

# 2SC4915

HIGH FREQUENCY AMPLIFIER APPLICATIONS

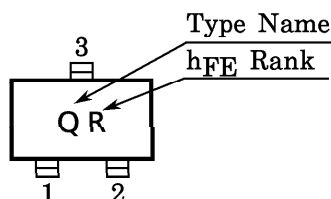
FM, RF, MIX, IF AMPLIFIER APPLICATIONS

- Small Reverse Transfer Capacitance :  $C_{re}=0.55\text{pF}$  (Typ.)
- Low Noise Figure :  $NF=2.3\text{dB}$  (Typ.)

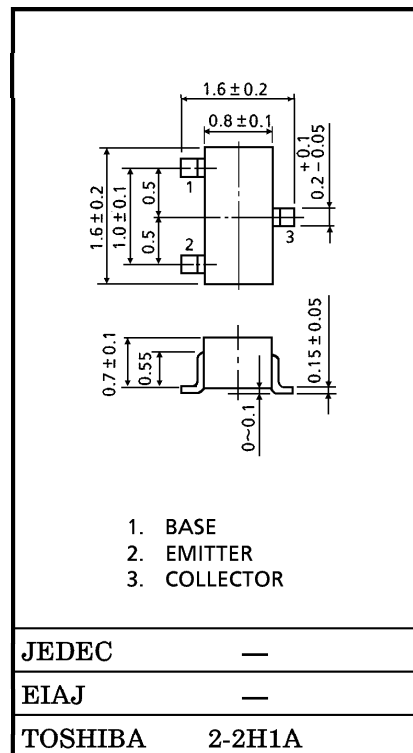
MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )

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	$I_C$	20	mA
Base Current	$I_B$	4	mA
Collector Power Dissipation	$P_C$	100	mW
Junction Temperature	$T_j$	125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	$-55\sim 125$	$^\circ\text{C}$

