

KSC2758**NPN EPITAXIAL SILICON TRANSISTOR****RF. MIXER FOR UHF TUNER**

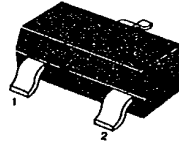
- HIGH POWER GAIN TYP. 17dB
- LOW NF TYP. 2.8dB

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	30	V
Collector-Emitter Voltage	V_{CE0}	25	V
Emitter-Base Voltage	V_{EB0}	4	V
Collector Current (DC)	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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1. Base 2. Emitter 3. Collector

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

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 25\text{V}, I_E = 0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE} = 10\text{V}, I_C = 3\text{mA}$	60	120	240	
Current Gain Bandwidth Product	f_T	$V_{CE} = 10\text{V}, I_E = -3\text{mA}$	750	1000		MHz
Output Capacitance	C_{ob}	$f = 1\text{MHz}, V_{CB} = 10\text{V}, I_E = 0$		0.6	0.8	pF
Noise Figure	NF	$V_{CB} = 10\text{V}, I_E = -3\text{mA}$ $f = 900\text{MHz}$		2.8	4.5	dB
Power Gain	G_{pb}	$V_{CB} = 10\text{V}, I_E = -3\text{mA}$ $f = 900\text{MHz}$	14	17		dB
AGC Current	I_{AGC}	$G_{pb} \text{ AGC} = I_E \text{ of } G_{pb} - 30\text{dB}$		-8	-11	mA

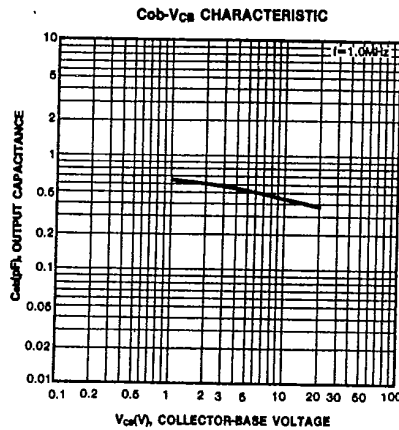
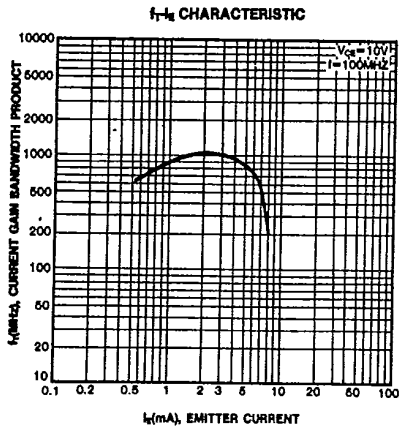
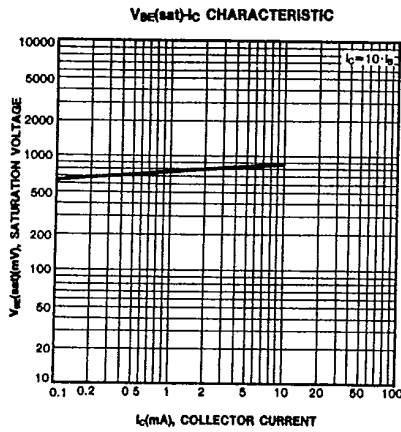
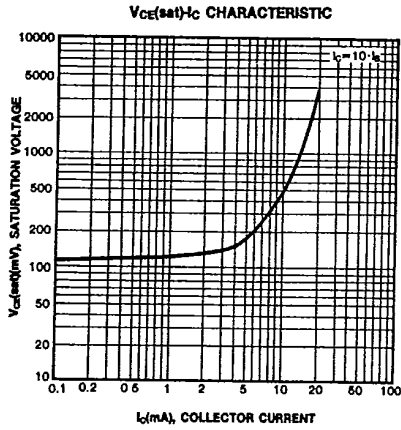
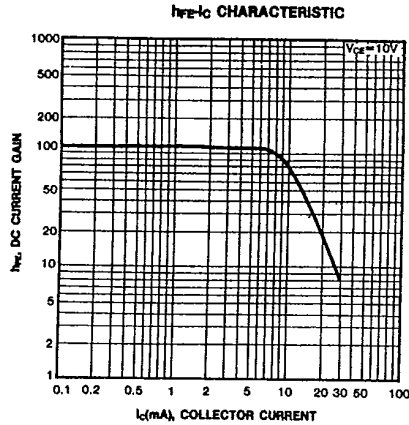
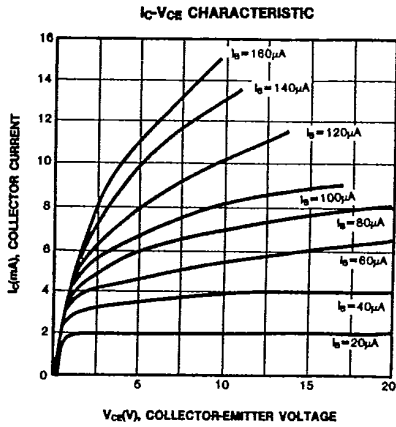
Marking



