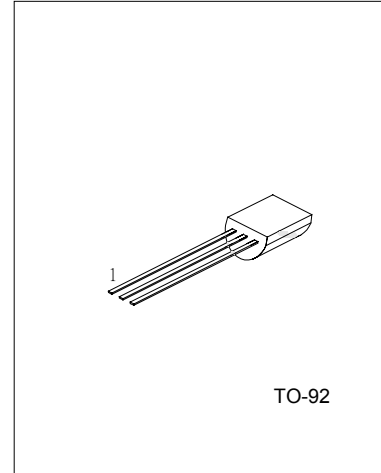


UTCMPSH10 NPN EPITAXIAL SILICON TRANSISTOR

RF TRANSISTOR

DESCRIPTION

The UTC MPSH10 is desinged for using as VHF and UHF oscillators and VHF Mixer in a tuner of a TV receiver.



1: EMITTER 2:BASE 3:COLLECTOR

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATING	UNIT
Collector-base voltage	V _{CB0}	30	V
Collector-emitter voltage	V _{CEO}	25	V
Emitter-base voltage	V _{EB0}	3	V
Total Power Dissipation	P _c	350	mW
Collector current	I _c	50	mA
Junction Temperature	T _j	150	°C
Storage Temperature	T _{STG}	-55 ~ +150	°C

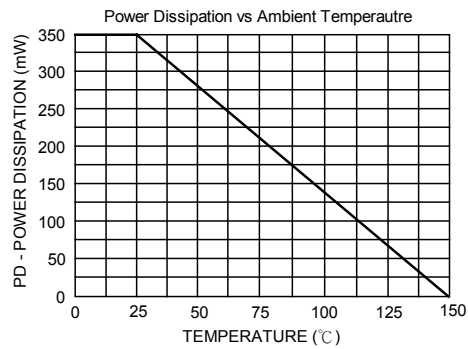
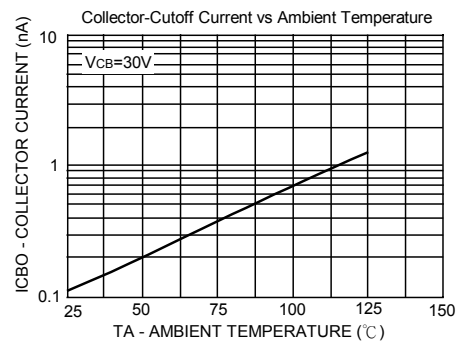
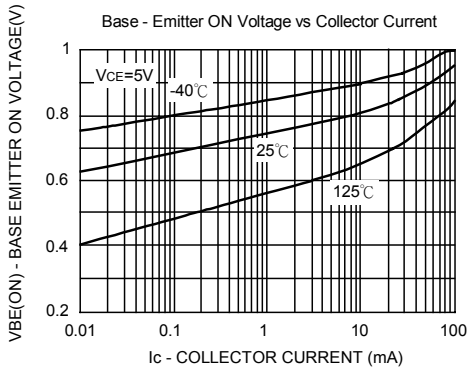
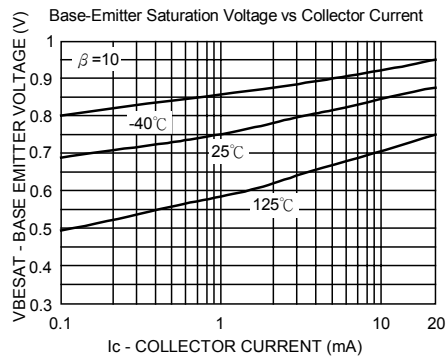
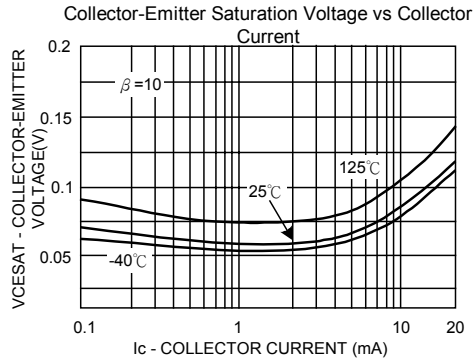
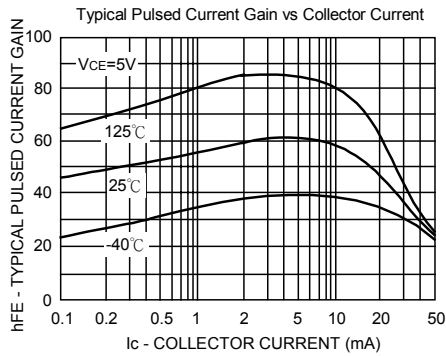
ELECTRICAL CHARACTERISTICS(Ta=25°C,unless otherwise specified)

