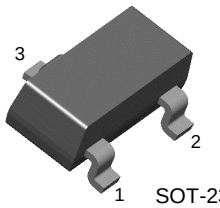
FAIRCHILD
SEMICONDUCTOR®

KSC2755

RF AMP, FOR VHF &TV TUNER

- Low NF, High G_{PE}
- Forward AGC Capability to 30 dB
- NF=2.0dB (TYP.), G_{PE}=23dB (TYP.) at f=200MHz



SOT-23

1. Base 2. Emitter 3. Collector

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	20	mA
P_C	Collector Power Dissipation	150	mW
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55 ~ 150	°C

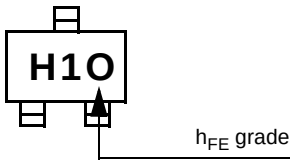
Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
I_{CBO}	Collector Cut-off Current	V_{CB}=20V, I_E=0			0.1	μA
h_{FE}	DC Current Gain	V_{CE}=10V, I_C=3mA	60	120	240	
f_T	Current Gain Bandwidth Product	V_{CE}=10V, I_C=3mA	400	600		MHz
C_{RE}	Reverse Transfer Capacitance	f=1MHz, V_{CB}=10V, I_E=0		0.3	0.5	pF
G_{PE}	Power Gain	V_{CE}=10V, I_C=3mA f=200MHz	20	23		dB
I_{AGC}	AGC Current	f=200MHz I_E at G_R= -30dB		-10	-12	mA
NF	Noise Figure	V_{CE}=10V, I_C=3mA f=200MHz		2.0	0.3	dB

