

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL PLANAR TYPE

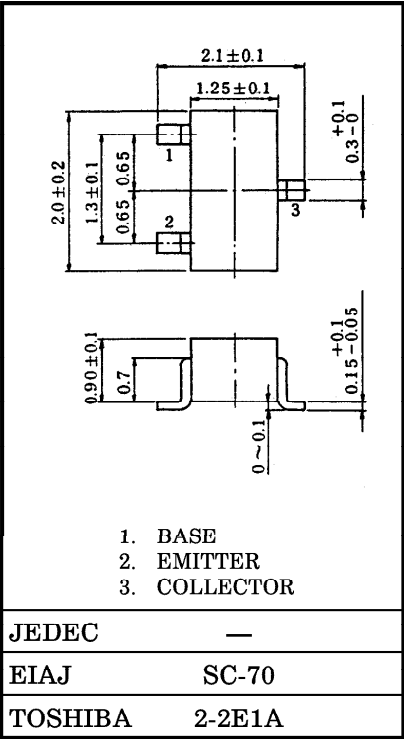
2SC4245

TV TUNER, UHF MIXER APPLICATIONS.
VHF~UHF BAND RF AMPLIFIER APPLICATIONS.

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	VCBO	30	V
Collector-Emitter Voltage	VCEO	15	V
Emitter-Base Voltage	VEBO	3	V
Collector Current	IC	50	mA
Base Current	IB	25	mA
Collector Power Dissipation	PC	100	mW
Junction Temperature	Tj	125	°C
Storage Temperature Range	Tstg	-55~125	°C

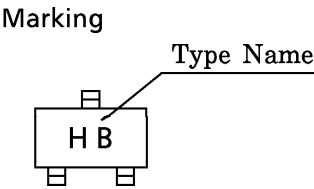
Unit in mm



ELECTRICAL CHARACTERISTICS (Ta = 25°C)

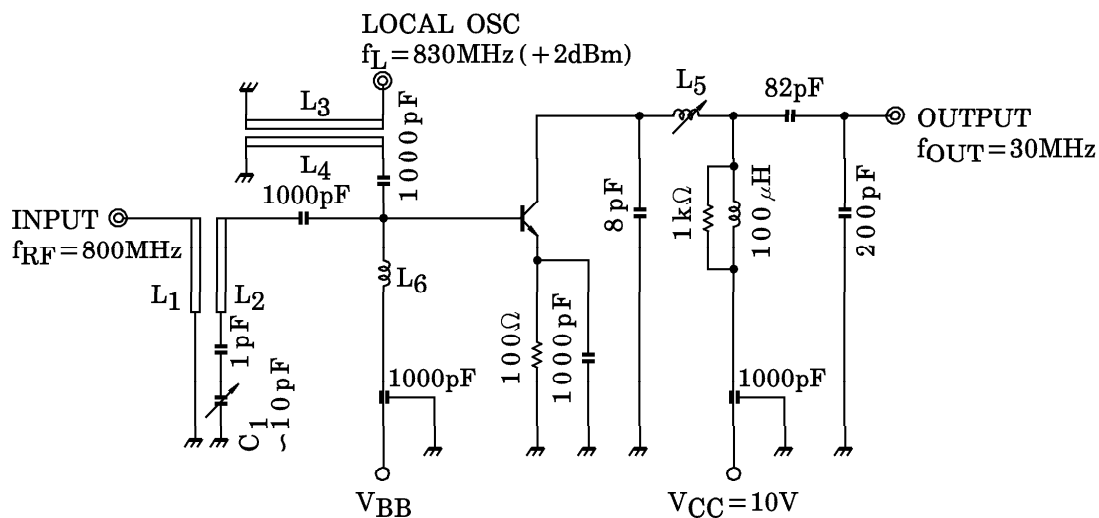
Weight : 0.006g

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	ICBO	VCB=30V, IE=0	—	—	0.1	μA
Emitter Cut-off Current	IEBO	VEB=2V, IC=0	—	—	1.0	μA
Collector-Emitter Breakdown Voltage	V(BR)CEO	IC=1mA, IB=0	15	—	—	V
DC Current Gain	hFE	VCE=10V, IC=5mA	40	100	200	—
Reverse Transfer Capacitance	Cre	VCB=10V, IE=0, f=1MHz	—	0.6	0.9	pF
Transition Frequency	fT	VCE=10V, IC=2mA	1500	2400	—	MHz
Conversion Gain	Gce	VCC=10V, IC=2mA, f=800MHz	12	17	—	dB
Noise Figure	NF	fL=830MHz (+2dBm) (Fig.1)	—	8	13	dB