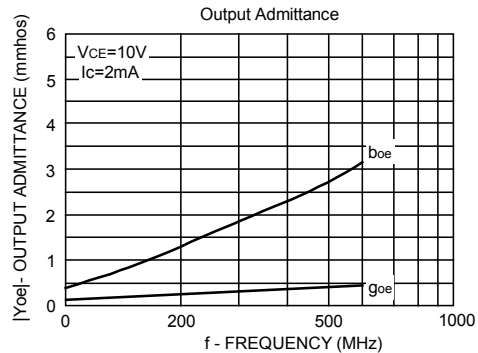
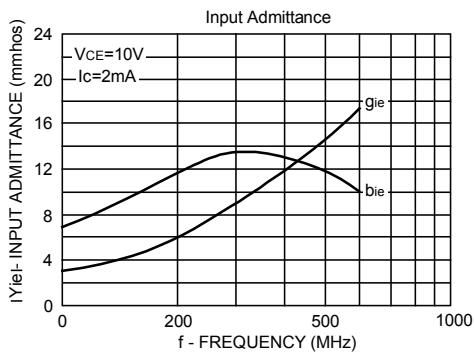
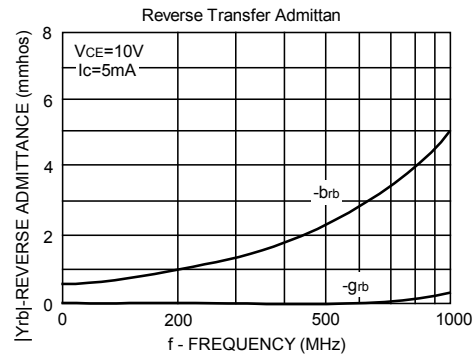
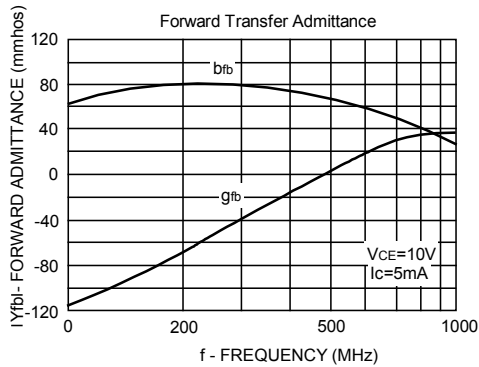
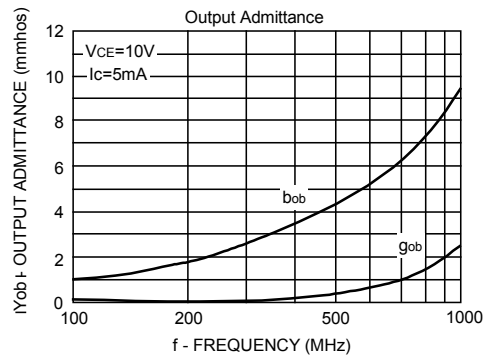
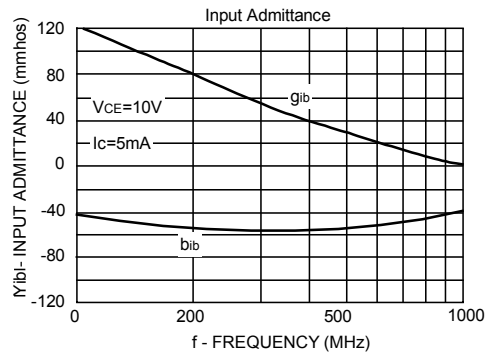
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	BV _{CB0}	I _c =100μA	30			V
Collector-emitter breakdown voltage	BV _{CEO}	I _c =1mA	25			V
Emitter-base breakdown voltage	BV _{EB0}	I _E =10μA			3	V
Collector cut-off current	I _{CB0}	V _{CB} =25V			100	nA
Emitter cut-off current	I _{EB0}	V _{EB} =2V			100	nA
Collector-emitter saturation voltage	V _{CE(SAT)}	I _C =4mA,I _B =400μA			500	mV
Base-emitter on voltage	V _{BE(ON)}	V _{CE} =10V,I _C =4mA			950	mV
DC current gain	h _{FE}	V _{CE} =10V,I _C =4mA	60			
Output capacitace	C _{ob}	V _{CB} =10V,f=1MHZ			0.7	pF
Current gain bandwidth product	f _T	V _{CE} =10V,I _C =4mA,f=100MHZ	650			MHZ

CLASSIFICATION OF hFE

RANK	A	B	C
RANGE	60-100	90-130	120 -200

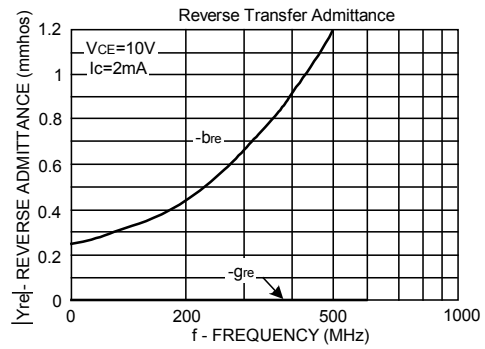
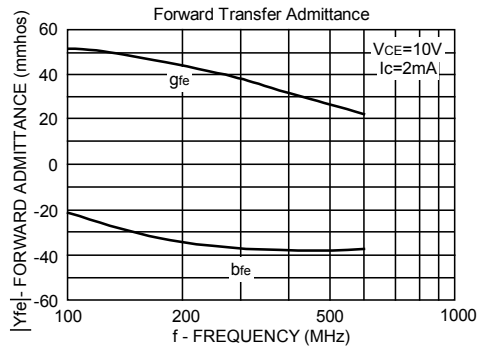
Typical Characteristics





