

**KSC2223**

**NPN EPITAXIAL SILICON TRANSISTOR**

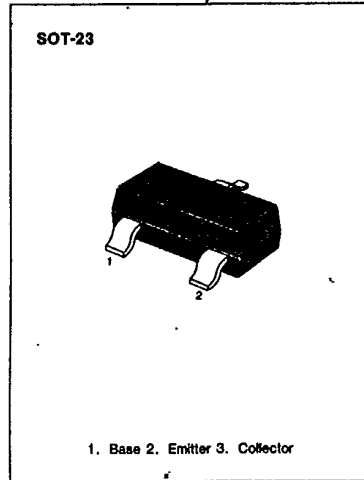
**HIGH FREQUENCY AMPLIFIER**

Very small size to assure good space factor in hybrid IC applications

- $f_T=800\text{MHz Typ. } (I_E=-1\text{mA})$
- $C_{ob}=1\text{pF Typ } (V_{CE}=6\text{V})$
- $NF=3\text{dB Typ } (f=100\text{MHz})$

**ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ )**

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CBO}$	30	V
Collector-Emitter Voltage	$V_{CEO}$	20	V
Emitter-Base Voltage	$V_{EBO}$	4	V
Collector Current	$I_C$	20	mA
Collector Dissipation	$P_C$	150	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 ~ 150	$^\circ\text{C}$



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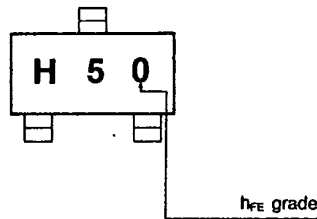
**ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ )**

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=30\text{V}, I_E=0$			0.1	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE}=6\text{V}, I_C=1\text{mA}$	40	90	180	
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$		0.1	0.3	V
Output Capacitance	$C_{ob}$	$V_{CB}=6\text{V}, I_E=0, f=1\text{MHz}$		1		pF
Current Gain Bandwidth Product	$f_T$	$V_{CE}=6\text{V}, I_C=-1\text{mA}$	400	600		MHz
Time Constant	$C_c \cdot r_{bb'}$	$V_{CB}=6\text{V}, I_E=-1\text{mA}$ $f=31.9\text{MHz}$		12		ps
Noise Figure	NF	$V_{CE}=6\text{V}, I_E=-1\text{mA}$ $f=100\text{MHz}, R_s=50\Omega$		3		dB