961001EAA2

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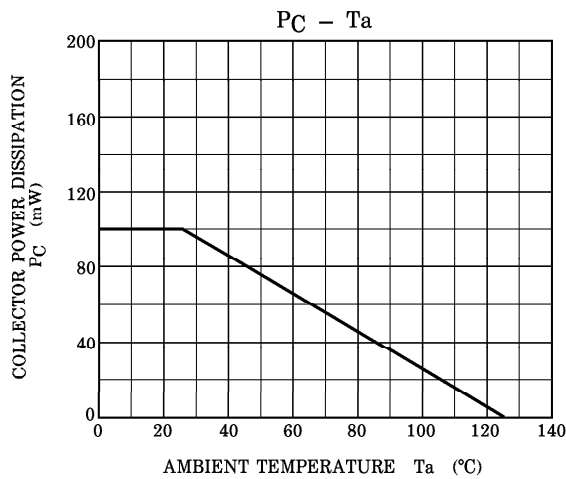
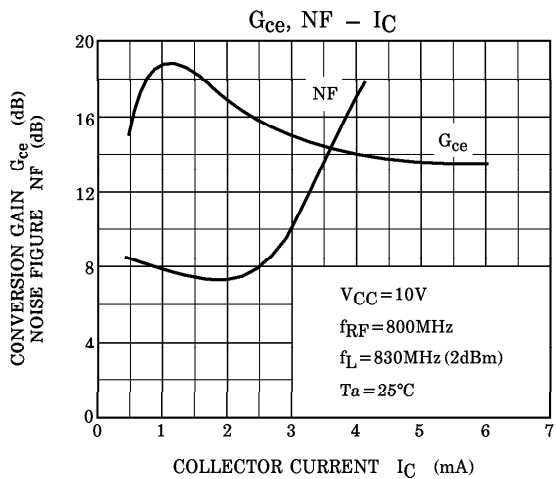
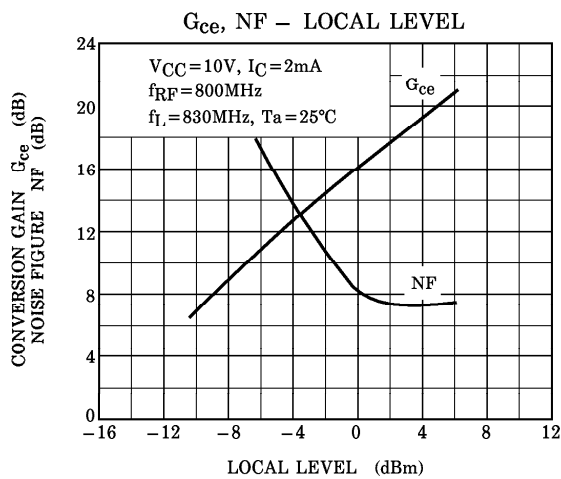
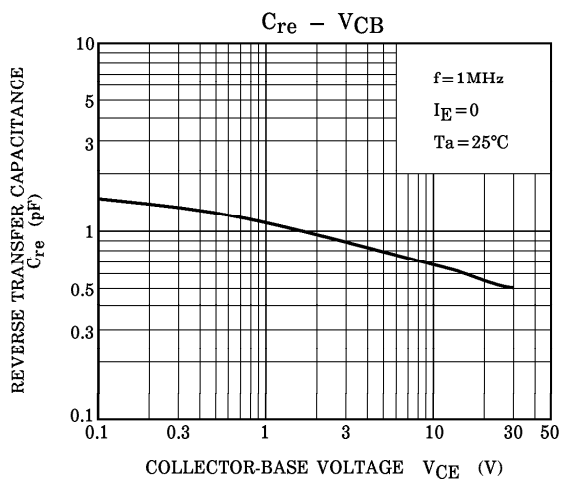
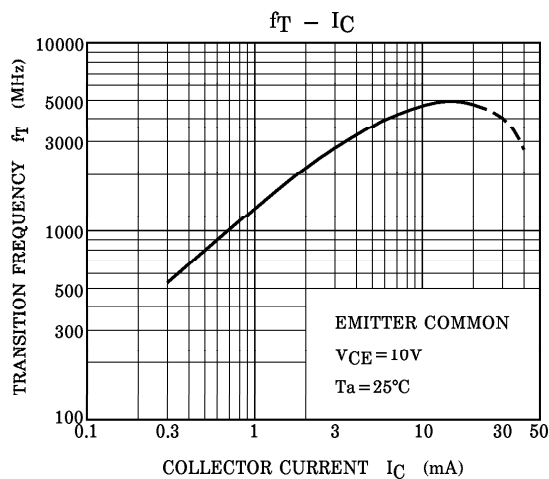
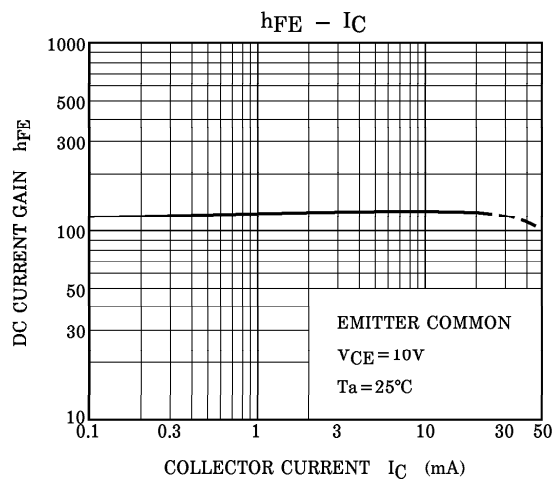