UTCMPSH10

NPN EPITAXIAL SILICON TRANSISTOR



Test Circuits

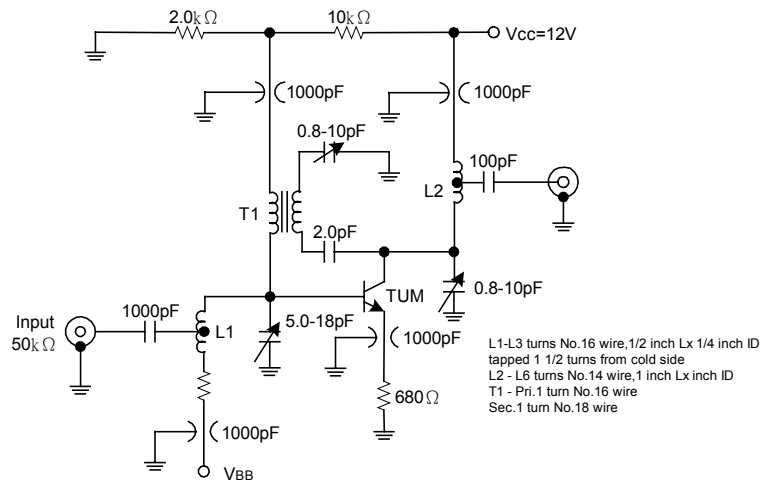


FIGURE 1:Neutralized 200 MHz PG and NF Circuit

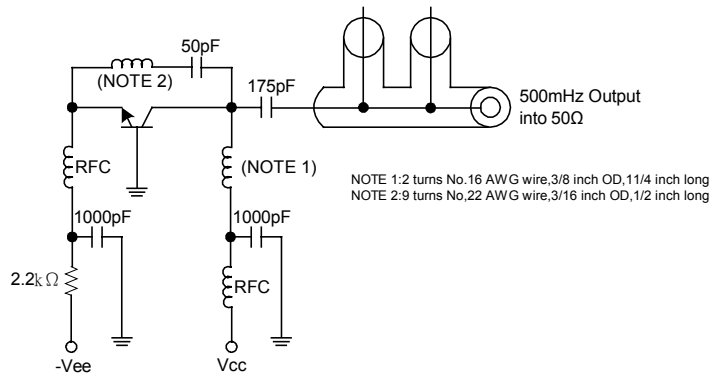


FIGURE 2:500 MHz Oscillator Circuit

Test Circuits

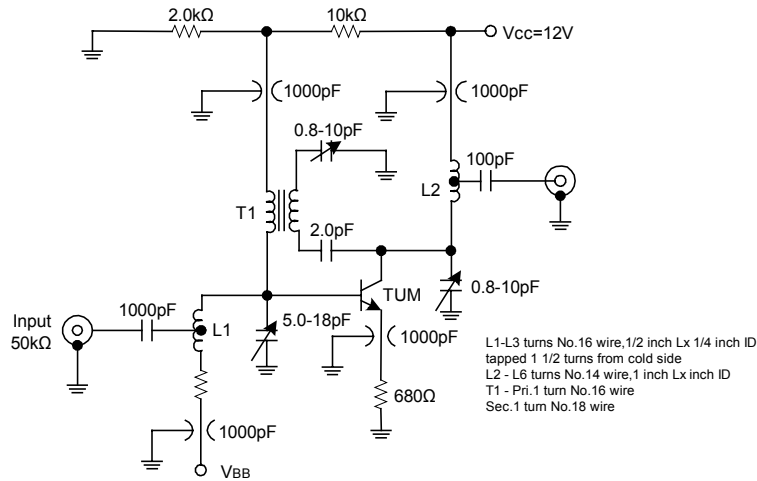


FIGURE 1:Neutralized 200 MHz PG and NF Circuit

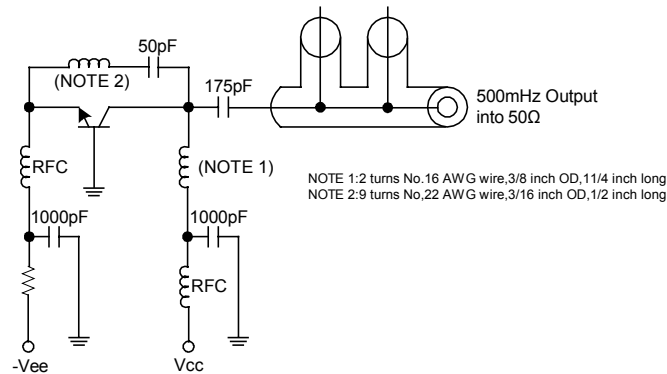


FIGURE 2:500 MHz Oscillator Circuit

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