

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

2SC2995

FM/AM RF, MIX, OSC, IF

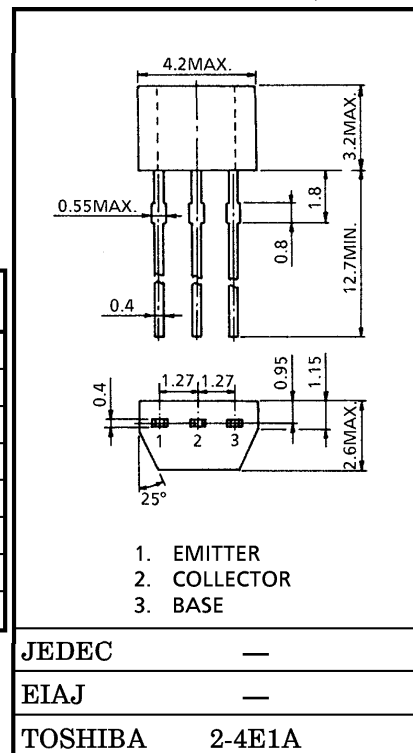
HIGH FREQUENCY AMPLIFIER APPLICATIONS.

- High stability Oscillation Voltage On FM Local Oscillator.
- Recommend FM/AM RF, MIX, OSC and IF.

MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CB0}	40	V
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Base Voltage	V_{EB0}	4	V
Collector Current	I_C	50	mA
Base Current	I_B	10	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	$-55 \sim 125$	$^\circ\text{C}$

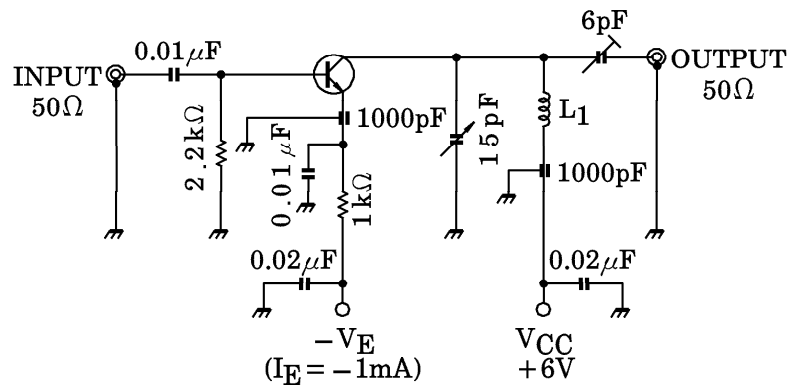
Unit in mm

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

Weight : 0.13g

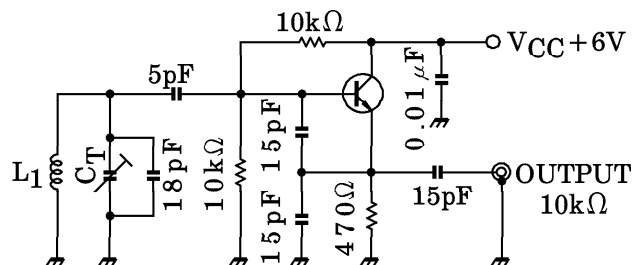
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 40\text{V}, I_E = 0$	—	—	0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 4\text{V}, I_C = 0$	—	—	0.5	μA
DC Current Gain	h_{FE} (Note)	$V_{CE} = 6\text{V}, I_C = 1\text{mA}$	40	—	240	—
Reverse Transfer Capacitance	C_{re}	$V_{CE} = 6\text{V}, f = 1\text{MHz}$	—	0.9	1.3	pF
Transition Frequency	f_T	$V_{CE} = 6\text{V}, I_E = -1\text{mA}$	150	350	—	MHz
Collector-Base Time Constant	$C_{c.rbb'}$	$V_{CE} = 6\text{V}, I_E = -1\text{mA}, f = 30\text{MHz}$	—	15	30	ps
Noise Figure	NF	$V_{CC} = 6\text{V}, I_E = -1\text{mA}, f = 100\text{MHz (Fig.1)}$	—	4.0	—	dB
Power Gain	G_{pe}		—	15	—	
Oscillation Output Voltage	V_{OSC}	$V_{CC} = 6\text{V}, f = 100\text{MHz (Fig.2)}$	—	150	—	mV

