

### FEATURES

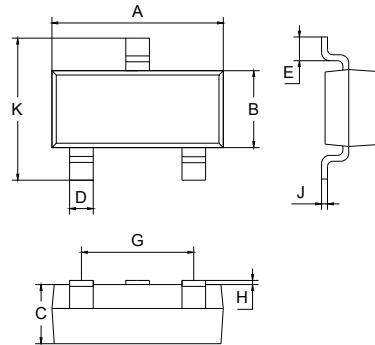
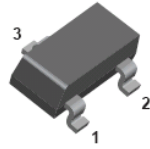
- Complementary to 2SC1623.
- High DC current gain:  $h_{FE}=200$ typ.  
( $V_{CE}=-6.0V, I_C=-1.0mA$ )
- High Voltage:  $V_{CEO}=-50V$ .

### APPLICATIONS

- Audio frequency, general purpose amplifier.

### ORDERING INFORMATION

Type No.	Marking
2SA812	M4/M5/M6/M7



SOT-23

SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	1.0 Typical	
D	0.4 Typical	
E	0.35	0.48
G	1.80	2.00
H	0.02	0.1
J	0.1 Typical	
K	2.20	2.60
All Dimensions in mm		

### MAXIMUM RATING @ $T_a=25^\circ C$ unless otherwise specified

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	-60	V
$V_{CEO}$	Collector-Emitter Voltage	-50	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current -Continuous	-100	mA
$P_C$	Collector Dissipation	200	mW
$T_j, T_{stg}$	Junction and Storage Temperature	-55 to +150	$^\circ C$

