



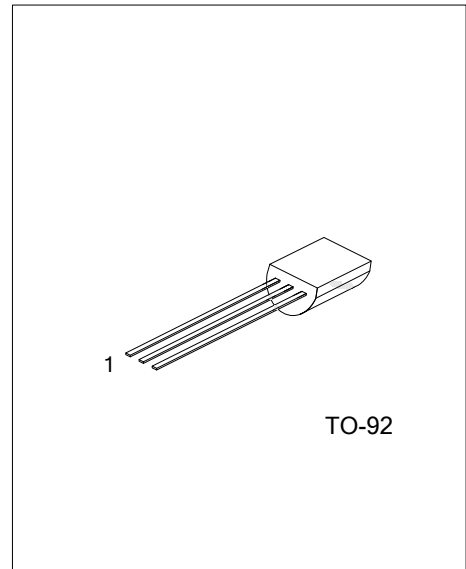
MPSH10

NPNEPITAXIAL 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.



ORDERING INFORMATION

Ordering Number			Package	Pin Assignment			Packing
Normal	Lead Free	Halogen Free		1	2	3	
MPSH10-x-T92-B	MPSH10L-x-T92-B	MPSH10G-x-T92-B	TO-92	E	B	C	Tape Box
MPSH10-x-T92-K	MPSH10L-x-T92-K	MPSH10G-x-T92-K	TO-92	E	B	C	Bulk

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

<p>MPSH10L-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_{CE0}	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

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}	$I_C=100\mu A$	30			V
Collector-Emitter Breakdown Voltage	BV_{CE0}	$I_C=1mA$	25			V
Emitter-Base Breakdown Voltage	BV_{EB0}	$I_E=10\mu A$			3	V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=25V$			100	nA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=2V$			100	nA
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=4mA, I_B=400\mu A$			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