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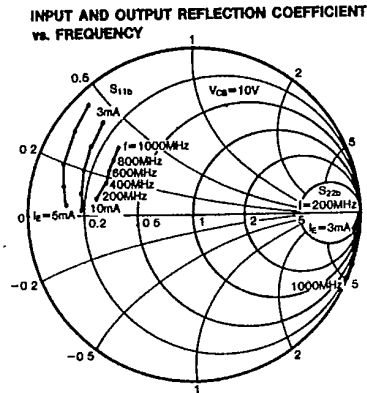
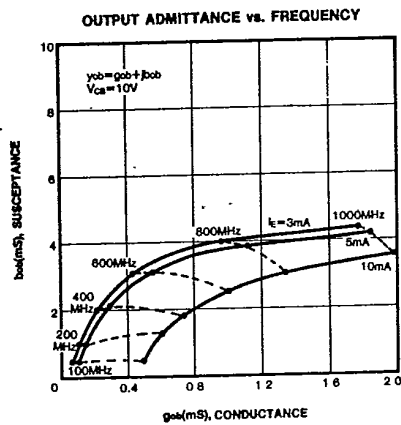
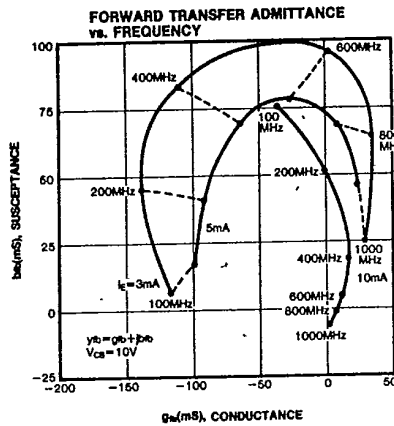
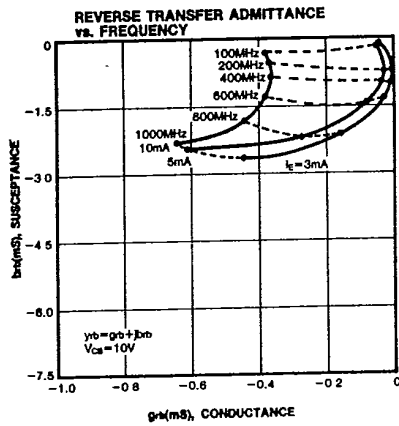
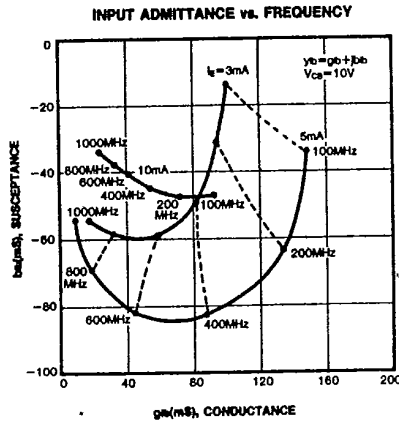
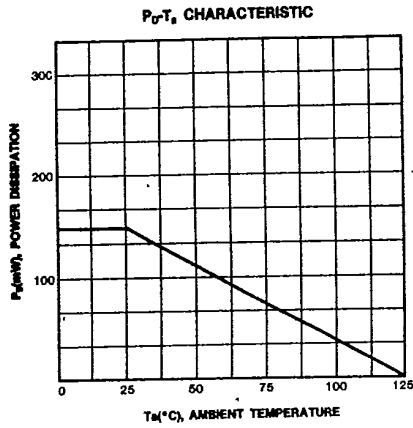


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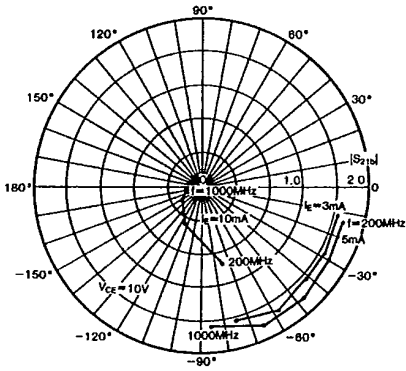


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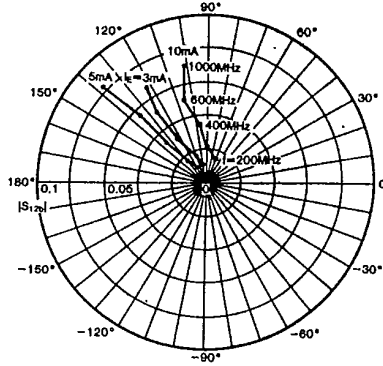
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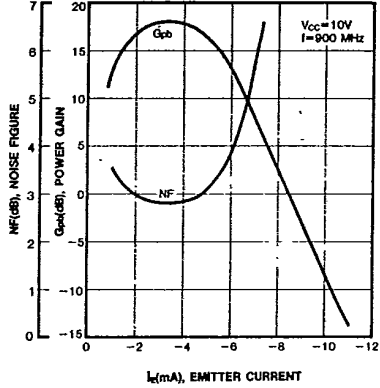
FORWARD INSERTION GAIN vs. FREQUENCY



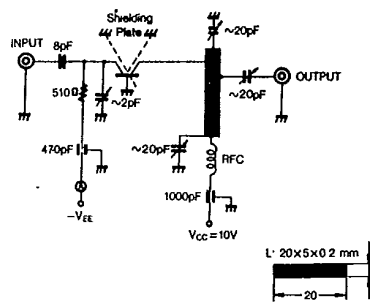
REVERSE INSERTION GAIN vs. FREQUENCY



POWER GAIN AND NOISE FIGURE vs. COLLECTOR CURRENT



900 MHz G_{pb} , NF TEST CIRCUIT



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