

**KSC2759****NPN EPITAXIAL SILICON TRANSISTOR**

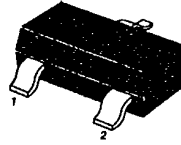
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MIXER, OSCILLATOR FOR UHF TUNER

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CB0}$	30	V
Collector-Emitter Voltage	$V_{CE0}$	14	V
Emitter-Base Voltage	$V_{EB0}$	3	V
Collector Current	$I_C$	50	mA
Collector Dissipation	$P_C$	150	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 ~ 150	$^\circ\text{C}$

SOT-23



1. Base 2. Emitter 3. Collector

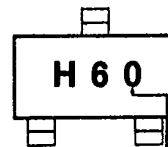
**ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )**

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 15\text{V}, I_E = 0$			0.1	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE} = 10\text{V}, I_C = 5\text{mA}$	40	100	180	
Current Gain Bandwidth Product	$f_T$	$V_{CE} = 10\text{V}, I_C = -5\text{mA}$	1.5	2		GHz
Output Capacitance	$C_{ob}$	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$		1	1.3	pF
Conversion Gain	$G_{cb}$	$V_{CB} = 10\text{V}, I_E = -5\text{mA}$ $f_{RF} = 900\text{MHz}, f_{osc} = 935\text{MHz}$ 115dB $\mu$	10	12.5		dB

 **$h_{FE}$  CLASSIFICATION**

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

Marking

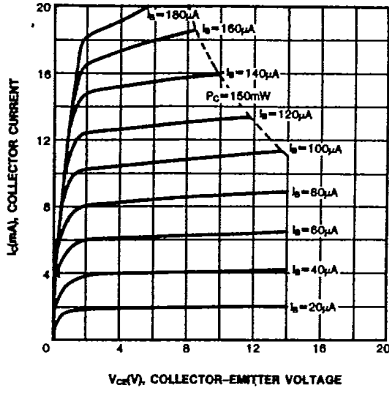
 $h_{FE}$  grade

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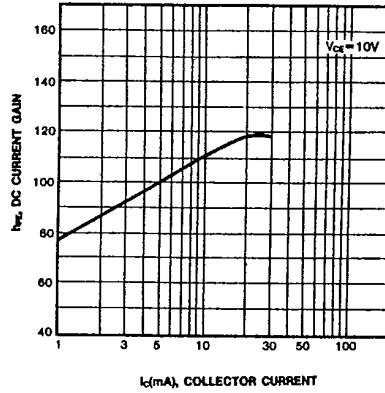
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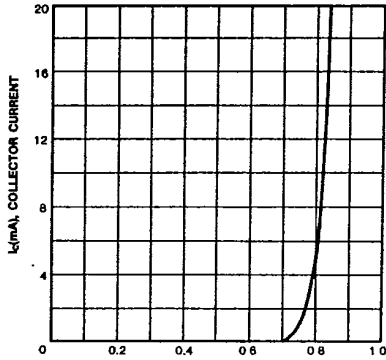
STATIC CHARACTERISTIC



