

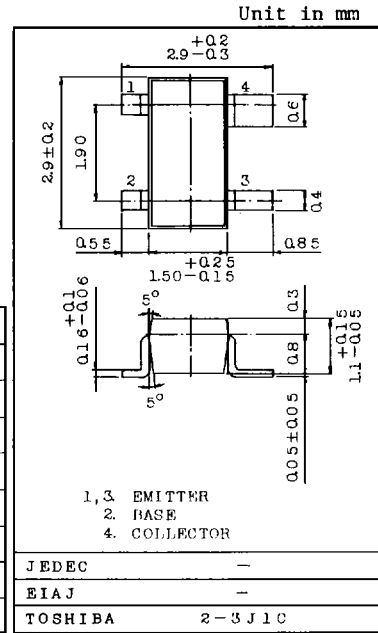
VHF~UHF BAND LOW NOISE AMPLIFIER APPLICATIONS.

FEATURES:

- Low Noise Figure, High Gain.
- $NF=1.1dB$, $|S_{21e}|^2=13dB$ ($f=1GHz$)

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CB0}	20	V
Collector-Emitter Voltage	V_{CE0}	12	V
Emitter-Base Voltage	V_{EB0}	3	V
Collector Current	I_C	80	mA
Base Current	I_B	40	mA
Collector Power Dissipation	P_C	150	mW
Junction Temperature	T_j	125	$^\circ C$
Storage Temperature Range	T_{stg}	-55~125	$^\circ C$



Weight : 0.012g

MICROWAVE CHARACTERISTICS ($T_a=25^\circ C$)

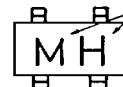
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Transition Frequency	f_T	$V_{CE}=10V, I_C=20mA$	5	7	-	GHz
Insertion Gain	$ S_{21e} ^2(1)$	$V_{CE}=10V, I_C=20mA, f=500MHz$	-	18.5	-	dB
	$ S_{21e} ^2(2)$	$V_{CE}=10V, I_C=20mA, f=1GHz$	9.5	13	-	dB
Noise Figure	NF(1)	$V_{CE}=10V, I_C=5mA, f=500MHz$	-	1	-	dB
	NF(2)	$V_{CE}=10V, I_C=5mA, f=1GHz$	-	1.1	2	dB

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

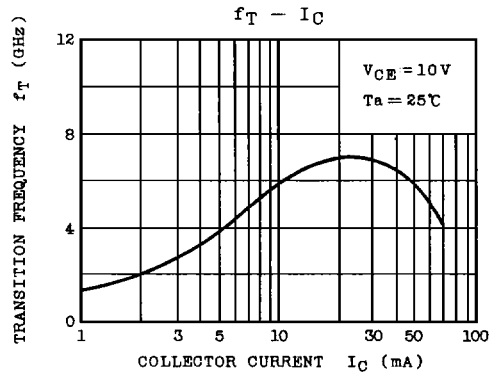
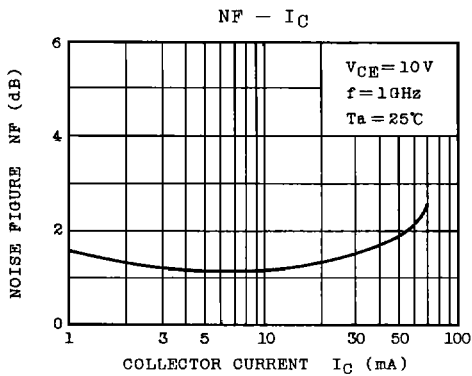
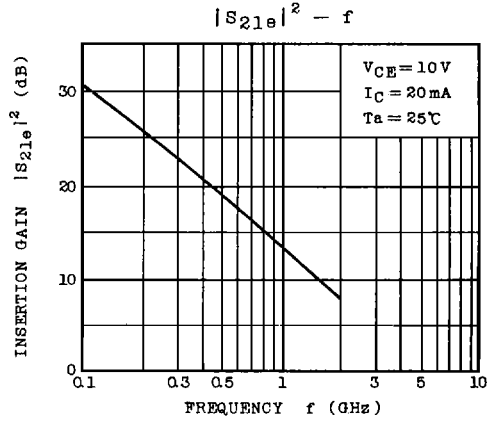
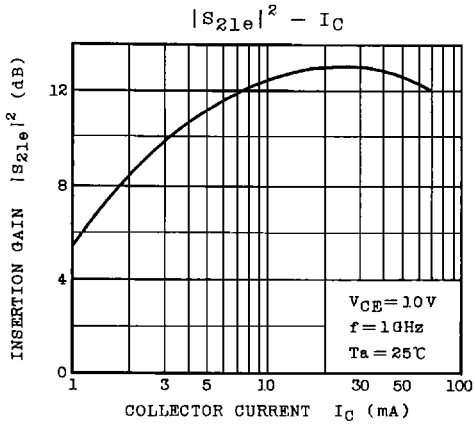
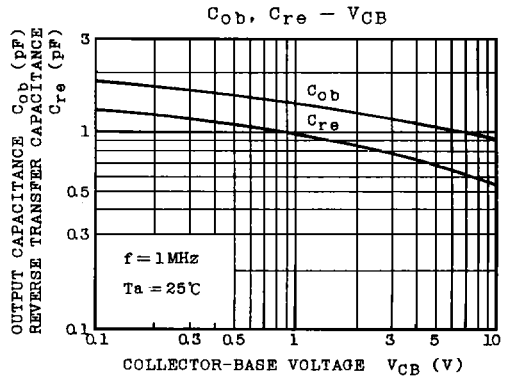
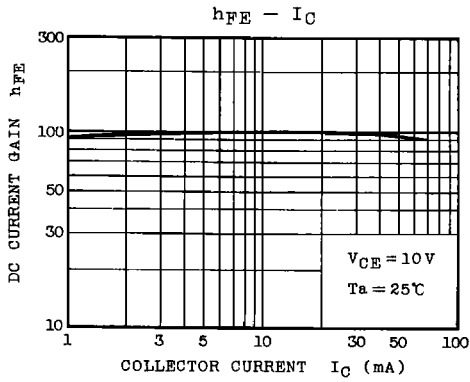
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CB0}	$V_{CB}=10V, I_E=0$	-	-	1	μA
Emitter Cut-off Current	I_{EB0}	$V_{EB}=1V, I_C=0$	-	-	1	μA
DC Current Gain	h_{FE}	$V_{CE}=10V, I_C=20mA$	30	-	250	-
Output Capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$	-	0.9	-	pF
Reverse Transfer Capacitance	C_{re}	(Note)	-	0.55	1	pF

