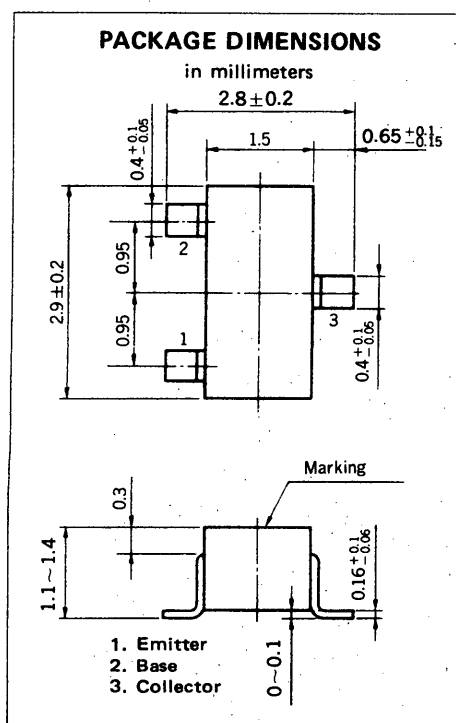


## DATA SHEET

**NEC****SILICON TRANSISTOR  
2SD596****AUDIO FREQUENCY POWER AMPLIFIER  
NPN SILICON EPITAXIAL TRANSISTOR  
MINI MOLD****DESCRIPTION**

The 2SD596 is designed for use in small type equipments especially recommended for hybrid integrated circuit and other applications.

**FEATURES**

- Micro package.
- High DC current gain.  $h_{FE}$  : 200 TYP. ( $V_{CE} = 1.0$  V,  $I_C = 100$  mA)
- Complimentary to NEC 2SB624 PNP Transistor.

**ABSOLUTE MAXIMUM RATINGS**

Maximum Voltages and Current ( $T_A = 25^\circ\text{C}$ )

Collector to Base Voltage	$V_{CBO}$	30	V
Collector to Emitter Voltage	$V_{CEO}$	25	V
Emitter to Base Voltage	$V_{EBO}$	5.0	V
Collector Current (DC)	$I_C$	700	mA

Maximum Power Dissipation

Total Power Dissipation at $25^\circ\text{C}$ Ambient Temperature	$P_T$	200	mW
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Maximum Temperatures

Storage Temperature Range	$T_{stg}$	-55 to +150	$^\circ\text{C}$
Operating Junction Temperature	$T_j$	150	$^\circ\text{C}$

