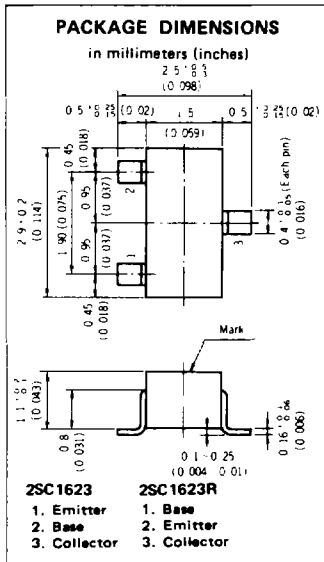


# 2SC1623, 2SC1623R

## Audio Frequency and 455 kHz IF Amplifier NPN Silicon Epitaxial Transistor



- High DC Current Gain:  $h_{FE}=200$  TYP. ( $V_{CE}=6.0V$ ,  $I_C=1.0mA$ )
- High Voltage:  $V_{CEO}=50V$

### ABSOLUTE MAXIMUM RATINGS

Maximum Voltages and Current ( $T_a=25^\circ C$ )

Collector to Base Voltage	$V_{CBO}$	60	V
Collector to Emitter Voltage	$V_{CEO}$	50	V
Emitter to Base Voltage	$V_{EBO}$	5.0	V
Collector Current (DC)	$I_C$	100	mA

Maximum Power Dissipation

Total Power Dissipation at $25^\circ C$ Ambient Temperature	$P_T$	150	mW
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Maximum Temperatures

Junction Temperature	$T_j$	125	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55 to +125	$^\circ C$

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

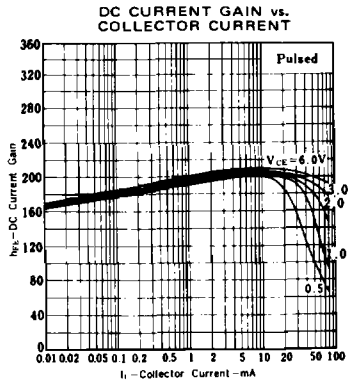
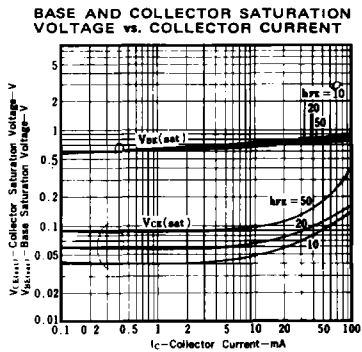
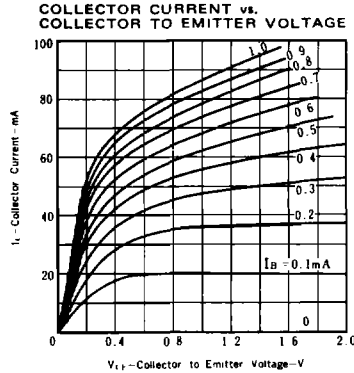
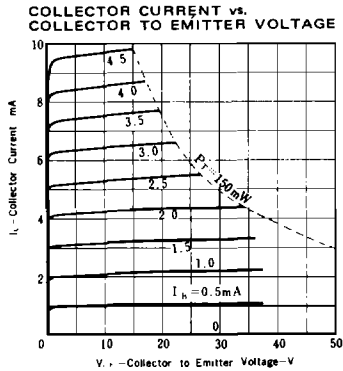
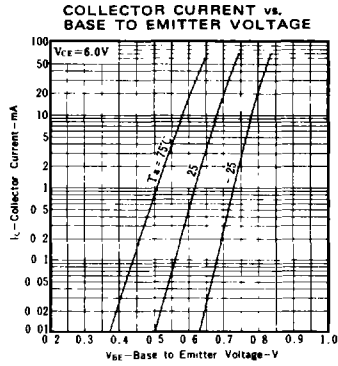
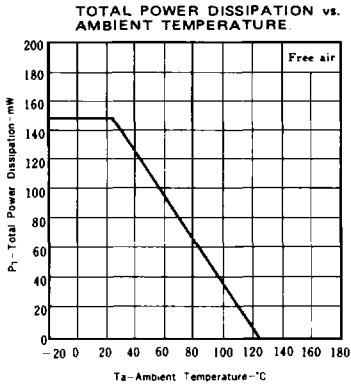
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	$I_{CBO}$			0.1	$\mu A$	$V_{CB}=60V$ , $I_E=0$
Emitter Cutoff Current	$I_{EBO}$			0.1	$\mu A$	$V_{EB}=5.0V$ , $I_C=0$
DC Current Gain	$h_{FE}$	60	200	600		$V_{CE}=6.0V$ , $I_C=1.0mA^*$
Collector Saturation Voltage	$V_{CE(sat)}$		0.15	0.3	V	$I_C=100mA$ , $I_B=10mA$
Base Saturation Voltage	$V_{BE(sat)}$		0.86	1.0	V	$I_C=100mA$ , $I_B=10mA$
Base Emitter Voltage	$V_{BE}$	0.55	0.62	0.65	V	$V_{CE}=6.0V$ , $I_C=1.0mA$
Gain Bandwidth Product	$f_T$		250		MHz	$V_{CE}=6.0V$ , $I_E=-10mA$
Output Capacitance	$C_{ob}$		3.0		pF	$V_{CB}=6.0V$ , $I_E=0$ , $f=1.0MHz$

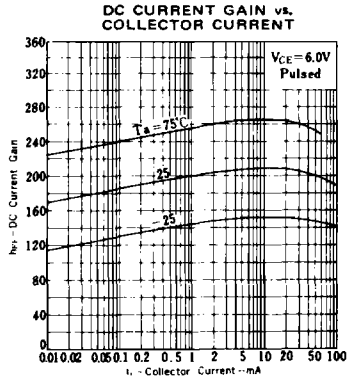
\* Pulsed:  $PW \leq 350\mu s$ , duty cycle  $\leq 2\%$

### $h_{FE}$ Classification

MARK	2SC1623	L3	L4	L5	L6	L7
	2SC1623R	3L	4L	5L	6L	7L
$h_{FE}$		60 - 120	90 - 180	135 - 270	200 - 400	300 - 600

TYPICAL CHARACTERISTICS (T<sub>a</sub> = 25°C)





**NORMALIZED h PARAMETER vs. COLLECTOR TO EMITTER VOLTAGE**