Note : h_{FE} Classification R : 40~80 O : 70~140 Y : 120~240



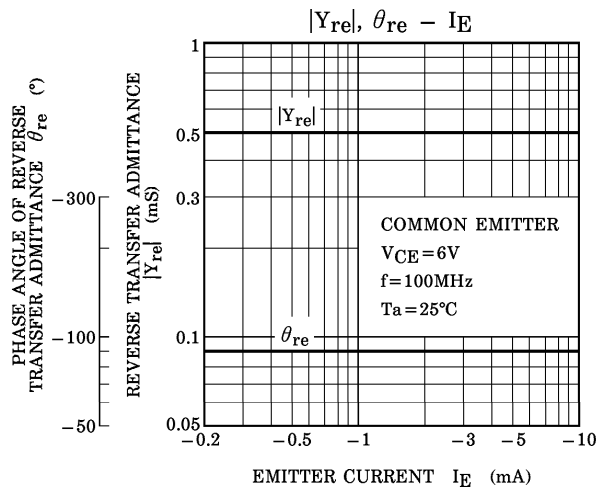
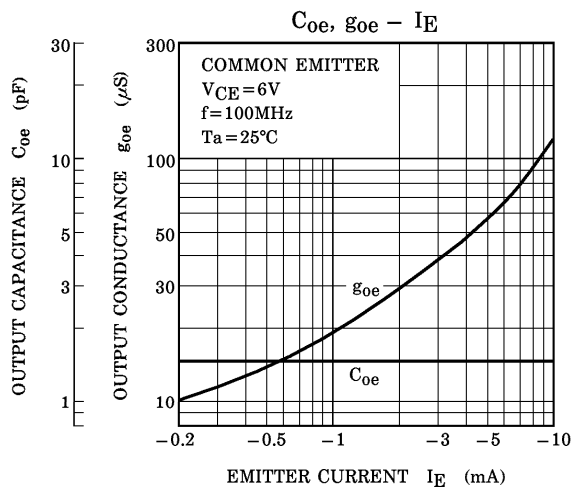
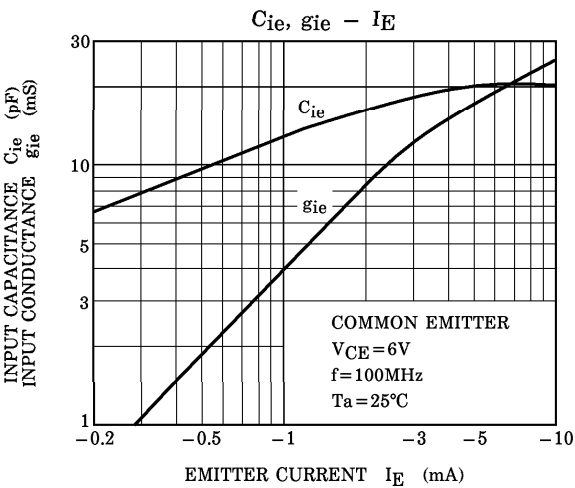
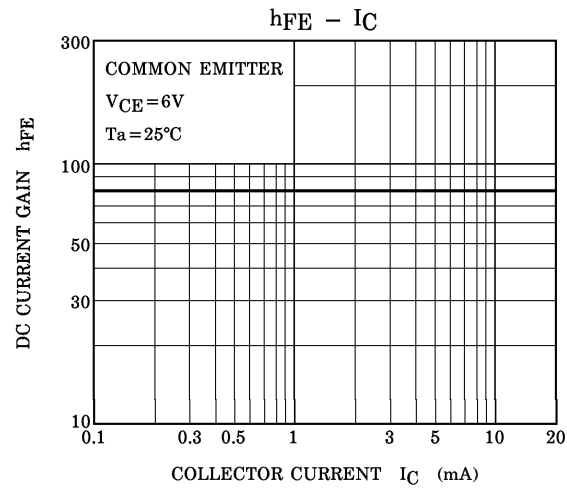
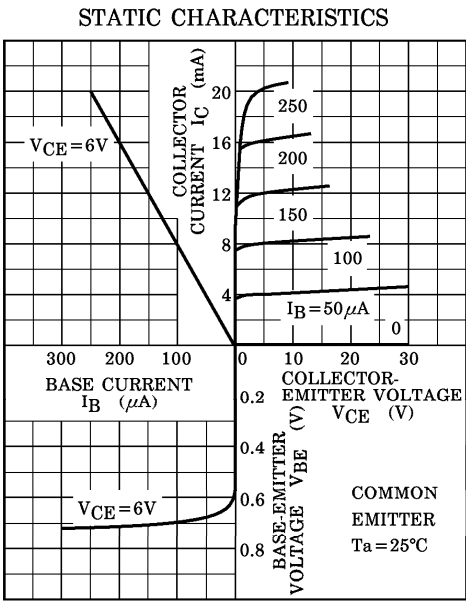
L₁ : 0.8mmφ SILVER PLATED COPPER WIRE, 4T, 10ID, 8 LENGTH

