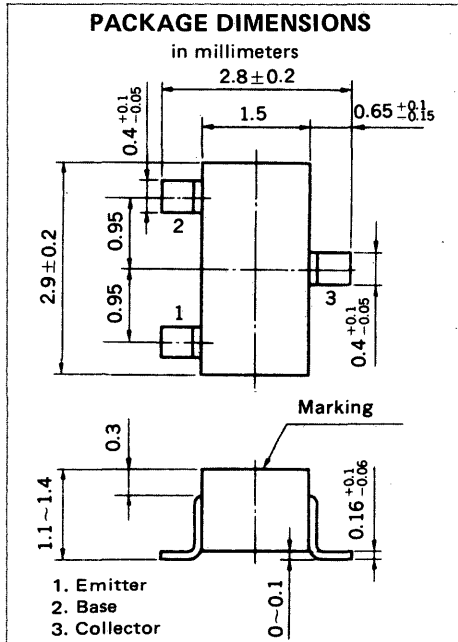


# SILICON TRANSISTORS

## 2SC3624, 2SC3624A

### AUDIO FREQUENCY AMPLIFIER, SWITCHING NPN SILICON EPITAXIAL TRANSISTORS MINI MOLD



#### FEATURES

- High DC Current Gain :  $h_{FE} = 1000$  to  $3200$
- Low  $V_{CE(sat)}$  :  $V_{CE(sat)} = 0.07$  V TYP.
- High  $V_{EBO}$  :  $V_{EBO} = 15$  V (2SC3624A)

#### ABSOLUTE MAXIMUM RATINGS

Maximum Voltages and Current ( $T_a = 25^\circ\text{C}$ )		2SC3624	2SC3624A	
Collector to Base Voltage	$V_{CB0}$	60		V
Collector to Emitter Voltage	$V_{CEO}$	50		V
Emitter to Base Voltage	$V_{EBO}$	12	15	V
Collector Current (DC)	$I_C$	150		mA
Maximum Power Dissipation				
Total Power Dissipation at $25^\circ\text{C}$ Ambient Temperature	$P_T$	200		mW
Maximum Temperatures				
Junction Temperature	$T_j$	150		$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to +150		$^\circ\text{C}$