h_{FE} Classification

Classification	R	O	Y
h_{FE}	60 ~ 120	90 ~ 180	120 ~ 240

Marking



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Typical Characteristics

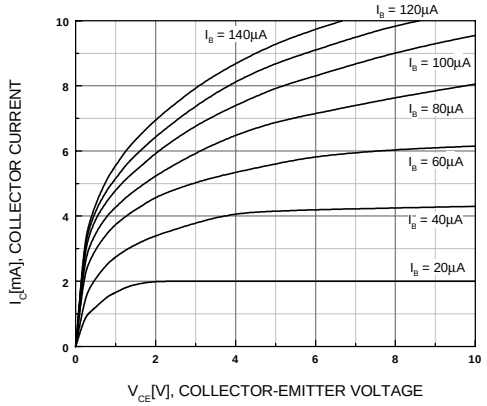


Figure 1. Static Characteristics

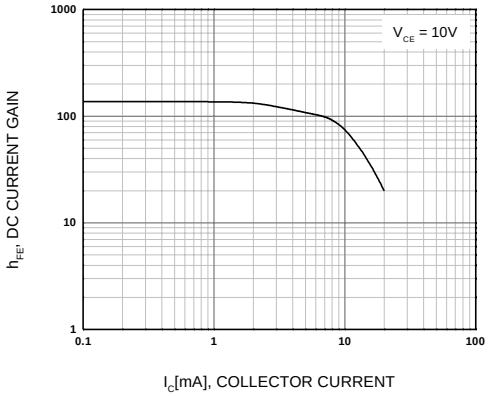


Figure 2. DC Current Gain

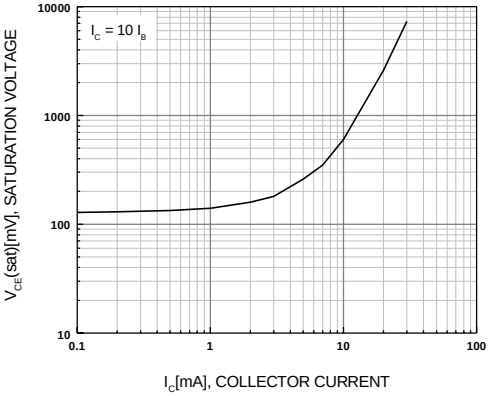


Figure 3. Collector-Emitter Saturation Voltage

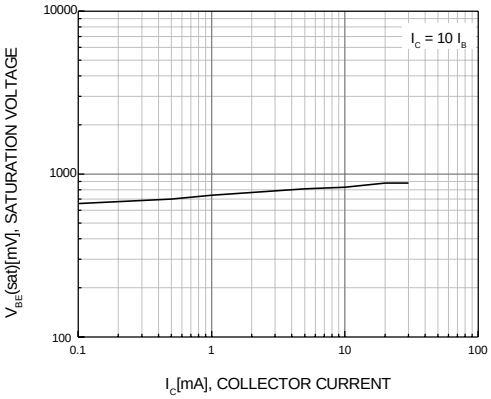


Figure 4. Base-Emitter Saturation Voltage

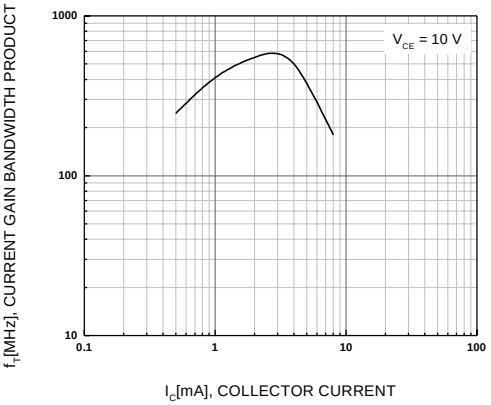


Figure 5. f_T - I_C

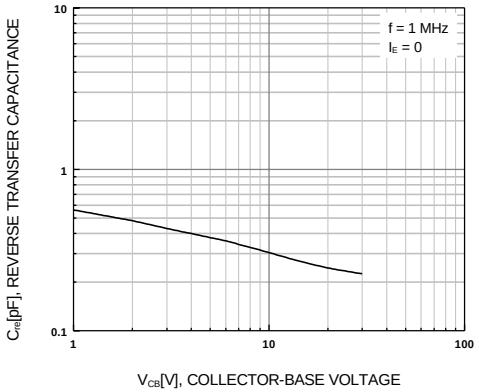


Figure 6. Cre - V_{CB}

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Typical Characteristics (Continued)