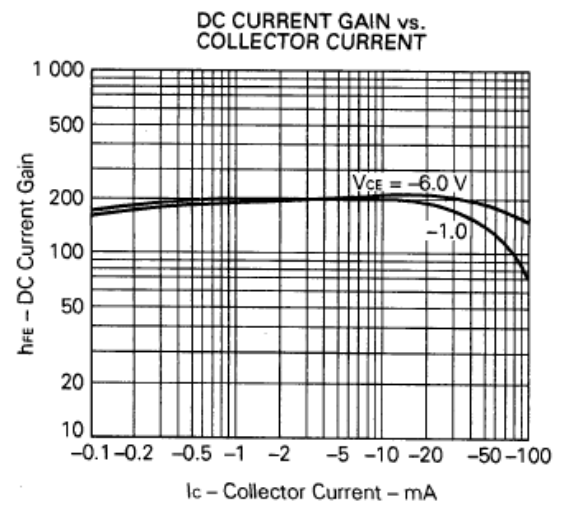
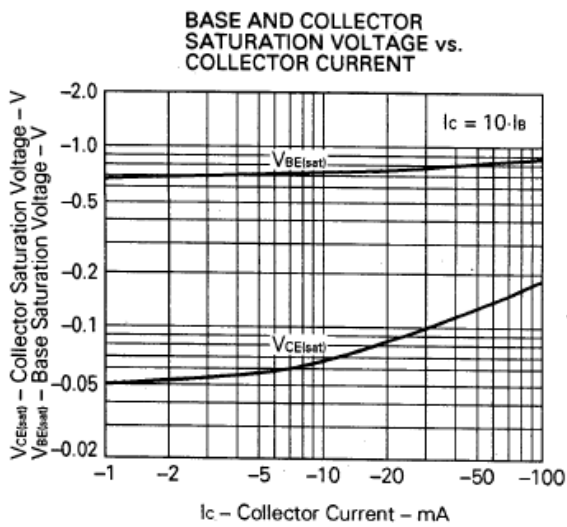
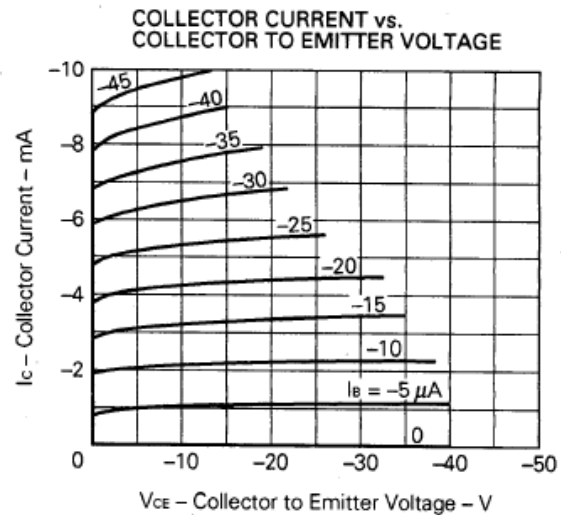
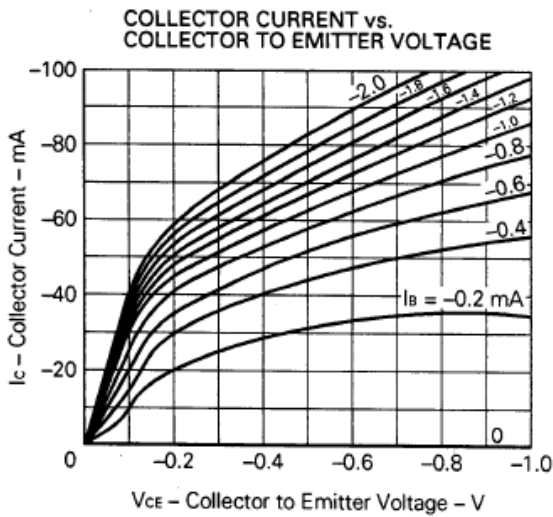
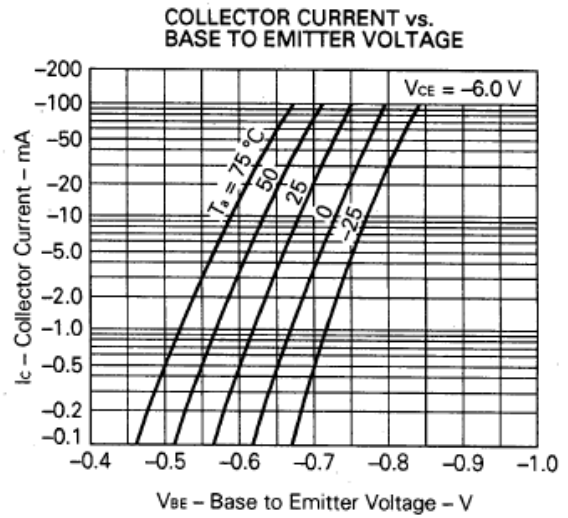
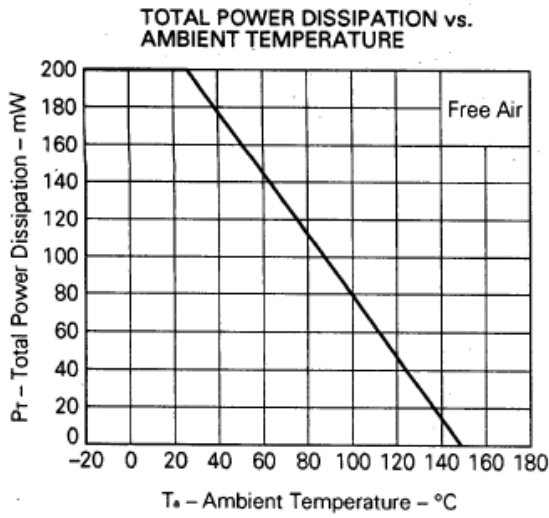
### ELECTRICAL CHARACTERISTICS @ $T_a=25^\circ C$ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-100\mu A, I_E=0$	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1mA, I_B=0$	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-100\mu A, I_C=0$	-5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=-60V, I_E=0$			-0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=-5V, I_C=0$			-0.1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE}=-6V, I_C=-1mA$	90	200	600	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-100mA, I_B=-10mA$		-0.18	-0.3	V
Base-emitter voltage	$V_{BE}$	$I_C=-1mA, V_{CE}=-6V$	-0.58	-0.62	-0.68	V
Transition frequency	$f_T$	$V_{CE}=-6V, I_C=-10mA$		180		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=-10V, I_E=0, f=1MHz$		4.5		pF

### CLASSIFICATION OF $h_{FE(1)}$

Range	M4	M5	M6	M7
Marking	90-180	135-270	200-400	300-600

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



Device	Package	Shipping
2SA812	SOT-23	3000/Tape&Reel