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

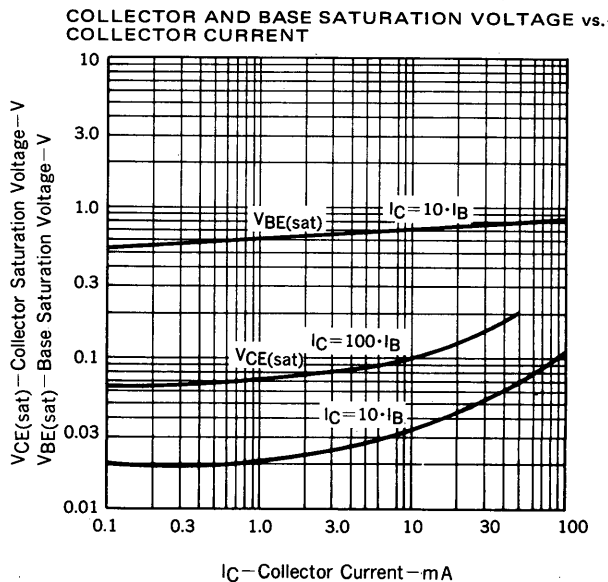
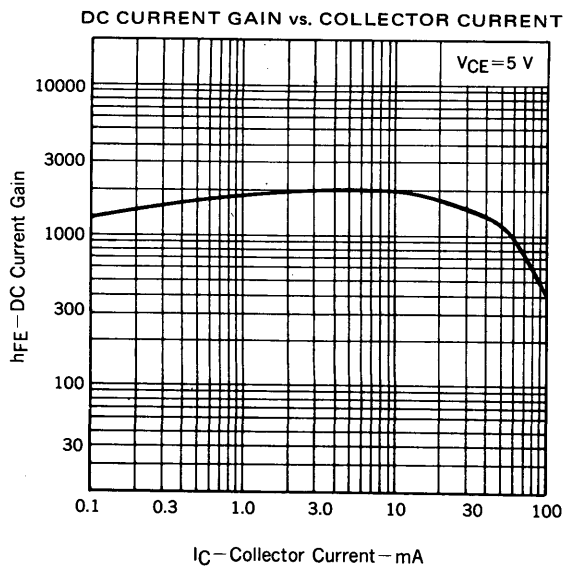
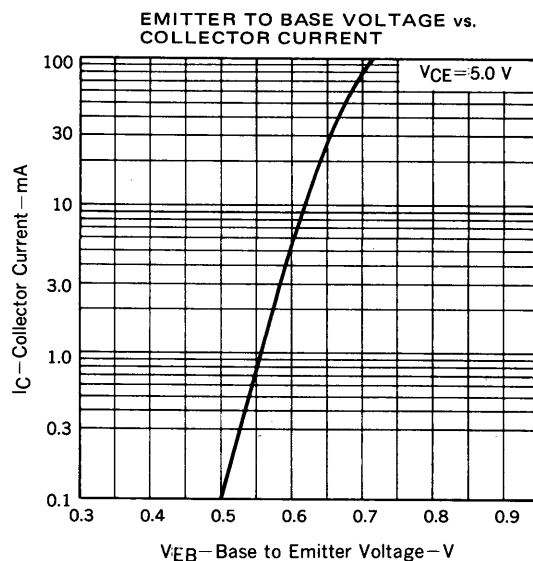
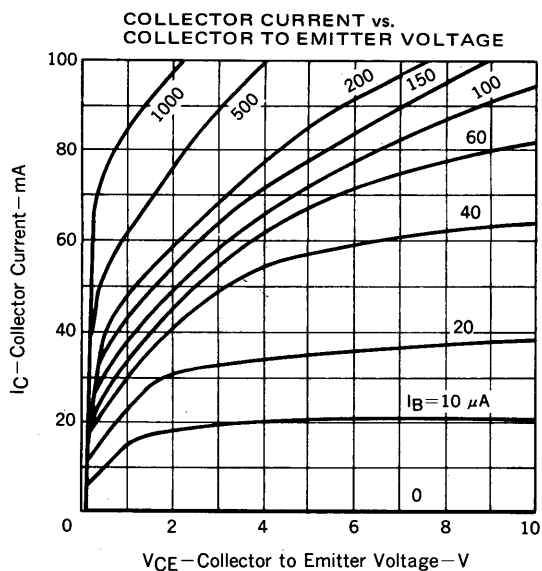
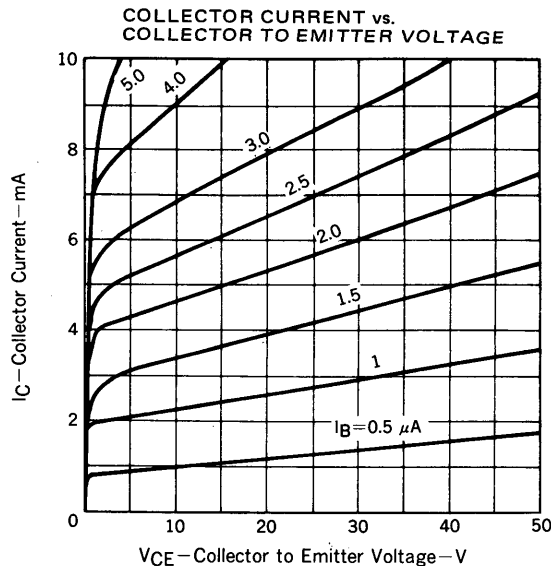
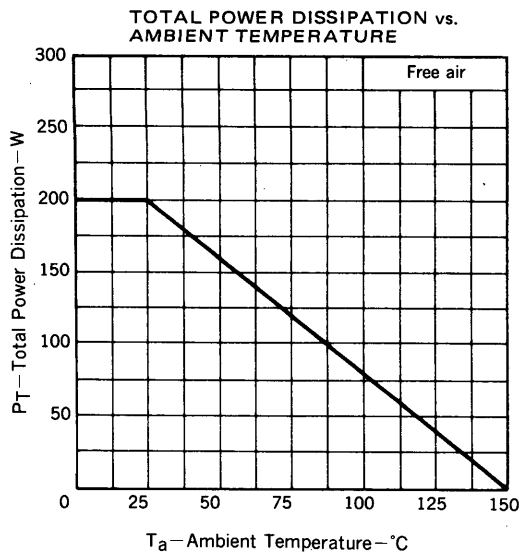
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	$I_{CBO}$			100	nA	$V_{CB} = 50$ V, $I_E = 0$
Emitter Cutoff Current	$I_{EBO}$			100	nA	$V_{EB} = 10$ V, $I_C = 0$
DC Current Gain	$h_{FE1}^*$	1000	1800	3200		$V_{CE} = 5.0$ V, $I_C = 1.0$ mA
DC Current Gain	$h_{FE2}^*$	200	350			$V_{CE} = 5.0$ V, $I_C = 100$ mA
Base to Emitter Voltage	$V_{BE}^*$		0.56		V	$V_{CE} = 5.0$ V, $I_C = 1.0$ mA
Collector Saturation Voltage	$V_{CE(sat)}^*$		0.07	0.3	V	$I_C = 50$ mA, $I_B = 5.0$ mA
Base Saturation Voltage	$V_{BE(sat)}^*$		0.8	1.2	V	$I_C = 50$ mA, $I_B = 5.0$ mA
Gain Bandwidth Product	$f_T$		250		MHz	$V_{CE} = 5.0$ V, $I_E = -10$ mA
Output Capacitance	$C_{ob}$		3.0		pF	$V_{CB} = 5$ V, $I_E = 0$ , $f = 1.0$ MHz
Turn-on Time	$t_{on}$		0.13		ns	$V_{CC} = 10$ V, $V_{BE(off)} = -2.7$ V
Storage Time	$t_{stg}$		0.72		ns	$I_C = 50$ mA
Turn-off Time	$t_{off}$		1.22		ns	$I_{B1} = -I_{B2} = 1.0$ mA

