

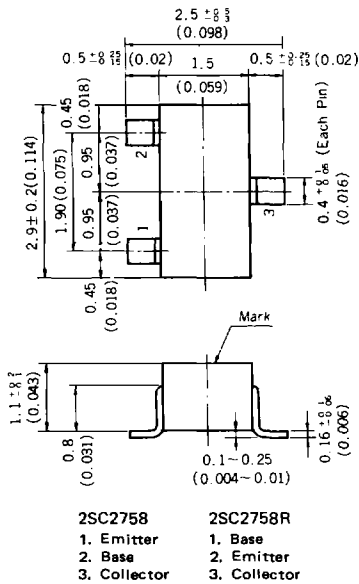
SILICON TRANSISTORS

2SC2758, 2SC2758R

RF AMP. FOR UHF TV TUNER

NPN SILICON TRANSISTOR

PACKAGE DIMENSIONS
in millimeters (inches)



The 2SC2758, 2SC2758R are specifically designed for UHF RF amplifier applications. The 2SC2758 and 2SC2758R feature high power gain, low noise, and excellent forward AGC characteristics in a tiny plastic package designed to realize easy and economical mounting for Hybrid IC.

- High power gain. ; 14dB MIN.
- Low noise figure. ; 4.5dB TYP.
- Forward AGC characteristic.
- Easy & economical mounting realizable with plastic mold package for Hybrid IC.

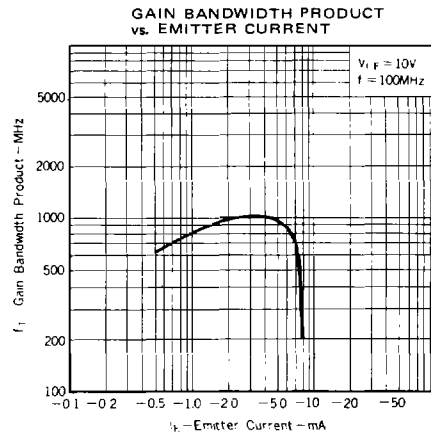
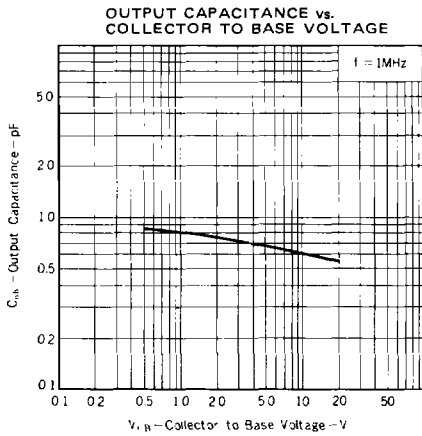
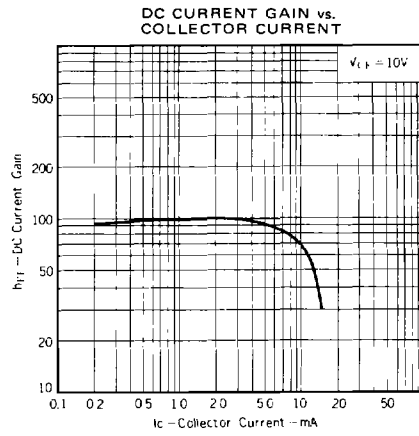
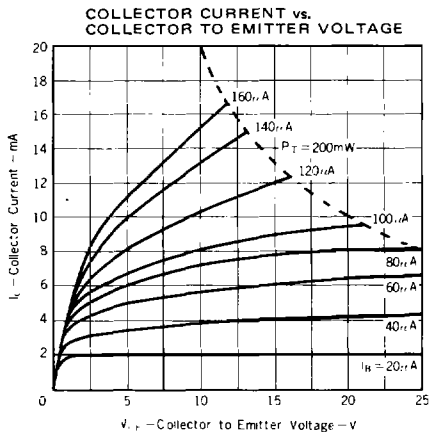
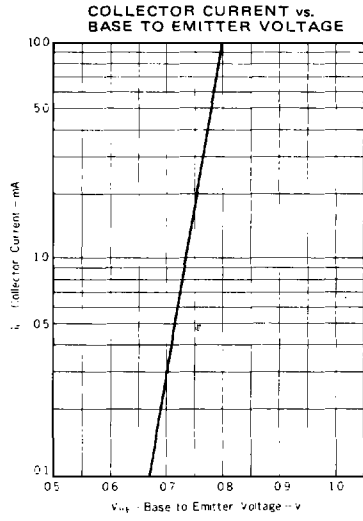
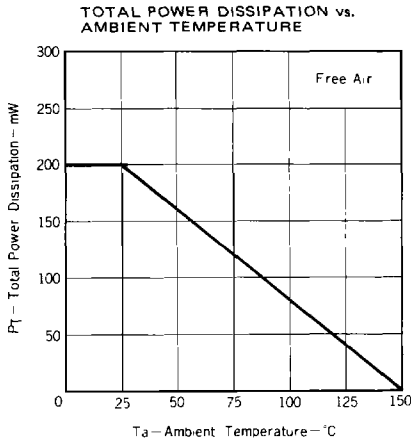
ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