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

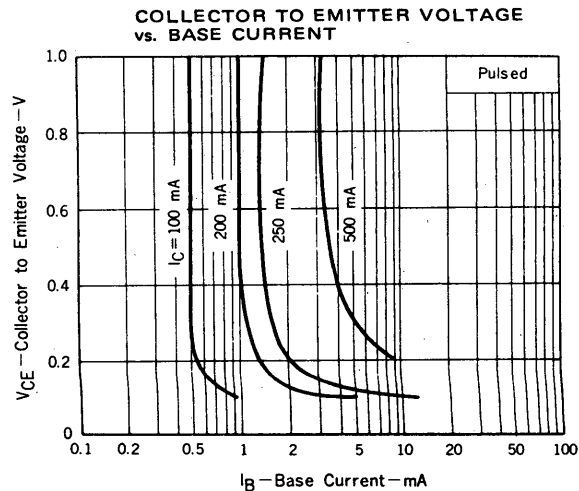
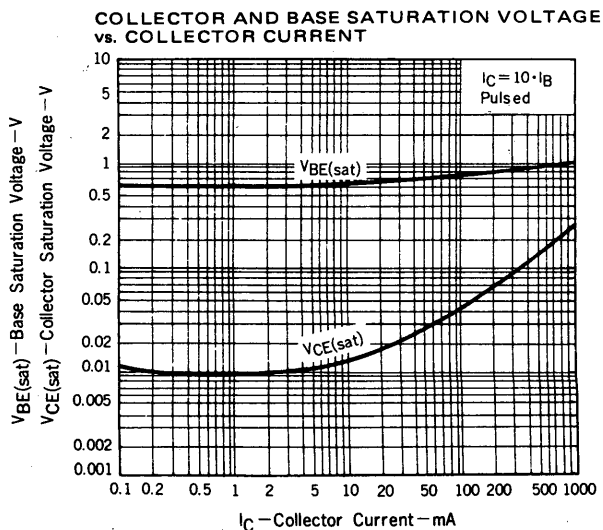
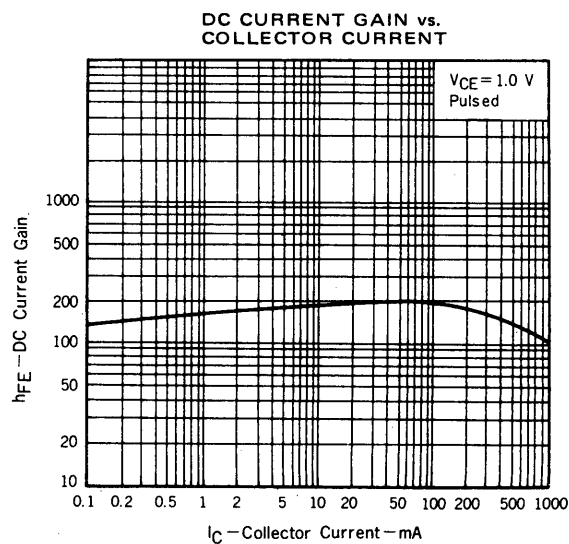
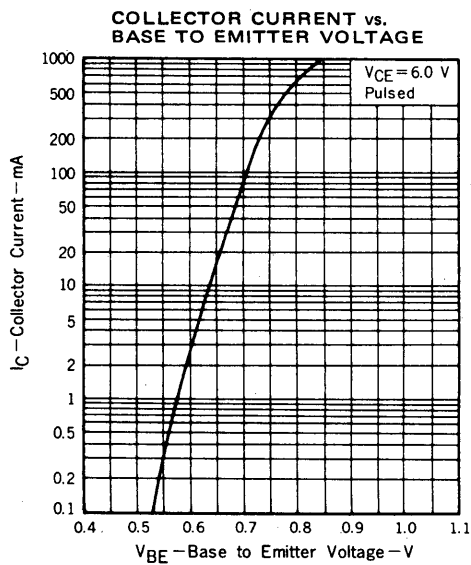
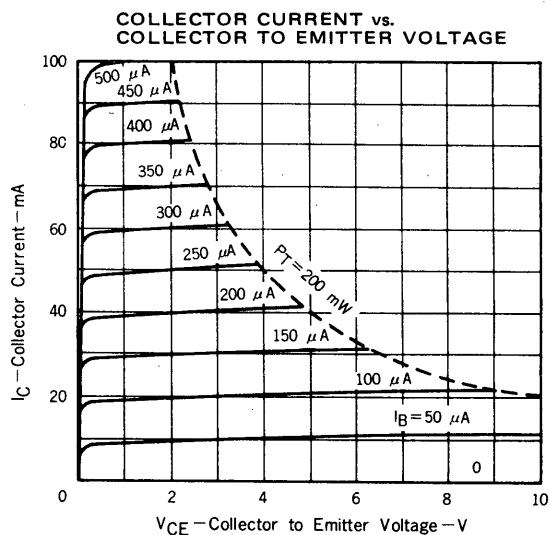
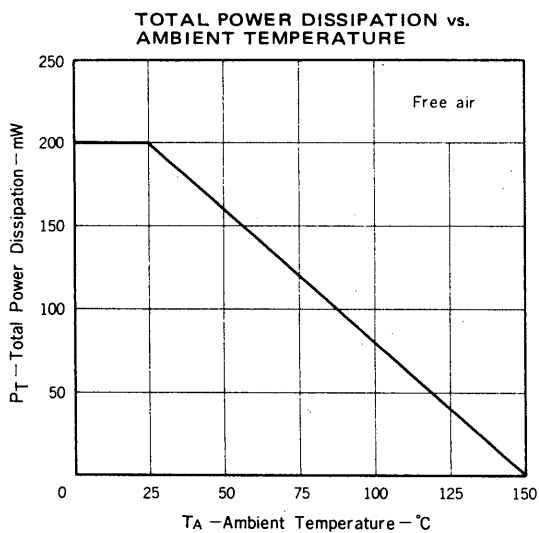
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	$I_{CBO}$			100	nA	$V_{CB} = 30$ V, $I_E = 0$
Emitter Cutoff Current	$I_{EBO}$			100	nA	$V_{EB} = 5.0$ V, $I_C = 0$
DC Current Gain	$h_{FE1}$	110	200	400		$V_{CE} = 1.0$ V, $I_C = 100$ mA *
DC Current Gain	$h_{FE2}$	50				$V_{CE} = 1.0$ V, $I_C = 700$ mA *
Base to Emitter Voltage	$V_{BE}$	600	640	700	mV	$V_{CE} = 6.0$ V, $I_C = 10$ mA *
Collector Saturation Voltage	$V_{CE(sat)}$		0.22	0.6	V	$I_C = 700$ mA, $I_B = 70$ mA *
Output Capacitance	$C_{ob}$		12		pF	$V_{CB} = 6.0$ V, $I_E = 0$ , $f = 10$ MHz
Gain Bandwidth Product	$f_T$		170		MHz	$V_{CE} = 6.0$ V, $I_E = -10$ mA