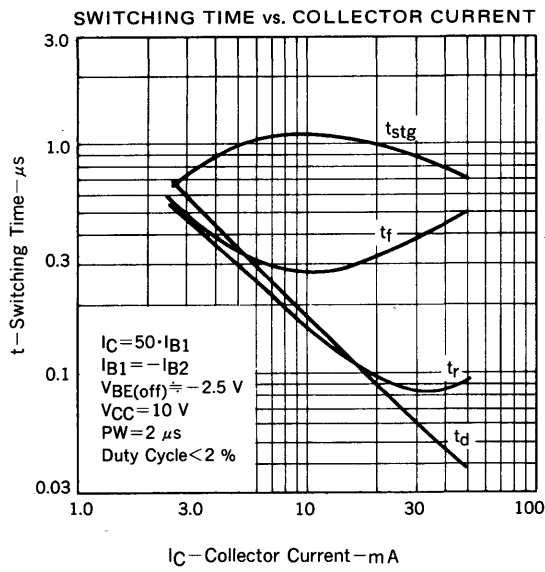
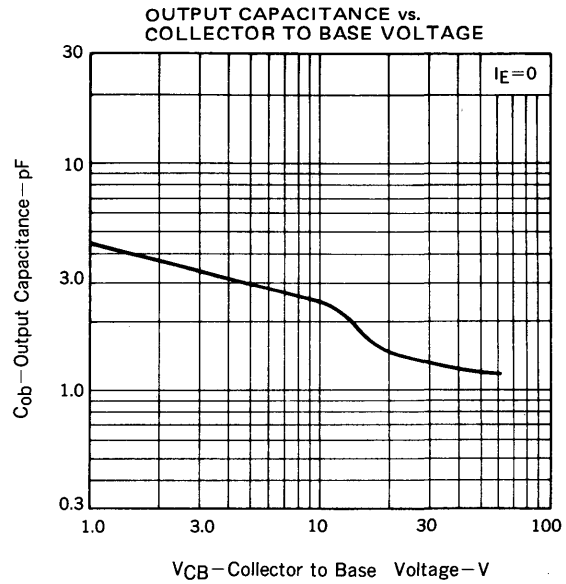
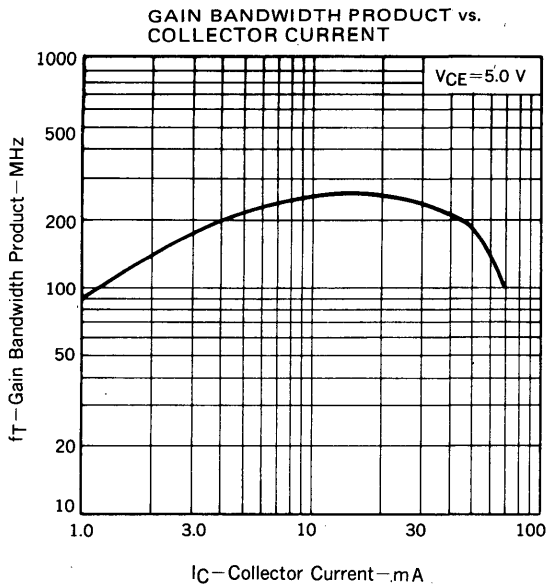
\*Pulsed:  $PW \leq 350 \mu\text{s}$ , Duty Cycle  $\leq 2\%$

#### $h_{FE}$ Classification

Marking	2SC3624	L17	L18
	2SC3624A	L15	L16
$h_{FE1}$	1000 to 2000	1600 to 3200	

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





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