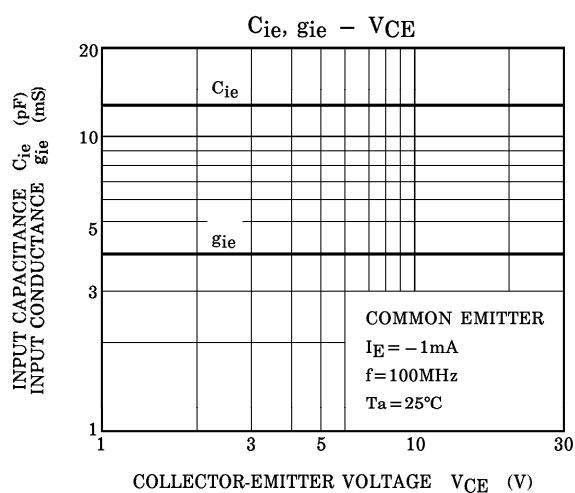
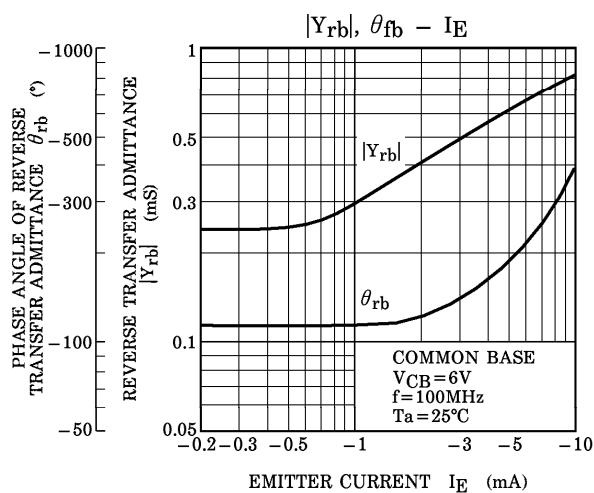
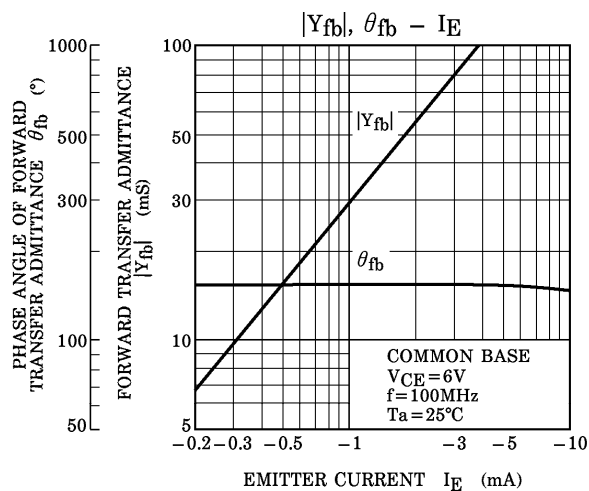
