



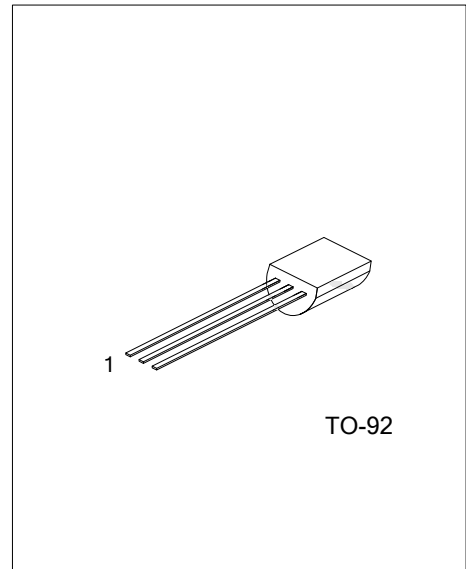
MPSH10A

NPN EPITAXIAL SILICON TRANSISTOR

RF TRANSISTOR

■ DESCRIPTION

The UTC **MPSH10A** is designed for using as VHF and UHF oscillators and VHF Mixer in a tuner of a TV receiver.



■ ORDERING INFORMATION

Ordering Number			Package	Pin Assignment			Packing
Normal	Lead Free	Halogen Free		1	2	3	
MPSH10A-x-T92-B	MPSH10AL-x-T92-B	MPSH10AG-x-T92-B	TO-92	B	E	C	Tape Box
MPSH10A-x-T92-K	MPSH10AL-x-T92-K	MPSH10AG-x-T92-K	TO-92	B	E	C	Bulk

Note: Pin assignment: E: EMITTER, C: COLLECTOR, B: BASE

<p>MPSH10AL-x-T92-B</p> <p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Rank</p> <p>(4)Lead Free</p>	<p>(1) B: Tape Box, K: Bulk</p> <p>(2) T92: TO-92</p> <p>(3) x: refer to Classification of h_{FE}</p> <p>(4) G: Halogen Free, L: Lead Free, Blank: Pb/Sn</p>
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■ ABSOLUTE MAXIMUM RATING (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V _{CB0}	30	V
Collector-Emitter Voltage	V _{CEO}	25	V
Emitter-Base Voltage	V _{EBO}	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

Note: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ 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 _{EBO}	I _E =10μA			3	V
Collector Cut-Off Current	I _{CB0}	V _{CB} =25V			100	nA
Emitter Cut-Off Current	I _{EBO}	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 Capacitance	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 h_{FE}