Marking



Unit in mm

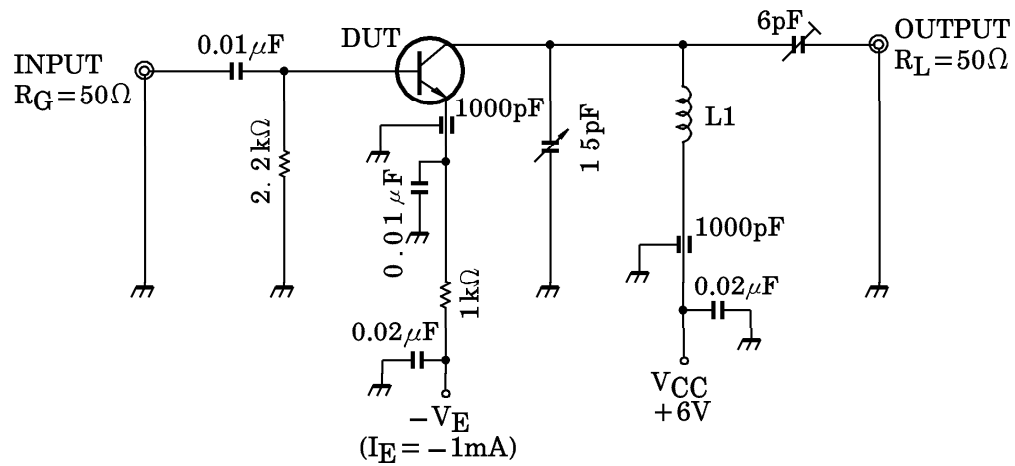


Weight : 2.4mg

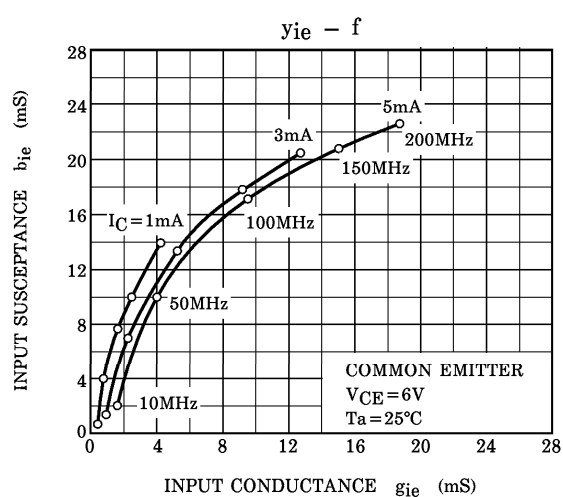
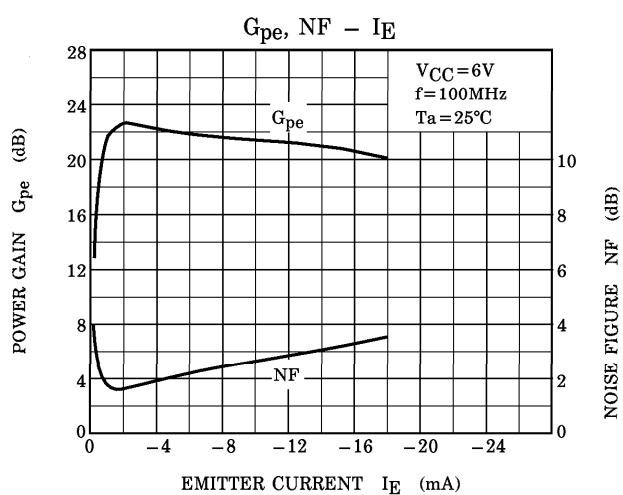
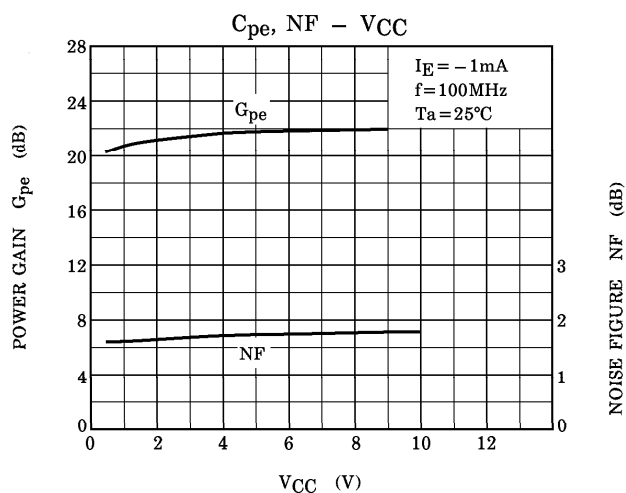
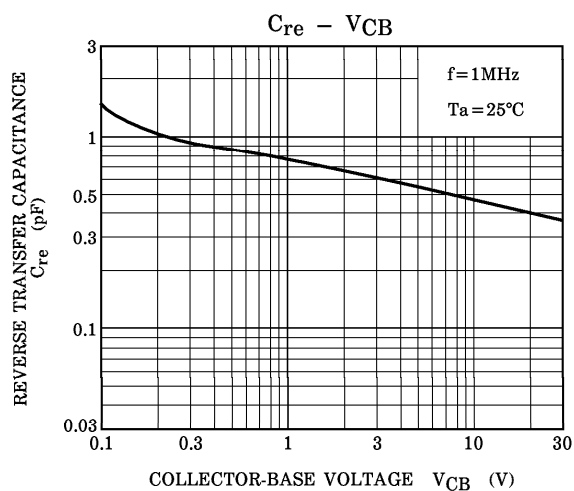
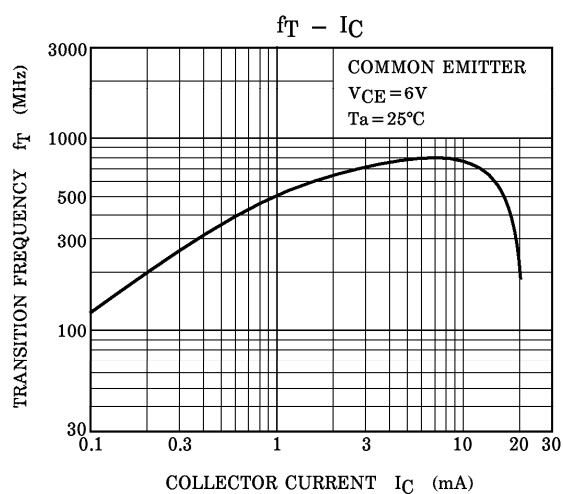
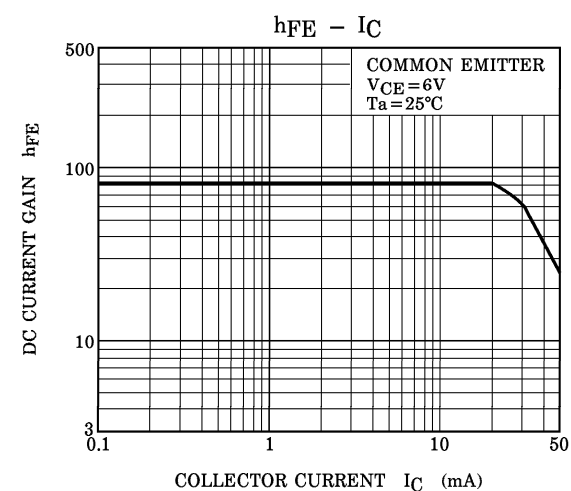
ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