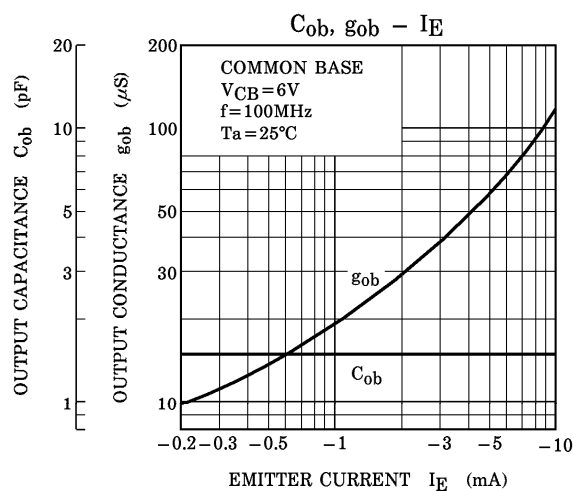
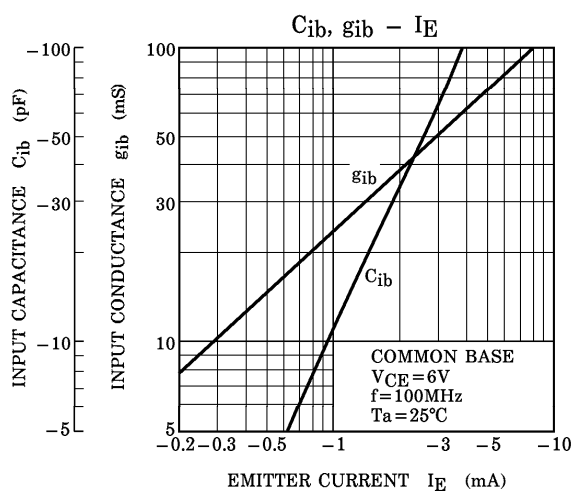
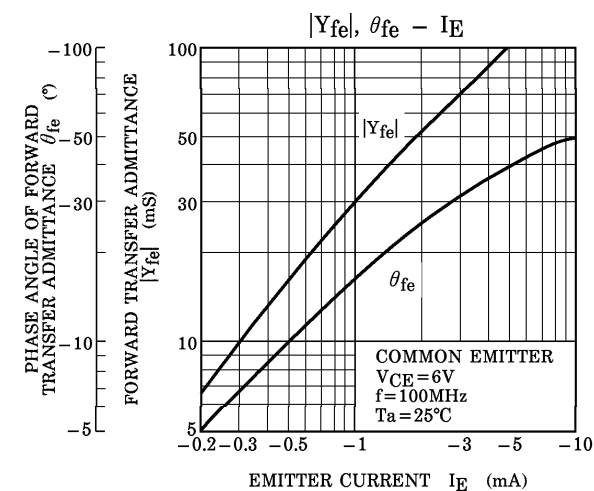
Fig.1 NF, G_{pe} TEST CIRCUIT