Collector to Base Voltage	V _{CB0}	30	V
Collector to Emitter Voltage	V _{CE0}	25	V
Emitter to Base Voltage	V _{EB0}	4.0	V
Collector Current	I _C	20	mA
Total Power Dissipation	P _T	200	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

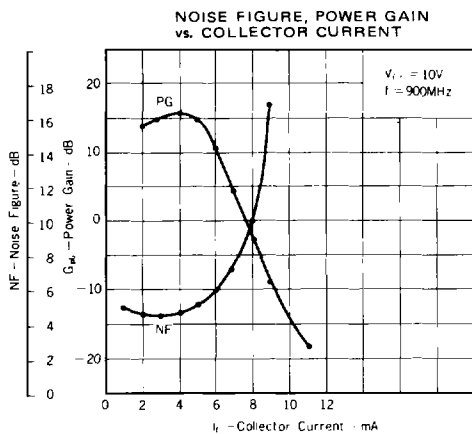
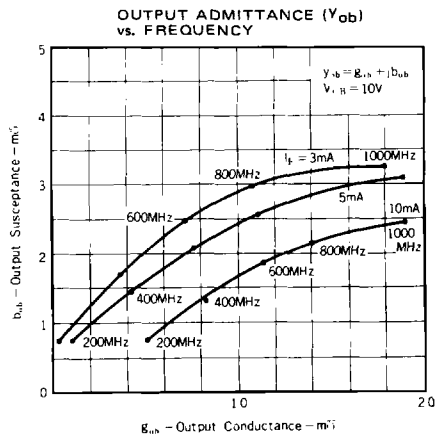
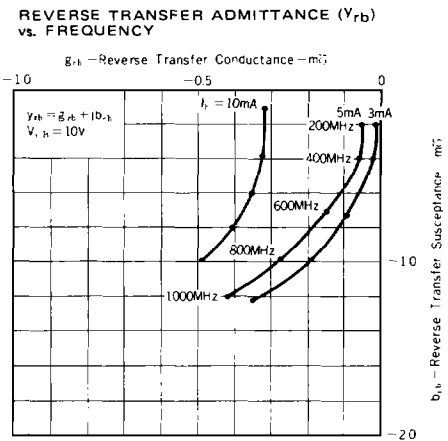
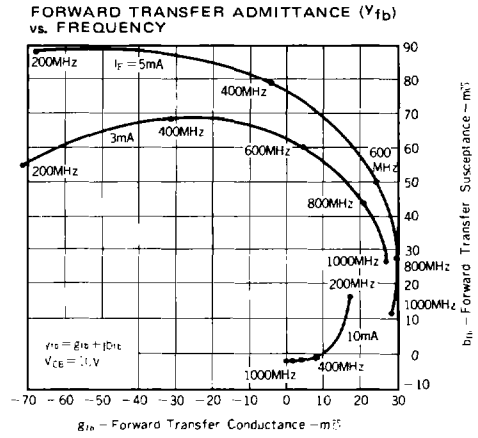
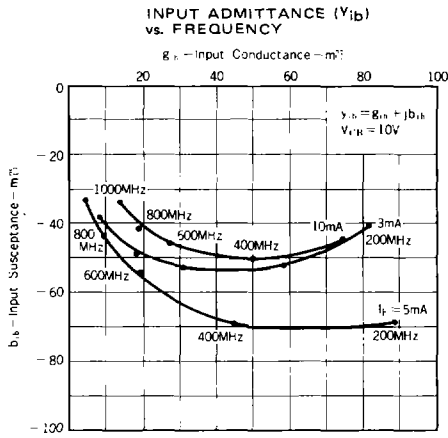
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	I _{CB0}			0.1	μA	V _{CB} = 25V, I _E = 0
DC Current Gain	h _{FE}	60	100	240		V _{CE} = 10V, I _C = 3.0mA
Gain Bandwidth Product	f _T	750	900		MHz	V _{CE} = 10V, I _E = -3.0mA
Output Capacitance	C _{ob}		0.6	0.8	pF	V _{CB} = 10V, I _E = 0, f = 1MHz
Noise Figure	NF		4.5	6.0	dB	V _{CB} = 10V, I _E = -3.0mA, f = 900MHz
Power Gain	G _{pb}	14			dB	V _{CB} = 10V, I _E = -3.0mA, f = 900MHz
AGC Current	I _{AGC}	-7	-10	-11	mA	I _E for which G _{pbAGC} = G _{pb} - 30dB

