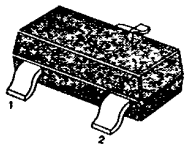
KSC2734 NPN EPITAXIAL SILICON TRANSISTOR

T-31-15

MIXER, OSC. FOR UHF TV TUNER

High f_T: 3.5GHz (TYP)

SOT-23



1 Base 2. Emitter 3. Collector

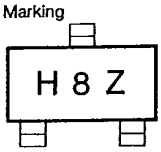
ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	20	V
Collector-Emitter Voltage	V_{CEO}	12	V
Emitter-Base Voltage	V_{EBO}	3	V
Collector Current (DC)	I_C	50	mA
Collector Dissipation	P_C	150	mW
Junction Temperature	Tj	125	°C
Storage Temperature	Tstg	−55~125	°C

ELECTRICAL CHARACTERISTICS (T_a=25°C)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=10μA, I_E=0	20			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=1mA, R_{BE}=∞	12			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=10μA, I_C=0	3			V
Collector Cutoff Current	I_{CBO}	V_{CB}=15V, I_E=0			700	nA
DC Current Gain	h_{FE}	V_{CE}=10V, I_C=5mA	20	90	200	
Collector Emitter Saturation Voltage	V_{CE}(sat)	I_C=10mA, I_B=5mA			0.7	V
Current Gain Bandwidth Product	f_T	V_{CE}=10V, I_C=10mA	1.4	3.5		GHz
Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz		0.9	1.5	pF

Marking



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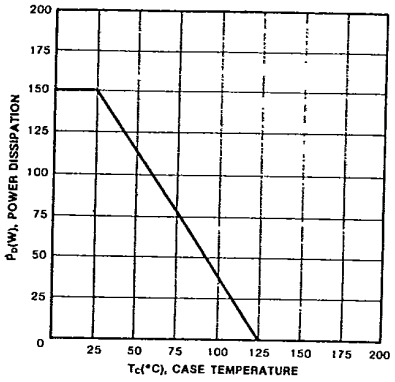
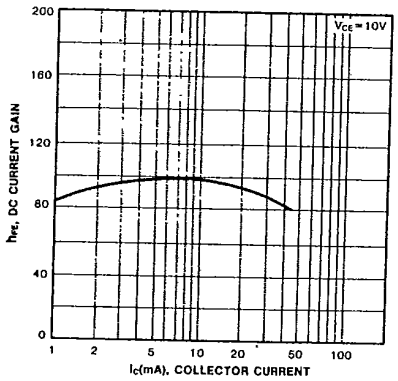
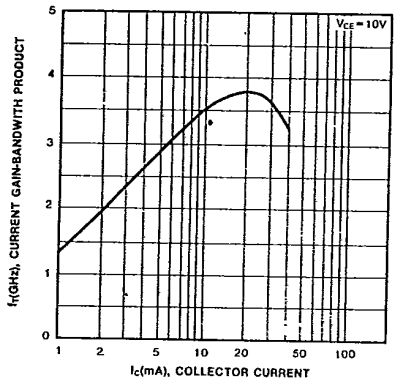
POWER DERATING