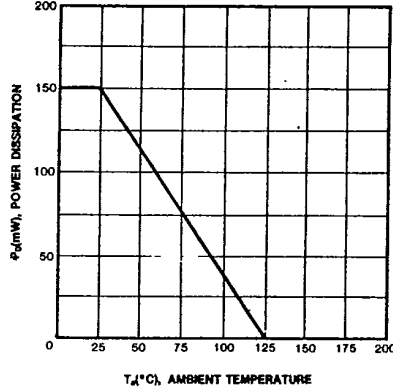
DC CURRENT GAIN



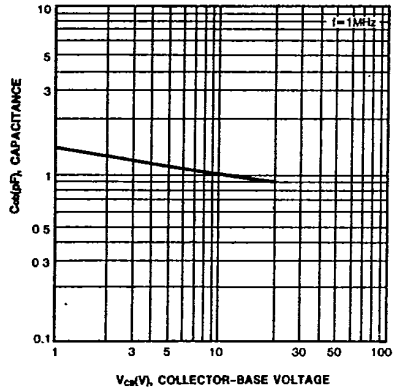
BASE-EMITTER ON VOLTAGE



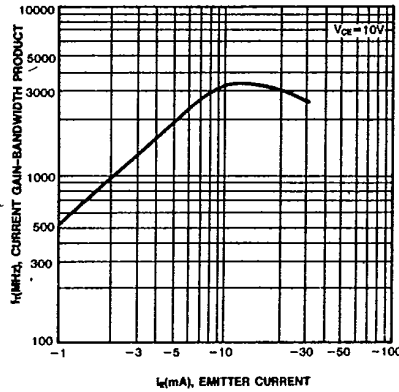
POWER DERATING



COLLECTOR OUTPUT CAPACITANCE



CURRENT GAIN - BANDWIDTH PRODUCT

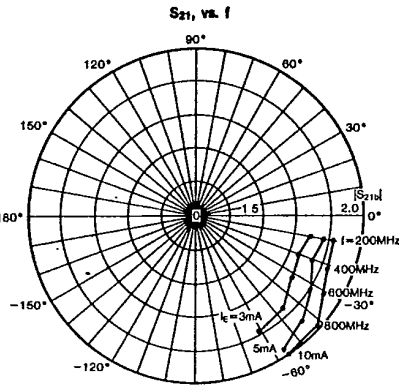
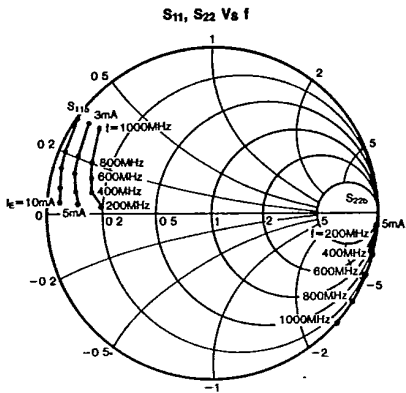
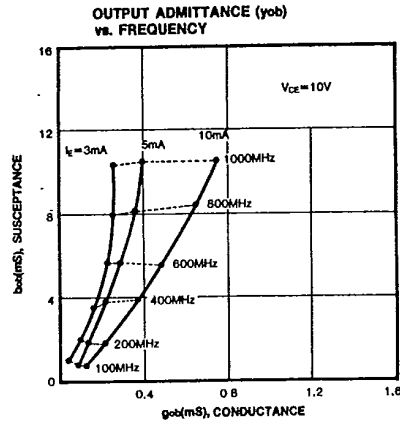
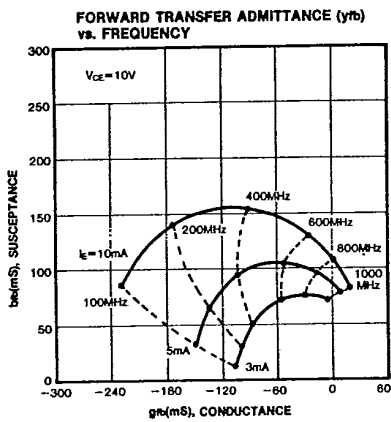
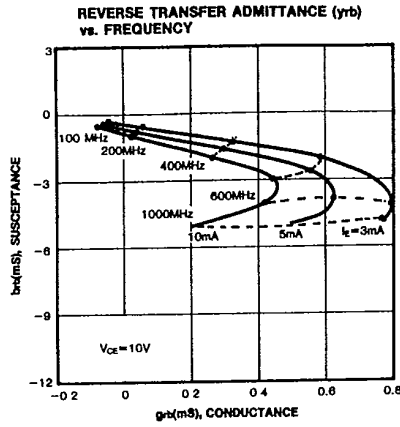
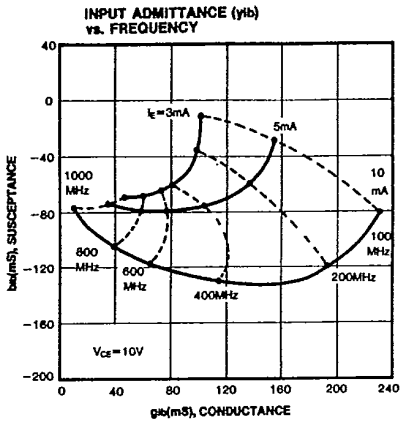


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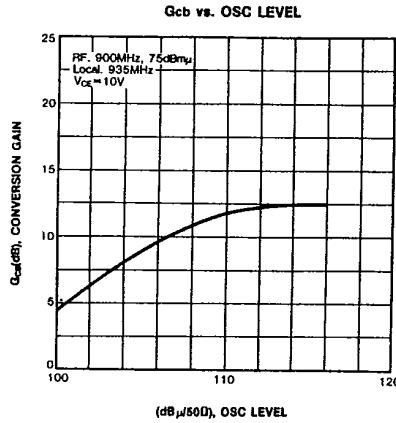
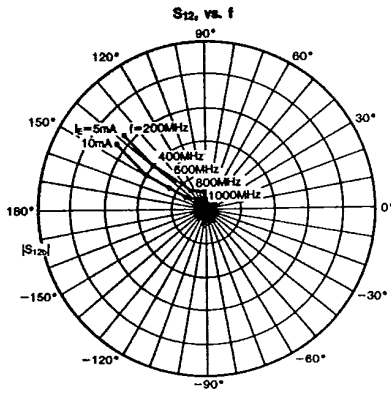
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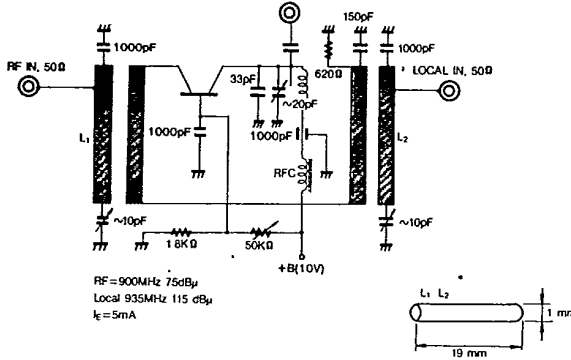
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G<sub>cb</sub> TEST CIRCUIT



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