_{ob}$	Output Capacitance		16	35	pF	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1.0 \text{ MHz}$
$I_{CBO}$	Collector Cutoff Current			100	nA	$V_{CB} = 50 \text{ V}, I_E = 0$
$I_{EBO}$	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		0.23	0.30	V	$I_C = 1.0 \text{ A}, I_B = 50 \text{ mA}$
$V_{BE(sat)}$	Base Saturation Voltage		0.92	1.20	V	$I_C = 1.0 \text{ A}, I_B = 50 \text{ mA}$

**Classification of  $h_{FE1}$**

Rank	L <sub>2</sub>	K <sub>3</sub>	K <sub>4</sub>	U <sub>4</sub>	U <sub>5</sub>
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 (Ta=25 °C)