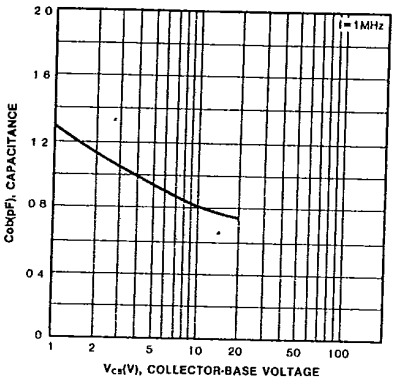
DC CURRENT GAIN



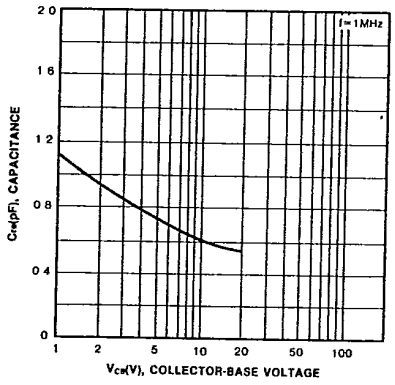
CURRENT GAIN BANDWIDTH PRODUCT



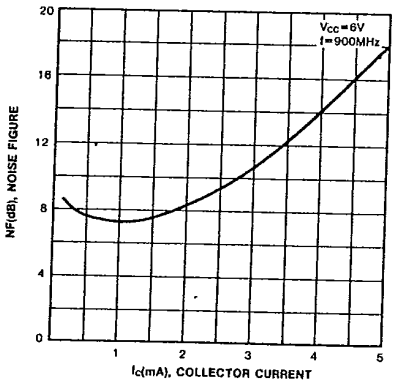
COLLECTOR OUTPUT CAPACITANCE



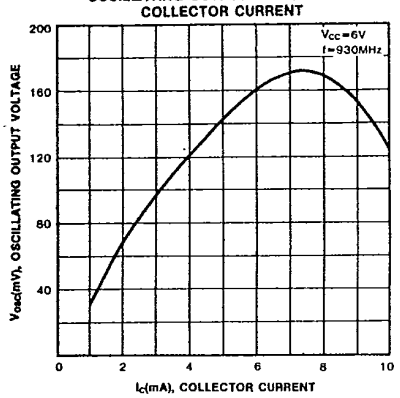
REVERSE TRANSFER CAPACITANCE



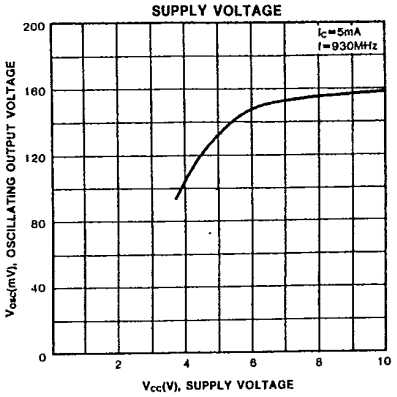
NOISE FIGURE vs. COLLECTOR CURRENT



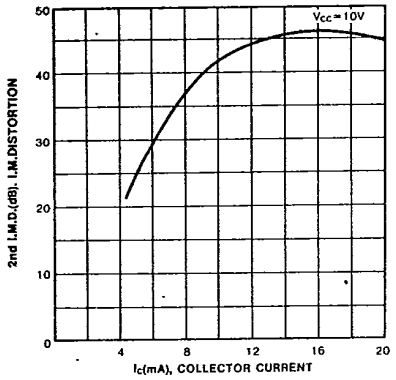
OSCILLATING OUTPUT VOLTAGE vs. COLLECTOR CURRENT



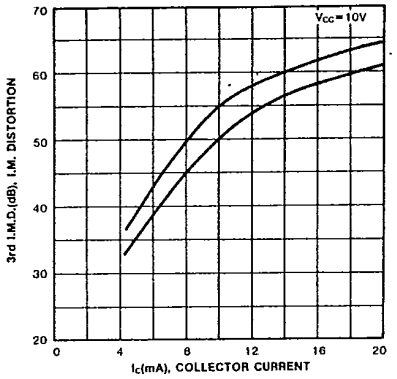
OSCILLATING OUTPUT VOLTAGE vs. SUPPLY VOLTAGE



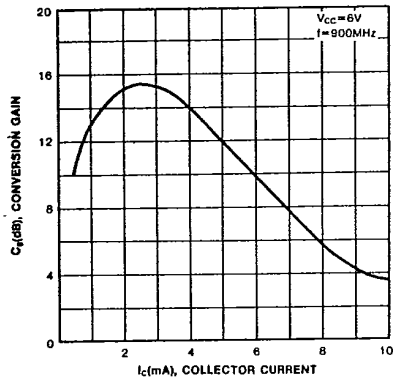
2ND I.M.DISTORTION vs. COLLECTOR CURRENT



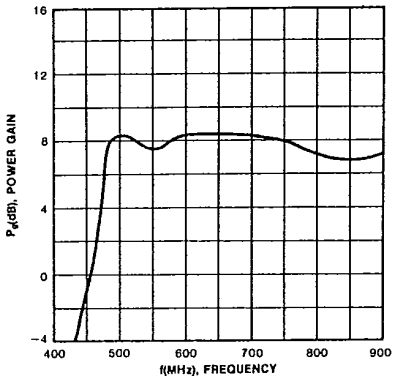
3RD I.M. DISTORTION vs. COLLECTOR CURRENT



CONVERSION GAIN vs. COLLECTOR CURRENT



POWER GAIN vs. FREQUENCY



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