

KSC1070 (1)/1070 (2) NPN EPITAXIAL SILICON TRANSISTOR

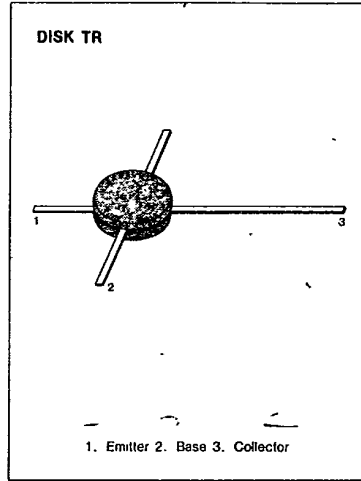
UHF TV TUNER RF AMPLIFIER, MIXER

DISK MOLD

HIGH PG, LOW NF (PG: 18dB, NF: 2.8dB, @900MHz)

ABSOLUTE MAXIMUM RATINGS (T_a = 25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V _{CB0}	30	V
Collector-Emitter Voltage	V _{CE0}	25	V
Emitter-Base Voltage	V _{EB0}	3.0	V
Collector Current	I _C	20	mA
Collector Dissipation	P _C	200	mW
Junction Temperature	T _J	150	°C
Storage Temperature	T _{stg}	-55 ~ 150	°C



ELECTRICAL CHARACTERISTICS (T_a = 25°C)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Cutoff Current	I _{CB0}	V _{CB} =25V, I _E =0			0.1	μA
DC Current Gain	h _{FE}	V _{CE} =10V, I _C =3mA	40	80	200	
Current Gain-Bandwidth Product	f _f	V _{CE} =10V, I _E =-3mA	750	1000		MHz
Output Capacitance	C _{ob}	f=1MHz, V _{CB} =10V, I _E =0		0.55	0.8	pF
Noise Figure	NF	V _{CB} =10V, I _E =-3mA f=900MHz		2.8	4.0	dB
Power Gain	PG	V _{CB} =10V, I _E =-3mA f=900MHz	14	18		dB
AGC Current: Only to C1070 (1)	I _{AGC}	I _E of PG -30dB f=900MHz	-8		-11	mA

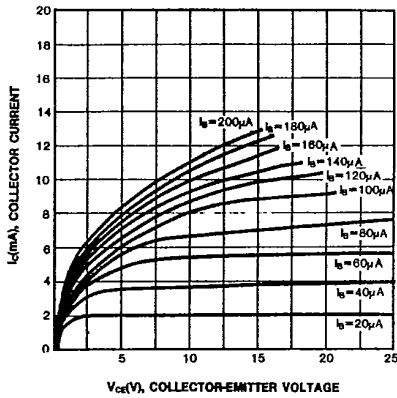
KSC1070 (1): I_{AGC} Classification P: -9~-11mA
Q: -8~-10mA

KSC1070 (2): h_{FE} Classification F: 40~200

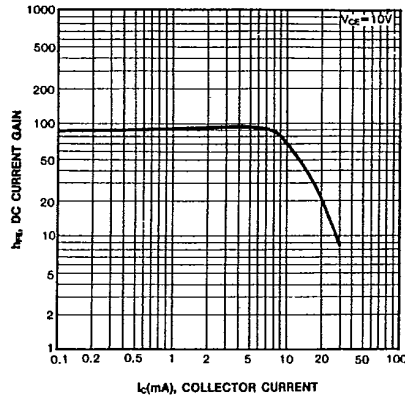
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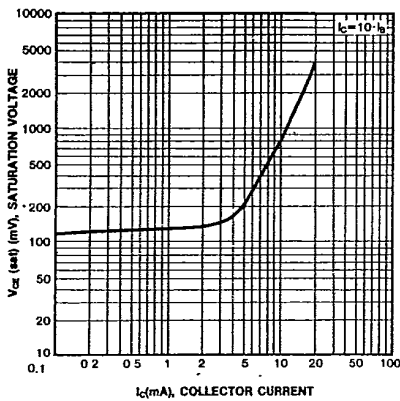
I_C - V_{CE} CHARACTERISTIC