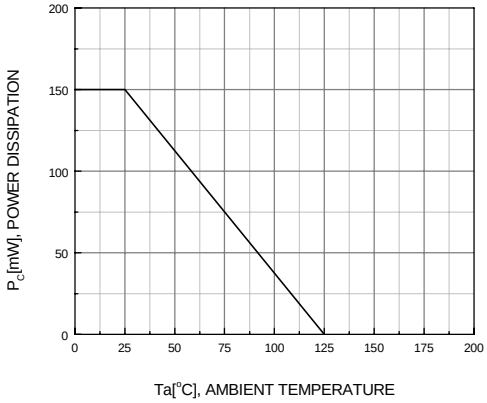


Figure 7. Power Derating

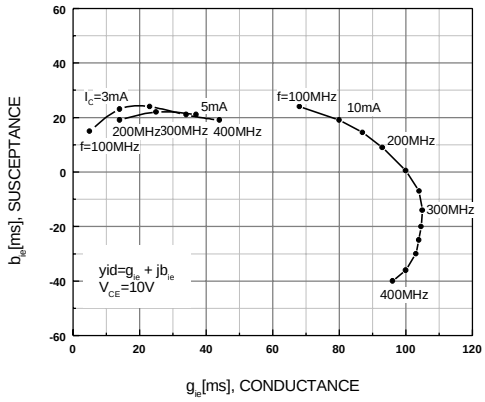


Figure 8. yie - f

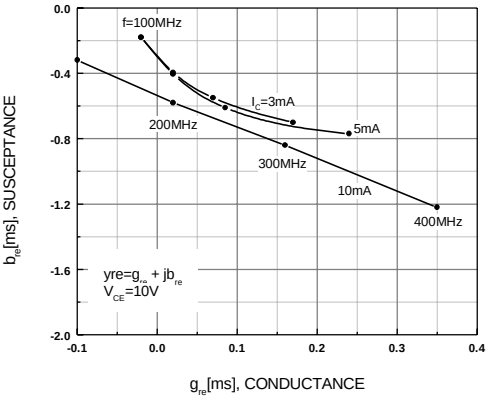


Figure 9. yre - f

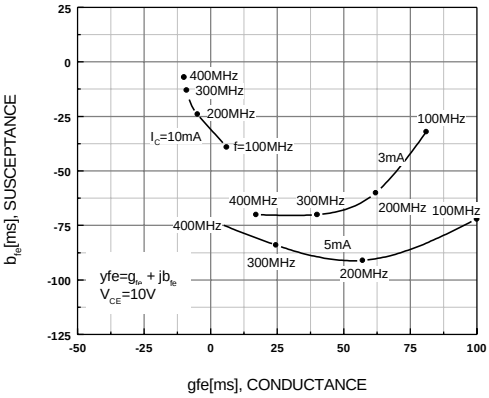


Figure 10. yfe - f

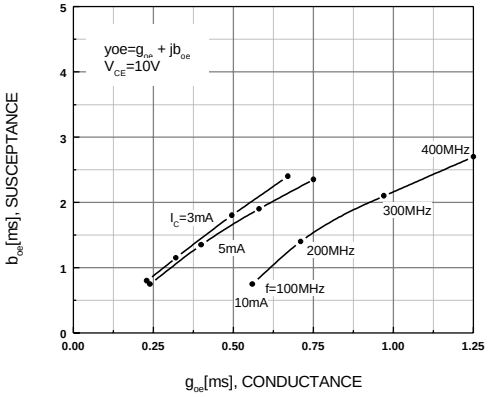


Figure 11. yoe - f

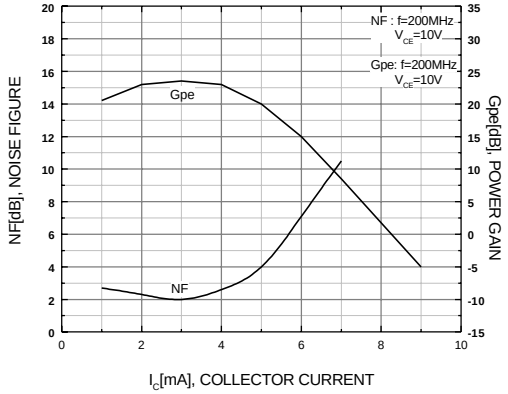
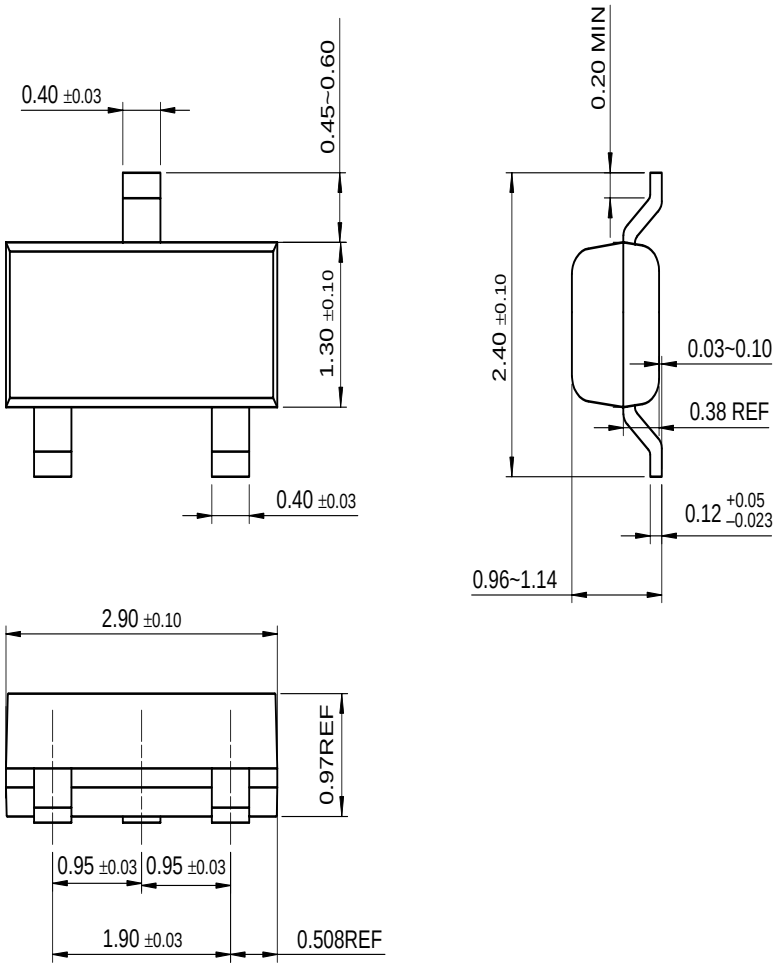


Figure 12. Gpe, NF - I_C

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Package Dimensions

SOT-23



Dimensions in Millimeters

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CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
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