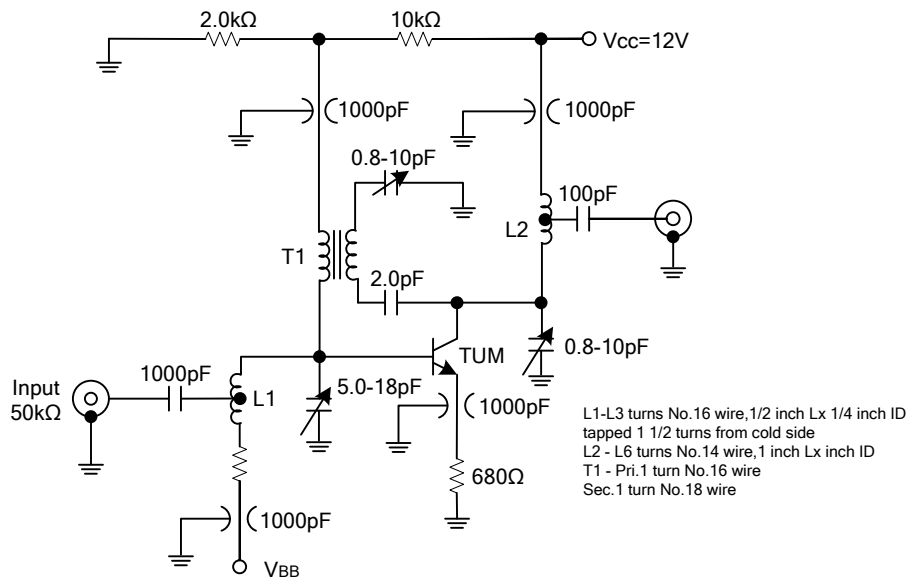


Figure 1. Neutralized 200 MHz PG and NF Circuit

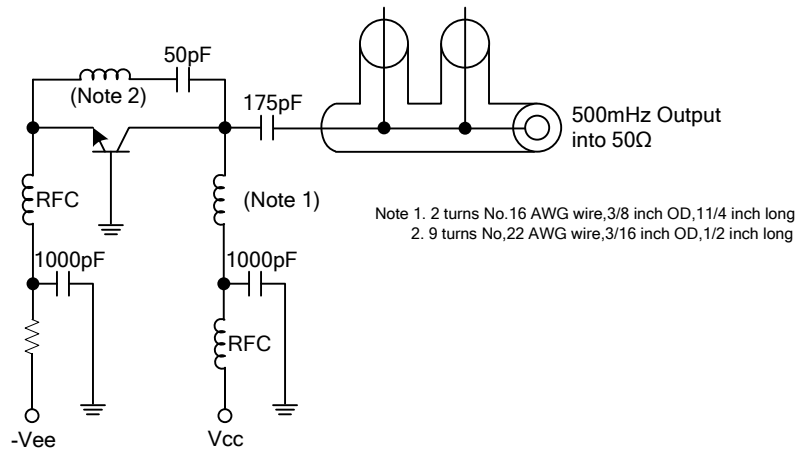


Figure 2. 500 MHz Oscillator Circuit

■ TEST CIRCUIT(Cont.)

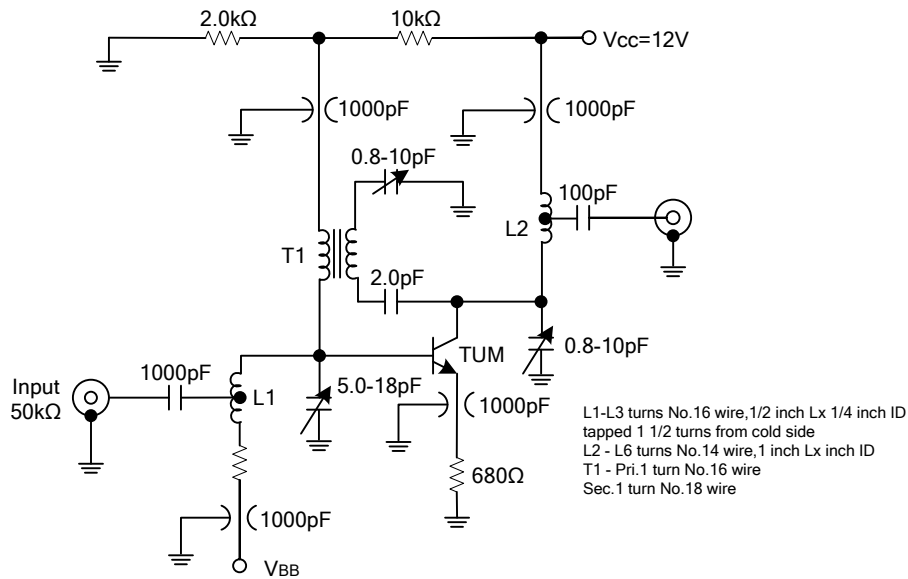


Figure 1. Neutralized 200 MHz PG and NF Circuit

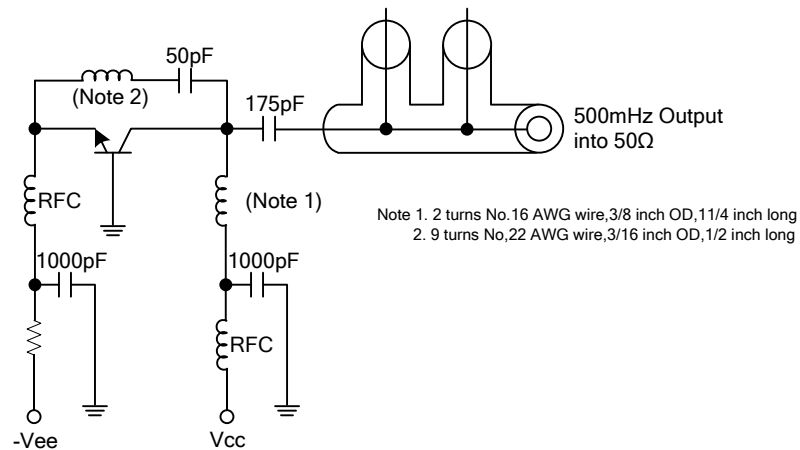


Figure 2. 500 MHz Oscillator Circuit

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