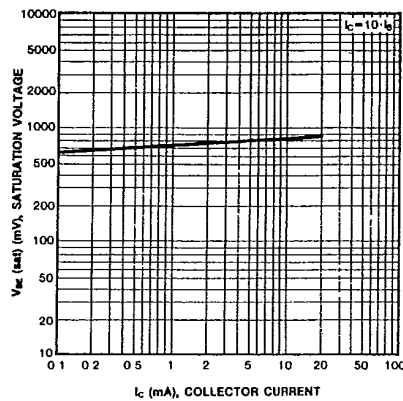
h_{FE} - I_C CHARACTERISTIC



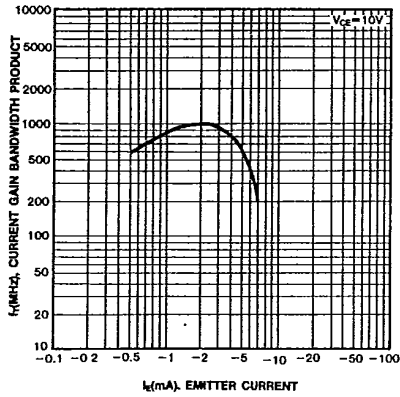
V_{CE} (sat)- I_C CHARACTERISTIC



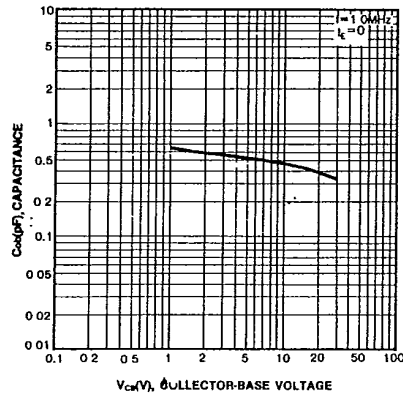
V_{BE} (sat)- I_C CHARACTERISTIC



f_T - I_E CHARACTERISTIC



C_{ob} - V_{CB} CHARACTERISTIC



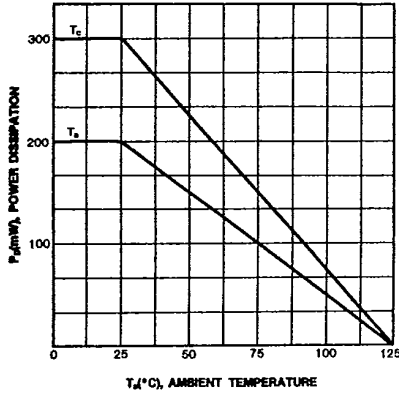
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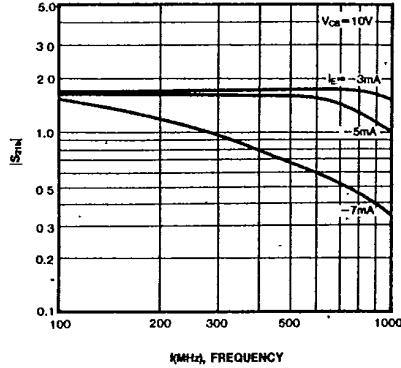
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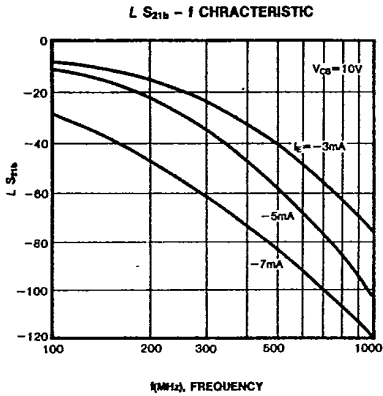
P_{TOT} - T_a CHARACTERISTIC