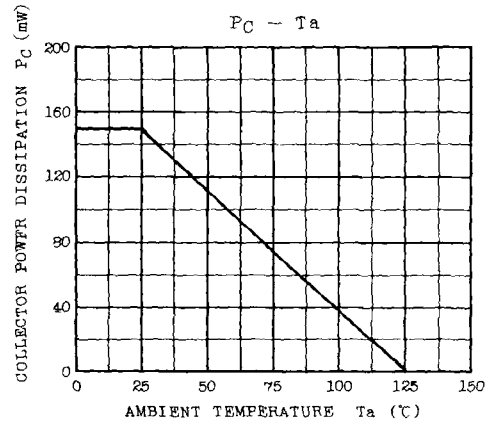
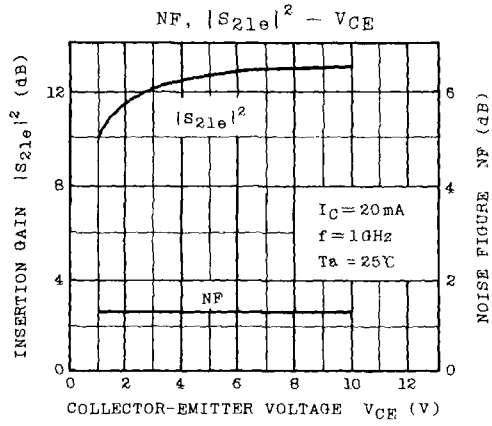
Note : C_{re} is measured by 3 terminal method with Capacitance Bridge.

