TOSHIBA Transistor Silicon NPN Epitaxial Planar Type

2SC4244

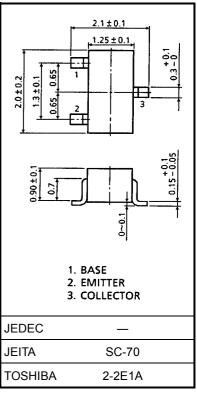
UHF TV Tuner RF Amplifier Applications

Unit: mm

Low noise figure: NF = 4dB (typ.)
High power gain: Gpb = 17dB (typ.)
Excellent forward AGC characteristics

Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	25	V
Collector-emitter voltage	V _{CEO}	20	V
Emitter-base voltage	V _{EBO}	2	V
Base current	ΙΒ	4	mA
Collector current	IC	20	mA
Collector power dissipation	P _C	100	mW
Junction temperature	Tj	125	°C
Storage temperature range	T _{stg}	-55~125	°C

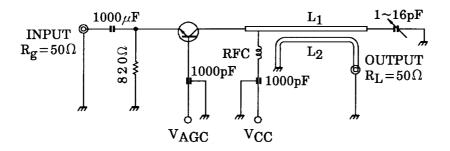


Weight: 0.006 g (typ.)

Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current	I _{CBO}	$V_{CB} = 10 \text{ V}, I_{E} = 0$	_	_	0.1	μΑ
Emitter cut-off current	I _{EBO}	V _{EB} = 2 V, I _C = 0	_	_	1	μΑ
Collector-emitter breakdown voltage	V (BR) CEO	I _C = 1 mA, I _B = 0	20	_	_	V
DC current gain	h _{FE}	V _{CE} = 3 V, I _C = 1 mA	40	100	_	
Transition frequency	f _T	V _{CE} = 3 V, I _C = 1 mA	500	850	_	MHz
Reverse transfer capacitance	C _{rb}	V _{CE} = 2 V, I _B = 0, f = 1 MHz	_	0.4	0.55	pF
Power gain	Gpe	V _{CC} = 4.5 V, V _{AGC} = 2.0 V	12	17	_	dB
Noise figure	NF	f = 800 MHz (Figure 1)	_	4	6	dB
AGC voltage	V _{AGC}	$V_{CC} = 4.5 \text{ V}, \text{ G.R.} = -20 \text{dB}, \\ f = 800 \text{ MHz}$ (Note	2.5	3.2	4.0	V

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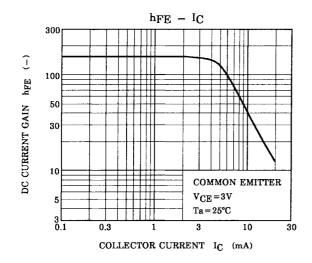
 $L_1,\,L_2$: $\phi 1.0$ mm silver plated copper wire

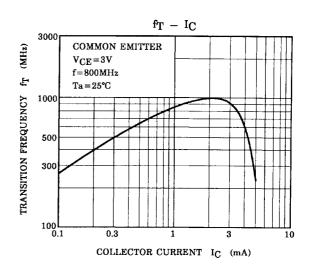
Note: V_{AGC} measured by the test circuit shown in Figure 1, when the power gain is reduced to 20dB compared with G_{pb} shown above table.

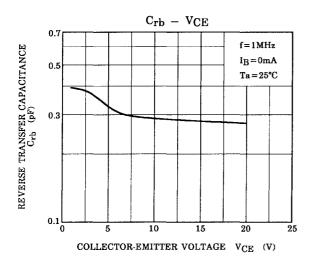
Figure 1 800 MHz Gpe, NF Test Circuit

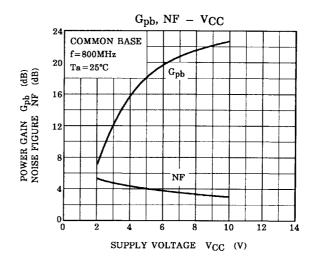
Marking

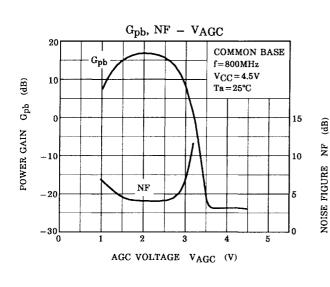


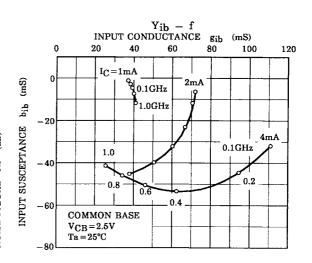




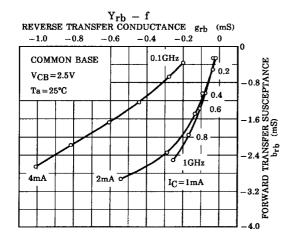


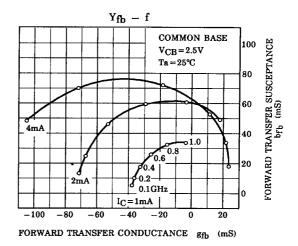


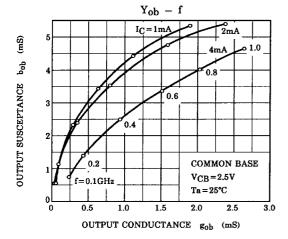


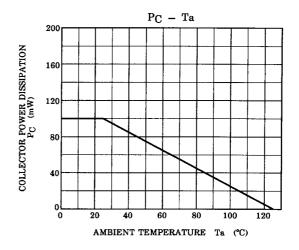


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