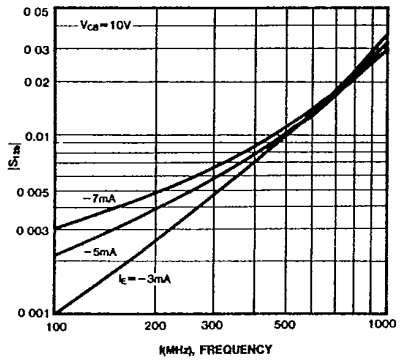
$|S_{21b}|$ - f CHARACTERISTIC



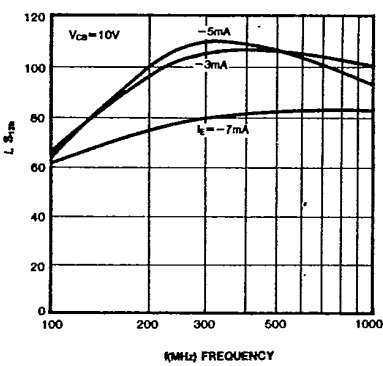
$L S_{21b}$ - f CHARACTERISTIC



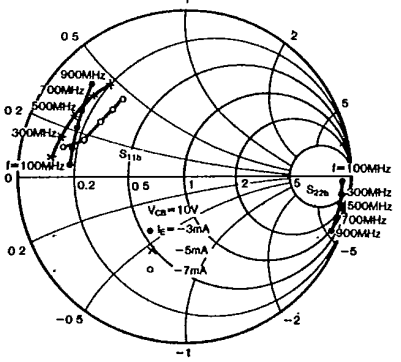
S_{12b} - f CHARACTERISTIC



$L S_{12b}$ - f CHARACTERISTIC

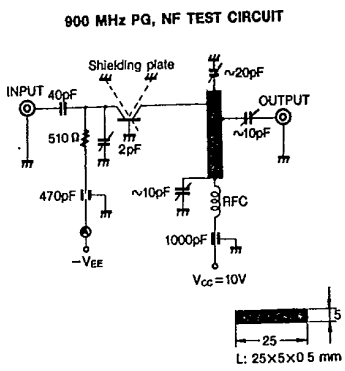
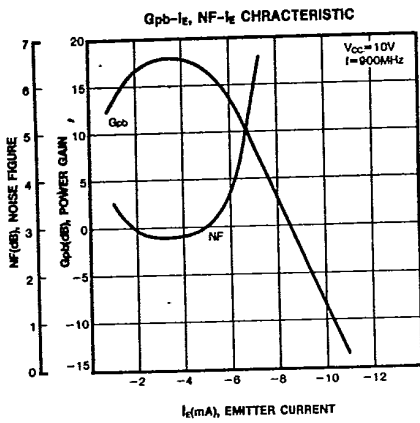
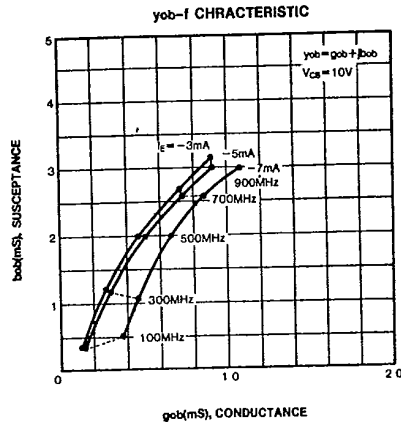
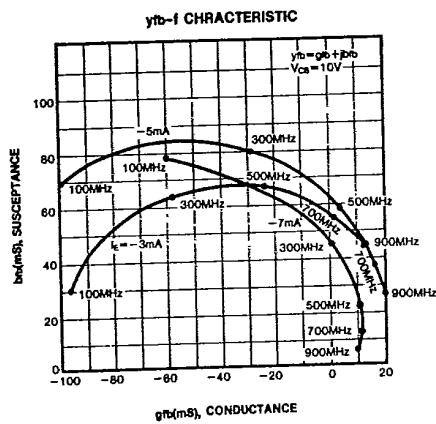
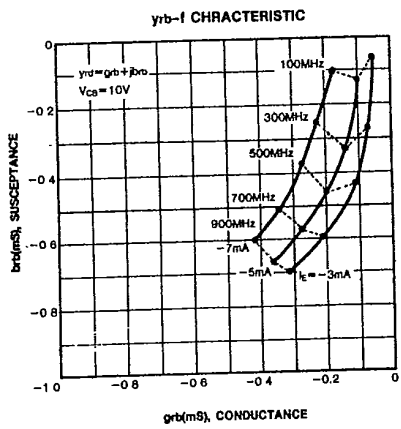
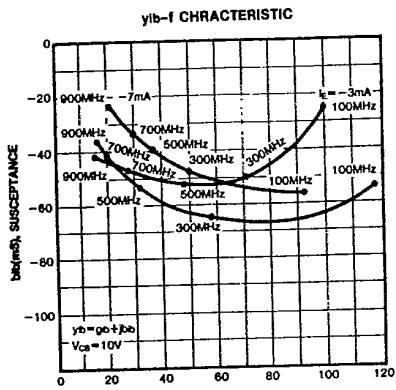


S_{11} - f, S_{22} - f



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