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

■ TEST CIRCUIT

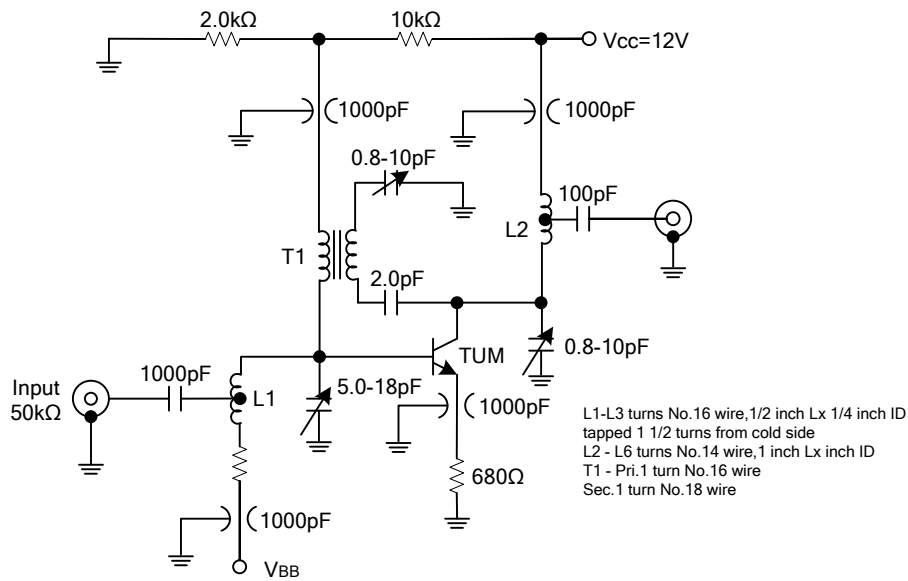


Figure 1. Neutralized 200 MHz PG and NF Circuit

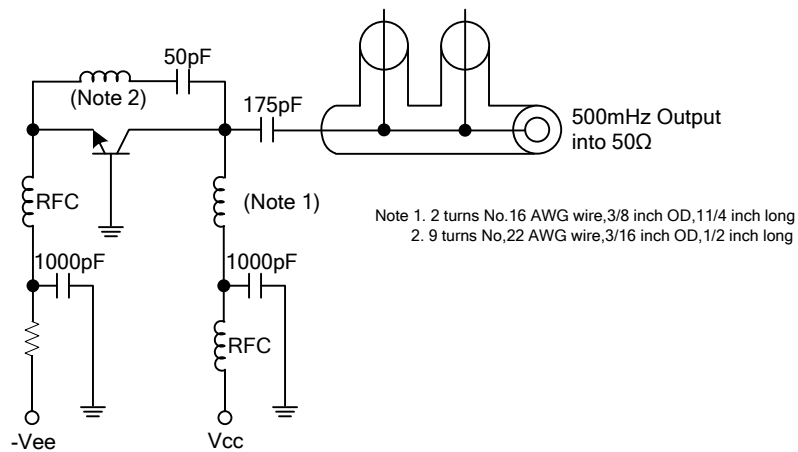


Figure 2. 500 MHz Oscillator Circuit

■ TEST CIRCUIT(Cont.)

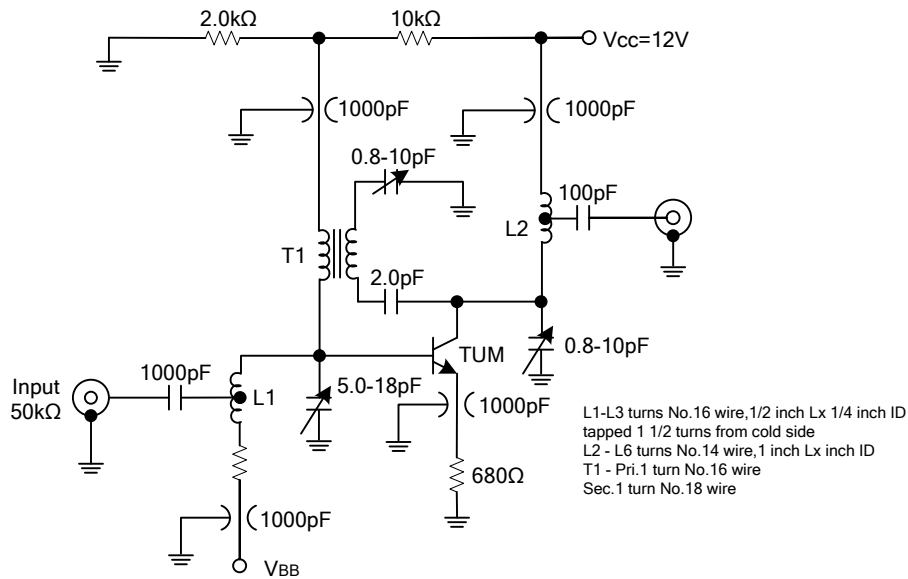


Figure 1. Neutralized 200 MHz PG and NF Circuit

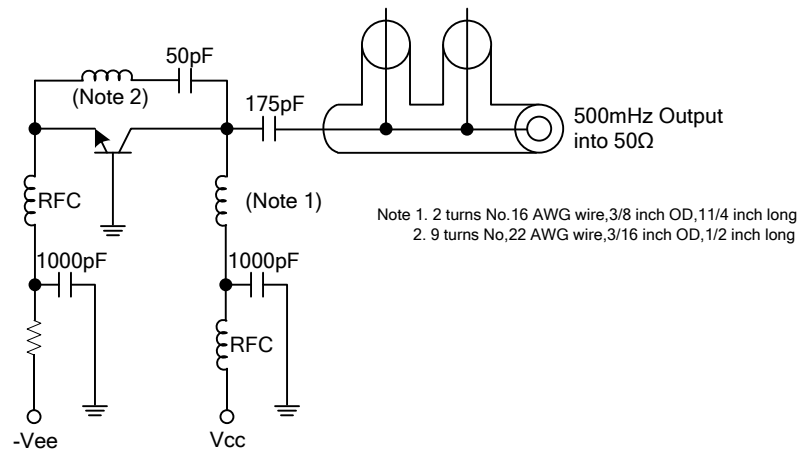


Figure 2. 500 MHz Oscillator Circuit

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