Marking

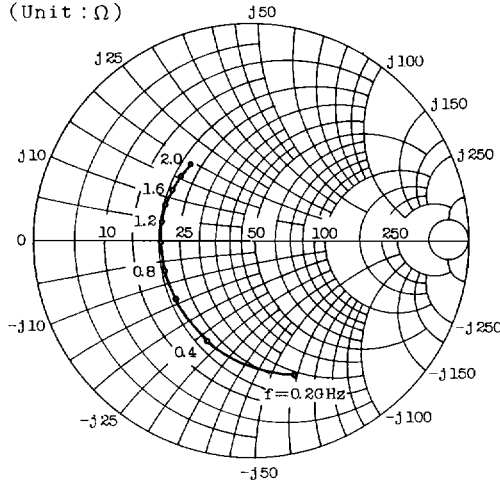


Type Name

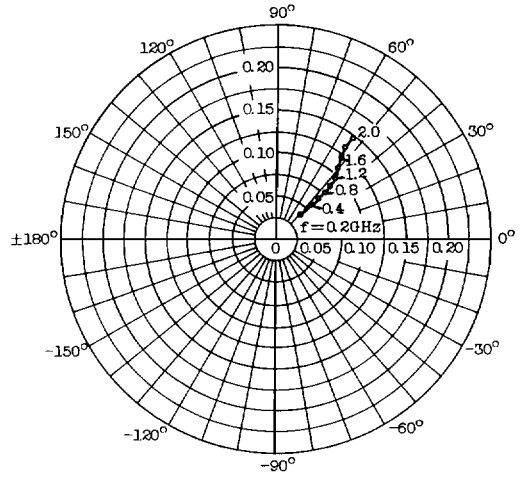




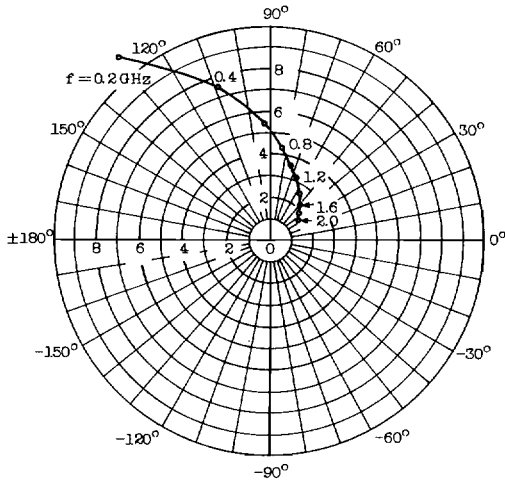
S_{11e}
 $V_{CE} = 10V$
 $I_C = 5mA$
 $T_a = 25^\circ C$
 (Unit: Ω)



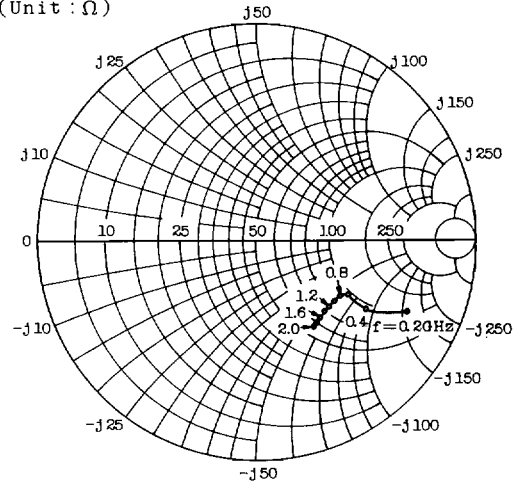
S_{12e}
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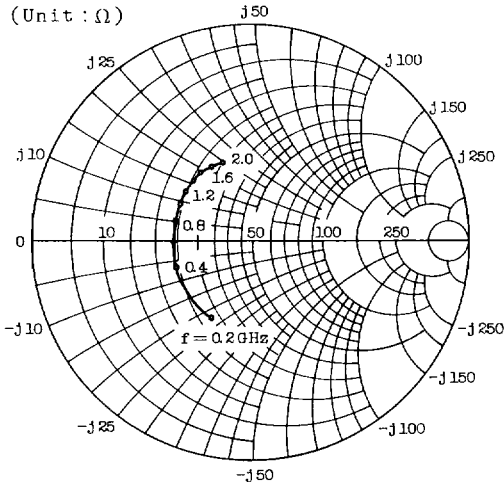
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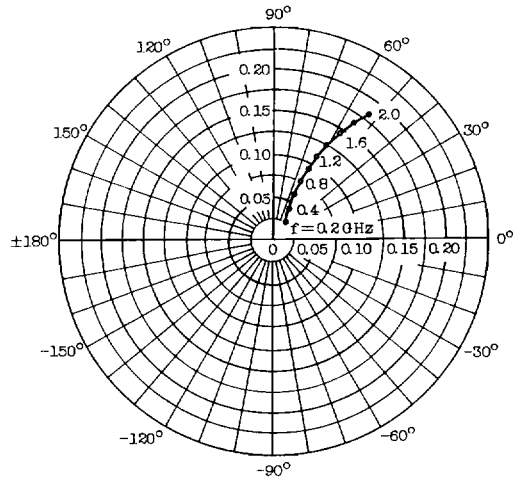
S_{22e}
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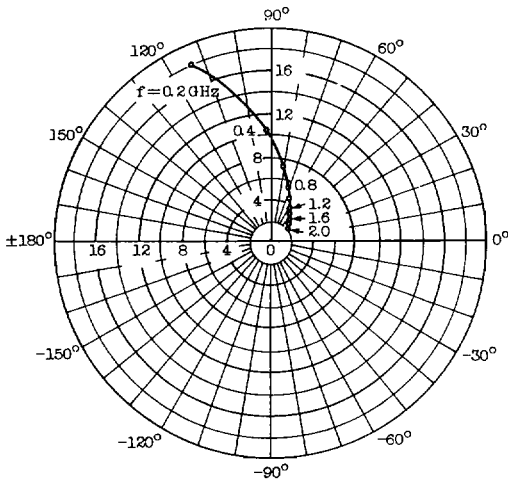
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 (Unit: Ω)



S_{12e}
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 $T_a = 25^\circ C$



S_{21e}
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 $I_C = 20mA$
 $T_a = 25^\circ C$



S_{22e}
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 (Unit: Ω)