- $L_1 \sim L_4$: $\phi 0.8\text{mm}$ SILVER PLATED COPPER WIRE
 L_5 : COIL WITH CORE SCN-5948①-③ TOKO OR EQUIVALENT
 L_6 : $\phi 0.2\text{mm}$ COPPER WIRE 10T 5mm I_D
 C_1 : AIR TRIMMER TTA23A100 MURATA MFC. Co., LTD. OR EQUIVALENT

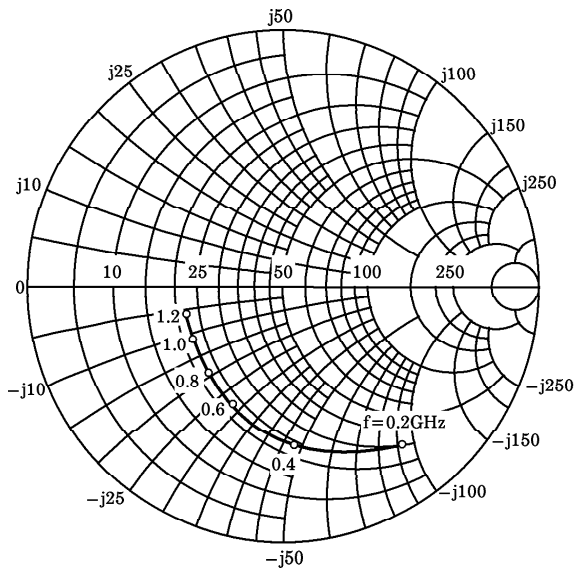
Fig.1 800MHz G_{ce} , NF TEST CIRCUIT

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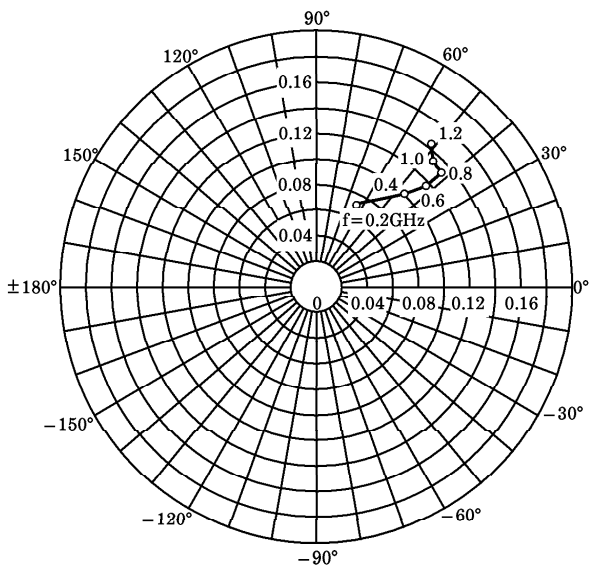
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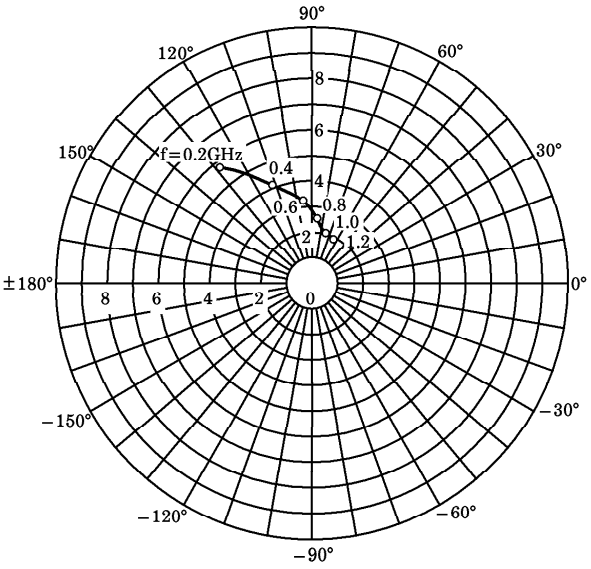
S_{11e}
V_{CE}=10V
I_C=2mA
T_a=25°C
(UNIT : Ω)



S_{12e}
V_{CE}=10V
I_C=2mA
T_a=25°C



S_{21e}
V_{CE}=10V
I_C=2mA
T_a=25°C



S_{22e}
V_{CE}=10V
I_C=2mA
T_a=25°C
(UNIT : Ω)

