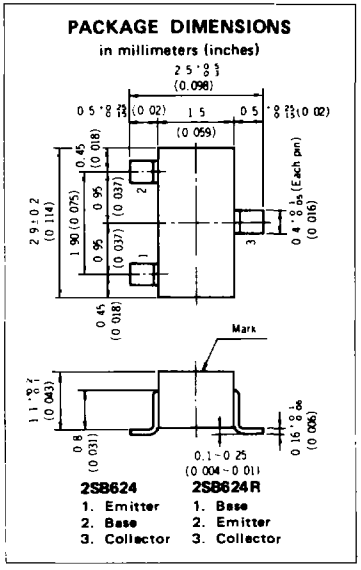
[redacted] 2SB624,2SB624R

Audio Frequency Power Amplifier
PNP Silicon Epitaxial Transistor



- Complimentary to 2SD596, 2SD596R
- High DC Current Gain: h_{FE} = 200 TYP. (V_{CE} = −1.0V, I_C = −100mA)

ABSOLUTE MAXIMUM RATINGS

Maximum Voltages and Current (Ta = 25°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°C Ambient Temperature	P_T	200	mW
Maximum Temperatures			
Junction Temperature	Tj	150	°C
Storage Temperature Range	T_{stg}	−55 to + 150	°C

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	I_{CBO}			−0.1	μA	V_{CB}=−30V, I_E=0
Emitter Cutoff Current	I_{EBO}			−0.1	μA	V_{EB}=−5.0V, I_C=0
DC Current Gain	h_{FE1}	110	200	400		V_{CE}=−1.0V, I_C=−100mA*
DC Current Gain	h_{FE2}	50				V_{CE}=−1.0V, I_C=−700mA*
Collector Saturation Voltage	$V_{CE(sat)}$		−0.25	−0.6	V	I_C=−700mA, I_B=−70mA*
Base to Emitter Voltage	V_{BE}	−600	−640	−700	mV	V_{CE}=−6.0V, I_C=−10mA*
Gain Bandwidth Product	f_T		160		MHz	V_{CE}=−6.0V, I_E=10mA
Output Capacitance	C_{ob}		17		pF	V_{CB}=−6.0V, I_E=0, f=1.0MHz

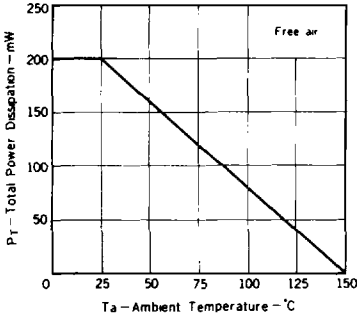
* Pulsed. PW ≦ 350 μs, duty cycle ≦ 2%

h_{FE1} Classification

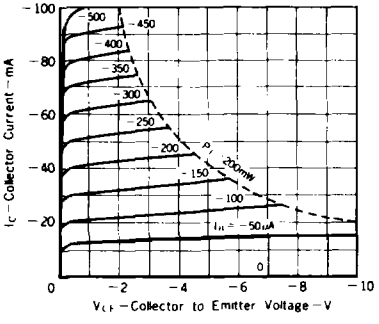
MARK	2SB624	BV1	BV2	BV3	BV4	BV5
	2SB624R	1BV	2BV	3BV	4BV	5BV
h_{FE1}		110–180	135–220	170–270	200–320	250–400

TYPICAL CHARACTERISTICS (Ta = 25°C)

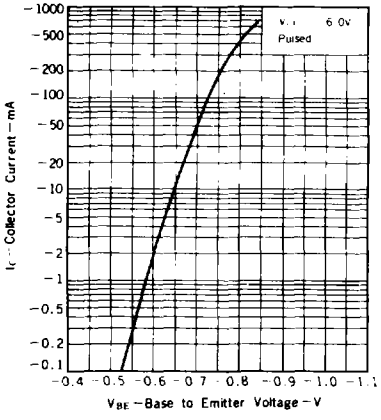
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



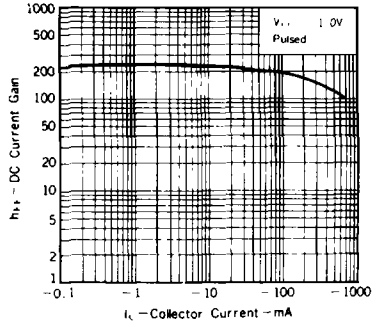
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



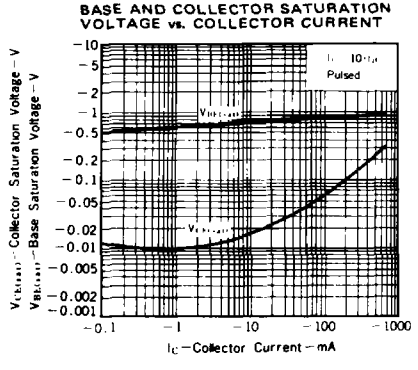
COLLECTOR CURRENT vs. BASE TO EMITTER VOLTAGE



DC CURRENT GAIN vs. COLLECTOR CURRENT



BASE AND COLLECTOR SATURATION VOLTAGE vs. COLLECTOR CURRENT



5