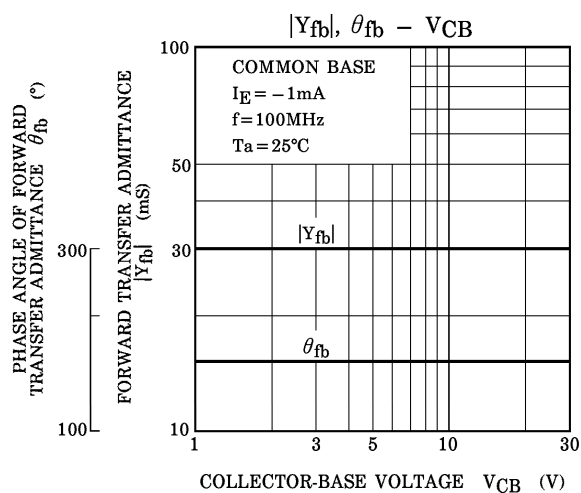
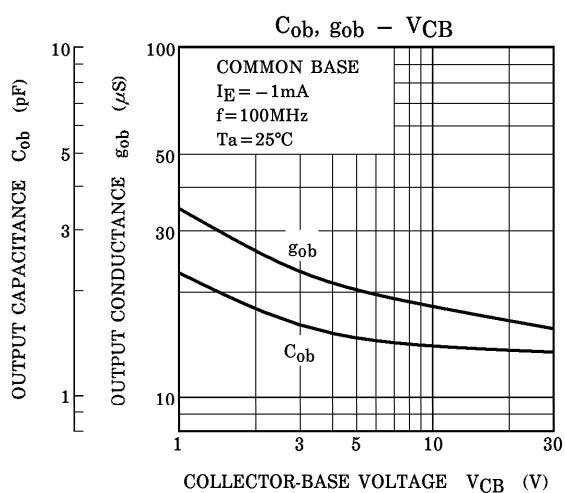
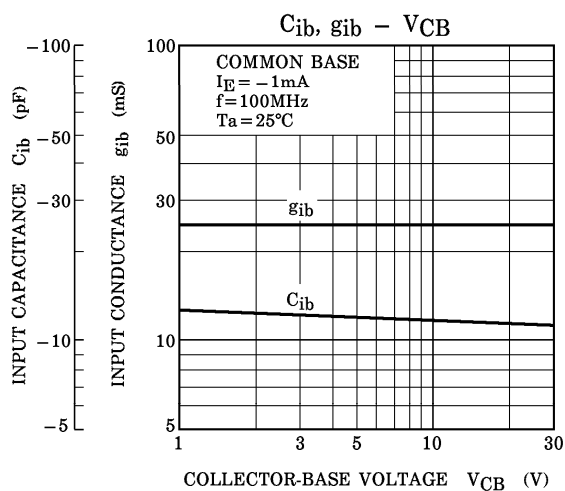
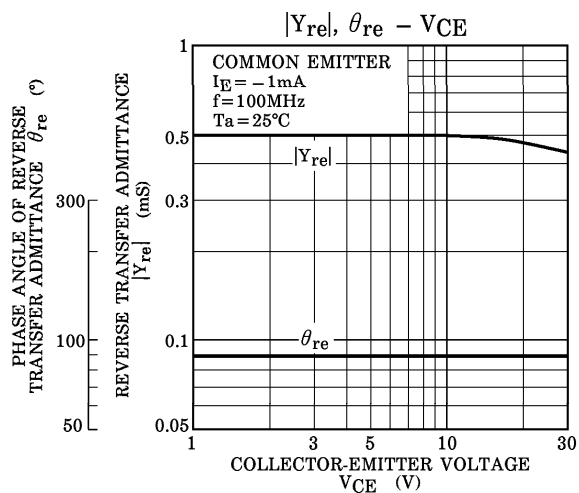
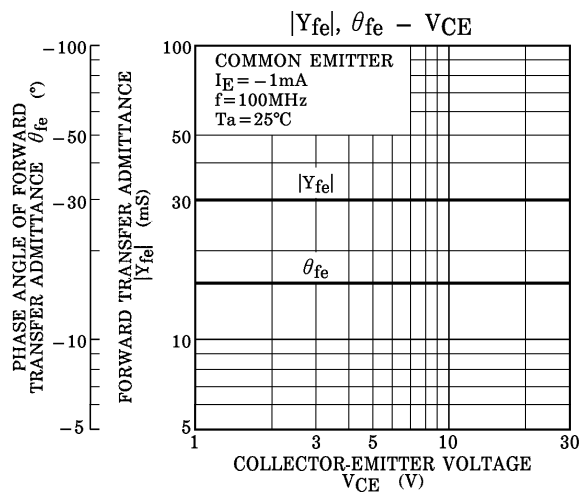
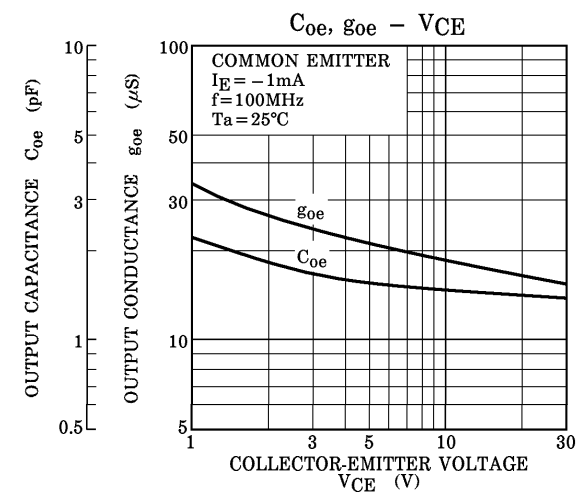