TYPICAL CHARACTERISTICS (Ta = 25°C)

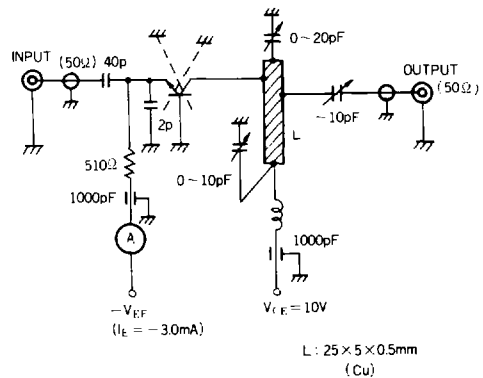


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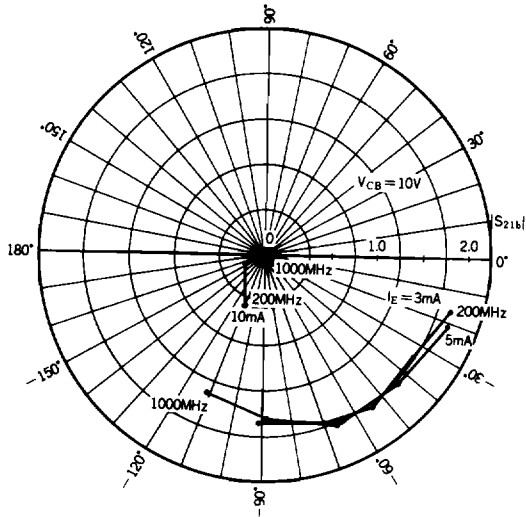
TYPICAL CHARACTERISTICS of "Y" PARAMETERS



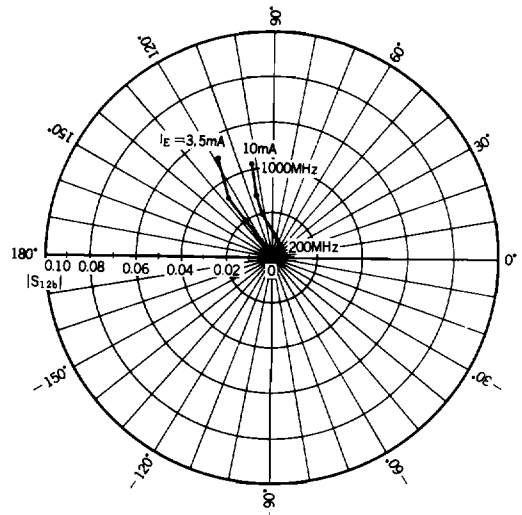
900 MHz G_{pb} & NF Test Circuit



S_{21b} vs. f



S_{12b} vs. f



S₁₁ vs. f, S₂₂ vs. f