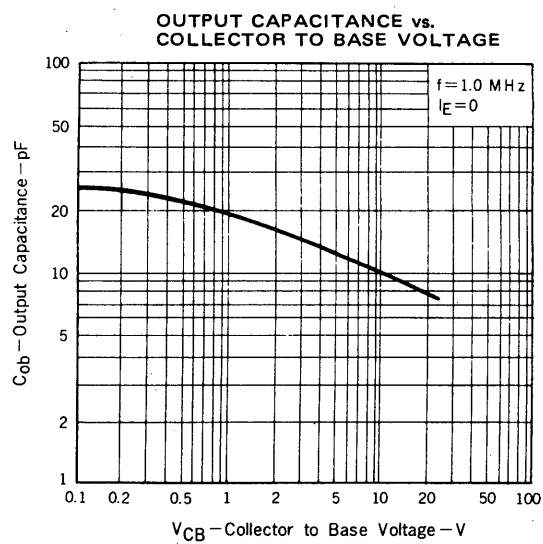
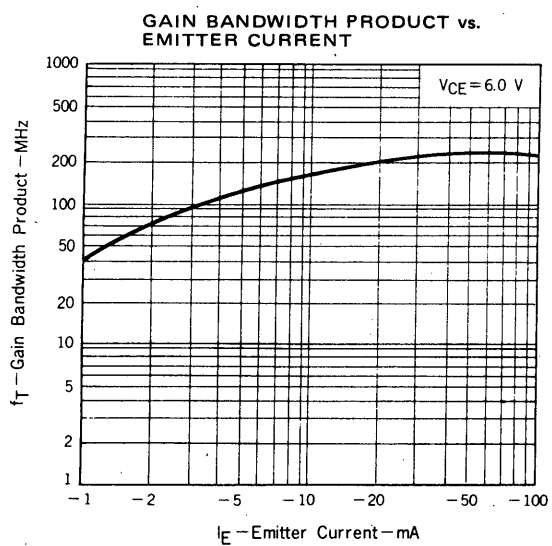
\* Pulsed:  $PW \leq 350$   $\mu\text{s}$ , Duty Cycle  $\leq 2\%$

 **$h_{FE1}$  Classification**

Marking	DV1	DV2	DV3	DV4	DV5
$h_{FE}$	110 to 180	135 to 220	170 to 270	200 to 320	250 to 400

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





[MEMO]

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Anti-radioactive design is not implemented in this product.

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