**$h_{FE}$  CLASSIFICATION**

Classification	R	O	Y
$h_{FE}$	40-80	60-120	90-180

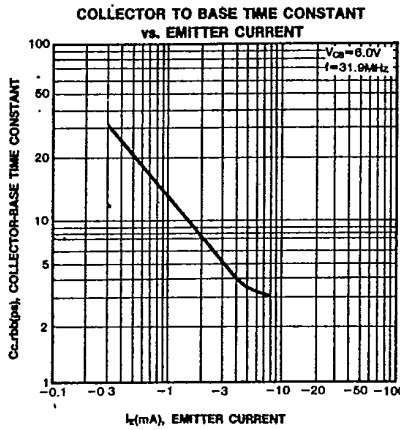
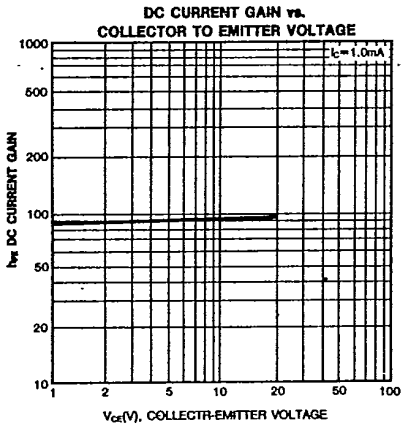
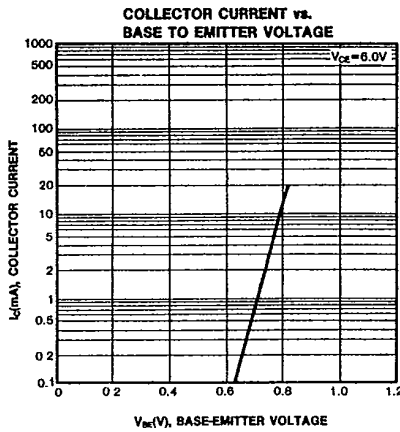
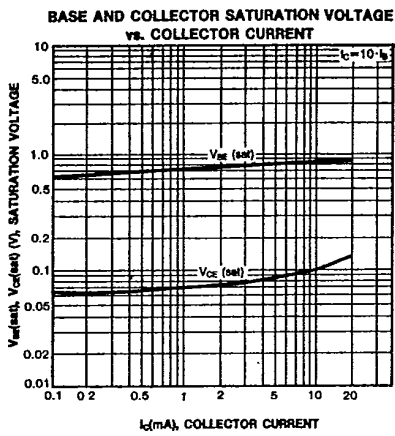
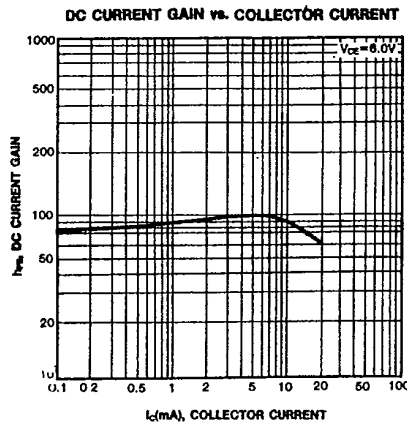
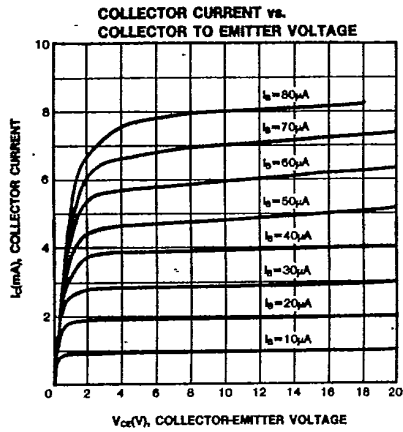
Marking



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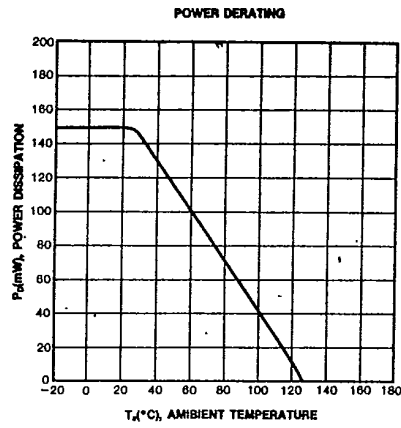
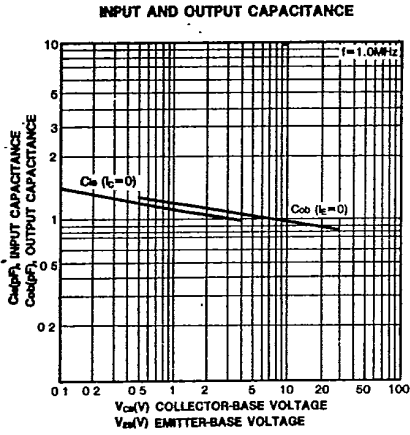
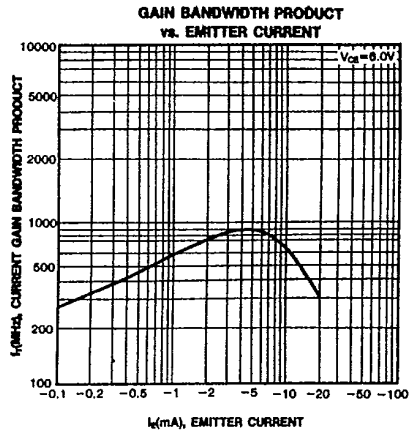
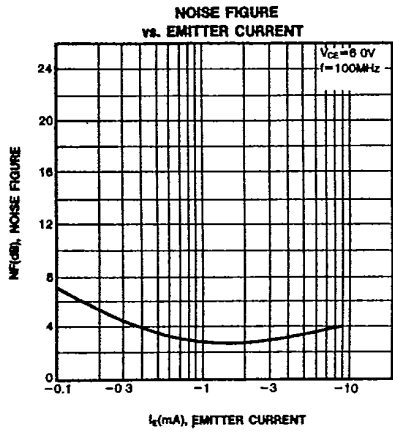
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