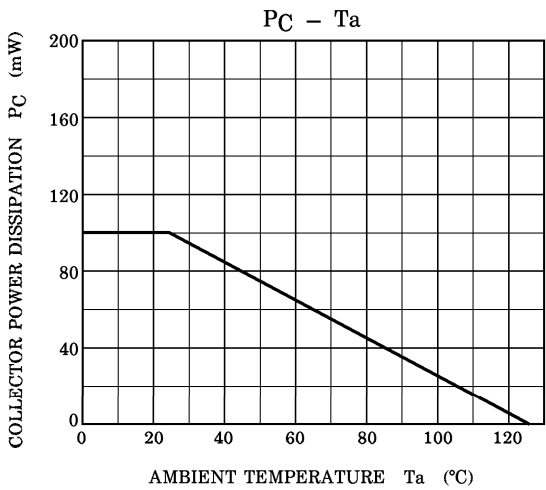
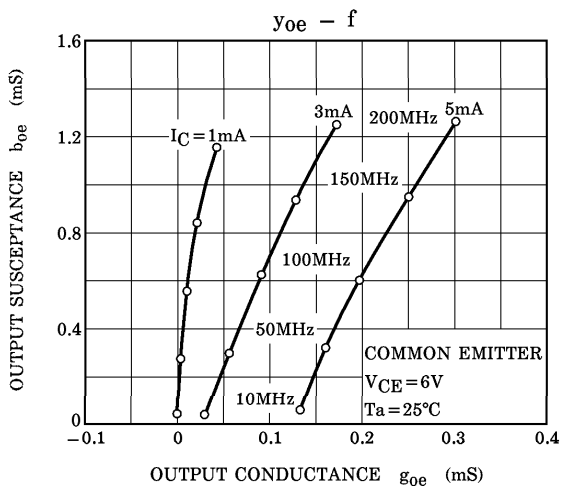
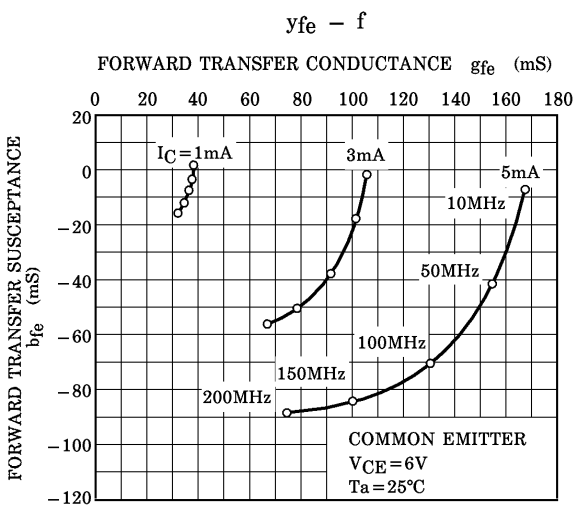
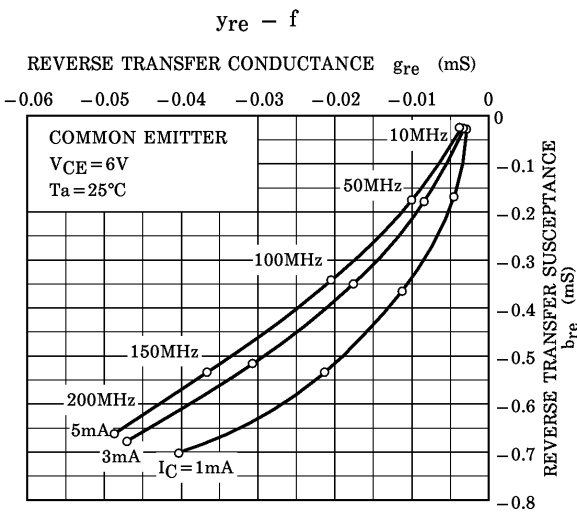
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=40\text{V}$ , $I_E=0\text{A}$	—	—	0.1	$\mu\text{A}$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=4\text{V}$ , $I_C=0\text{A}$	—	—	0.5	$\mu\text{A}$
DC Current Gain	$h_{FE}$ (Note)	$V_{CE}=6\text{V}$ , $I_C=1\text{mA}$	40	—	200	
Reverse Transfer Capacitance	$C_{re}$	$V_{CB}=6\text{V}$ , $f=1\text{MHz}$	—	0.55	—	pF
Transition Frequency	$f_T$	$V_{CE}=6\text{V}$ , $I_C=1\text{mA}$	260	550	—	MHz
Collector-Base Time Constant	$C_c \cdot r_{bb'}$	$V_{CE}=6\text{V}$ , $I_E=-1\text{mA}$ , $f=30\text{MHz}$	—	—	20	ps
Noise Figure	NF	$V_{CC}=6\text{V}$ , $I_E=-1\text{mA}$ , $f=100\text{MHz}$ , Fig.1	—	2.3	5.0	dB
Power Gain	$G_{pe}$		17	23	—	dB

(Note)  $h_{FE}$  Classification R : 40~80, O : 70~140, Y : 100~200

Fig.1 NF,  $G_{pe}$  TEST CIRCUIT

L1 :  $0.8mm\phi$  SILVER PLATED COPPER WIRE, 4T, 10mm ID, 8mm LENGTH





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