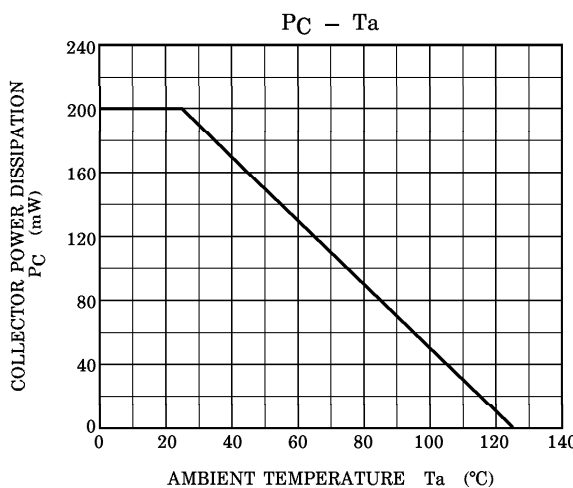
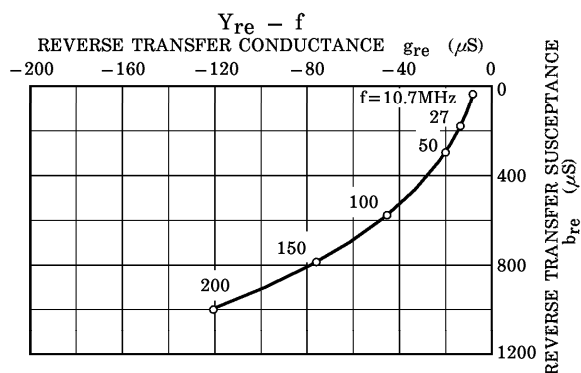
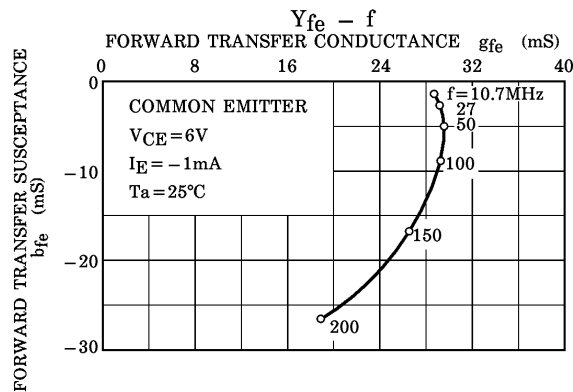
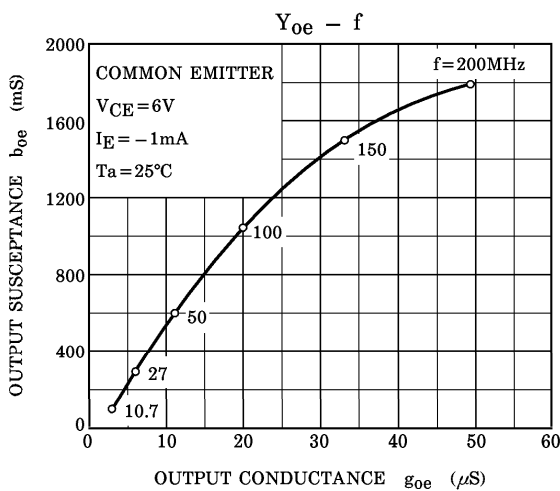
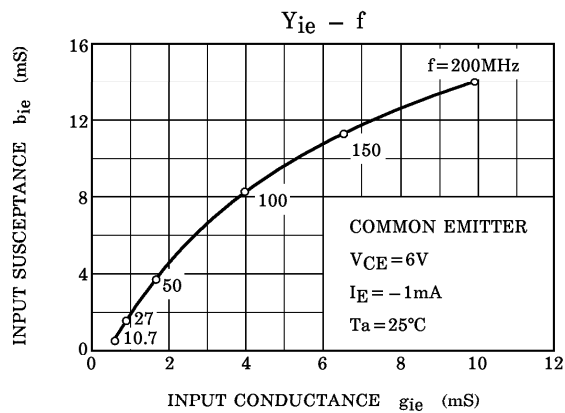
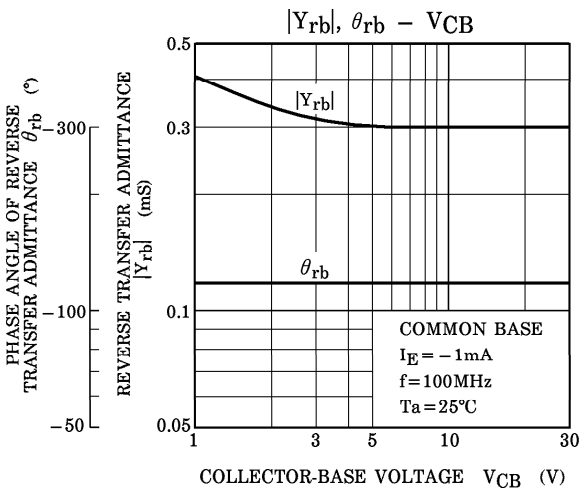
L₁ : 0.8mmφ SILVER PLATED COPPER WIRE, 4T, 10ID, 8 LENGTH

Fig.2 V_{OSC} TEST CIRCUIT









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