

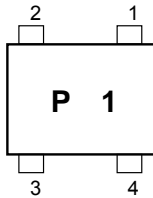
MT4S104U

UHF-SHF Low Noise Amplifier Application

FEATURES

- Low Noise Figure :NF=1.25dB (@f=5.2GHz)
- High Gain:|S21e|^2=10.0dB (@f=5.2GHz)

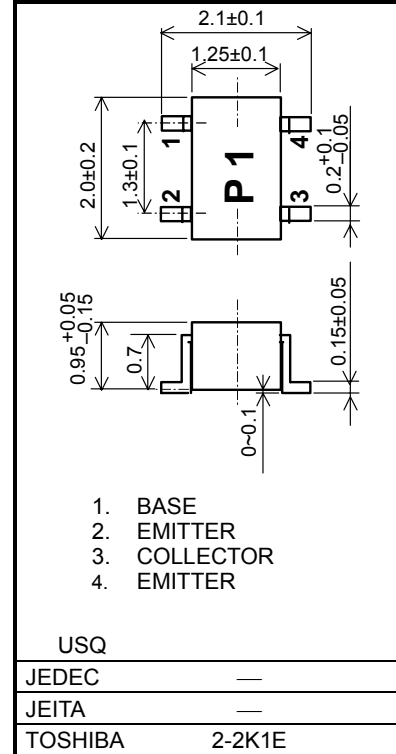
Marking



Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Collector-Base voltage	V _{CB0}	6	V
Collector-Emitter voltage	V _{CEO}	3	V
Emitter-Base voltage	V _{EBO}	1.2	V
Collector-Current	I _C	10	mA
Base-Current	I _B	5	mA
Collector Power dissipation	P _C	30	mW
Junction temperature	T _J	150	°C
Storage temperature Range	T _{stg}	-55~150	°C

Unit:mm



Weight: 0.006 g

Microwave Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Transition Frequency	f_T	$V_{CE}=2V, I_C=7mA, f=2GHz$	19	23	—	GHz
Insertion Gain	$ S_{21e} ^2(1)$	$V_{CE}=2V, I_C=7mA, f=2GHz$	14.0	16.5	—	dB
	$ S_{21e} ^2(2)$	$V_{CE}=2V, I_C=7mA, f=5.2GHz$	—	10.0	—	dB
Noise Figure	NF(1)	$V_{CE}=2V, I_C=5mA, f=2GHz$	—	0.67	0.95	dB
	NF(2)	$V_{CE}=2V, I_C=5mA, f=5.2GHz$	—	1.25	—	dB

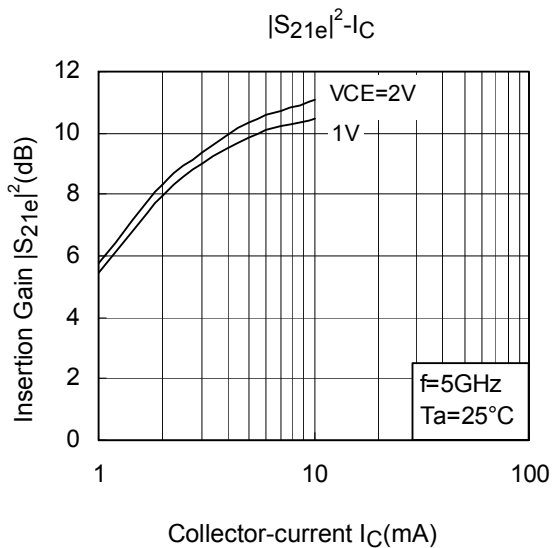
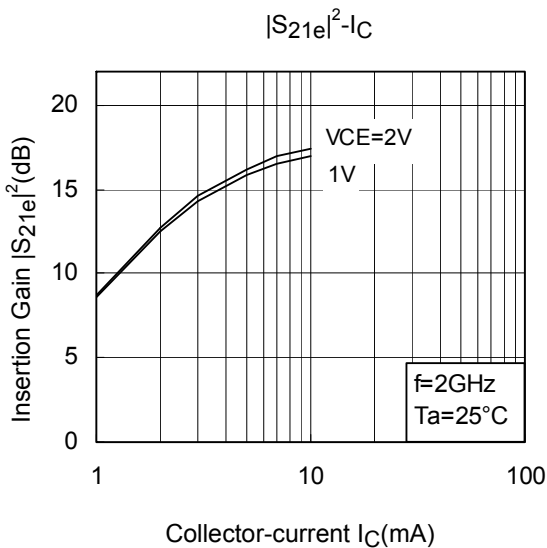
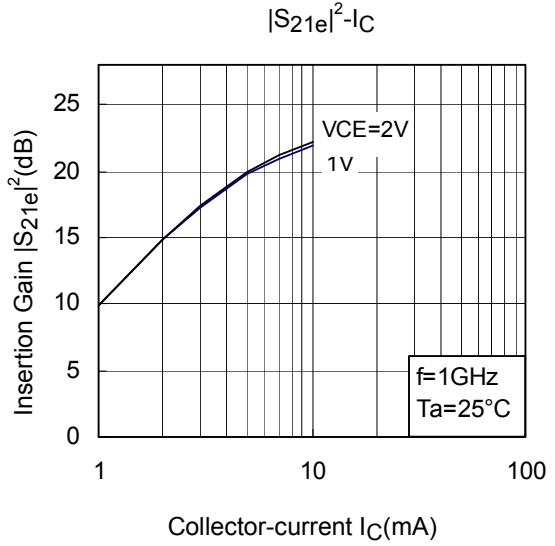
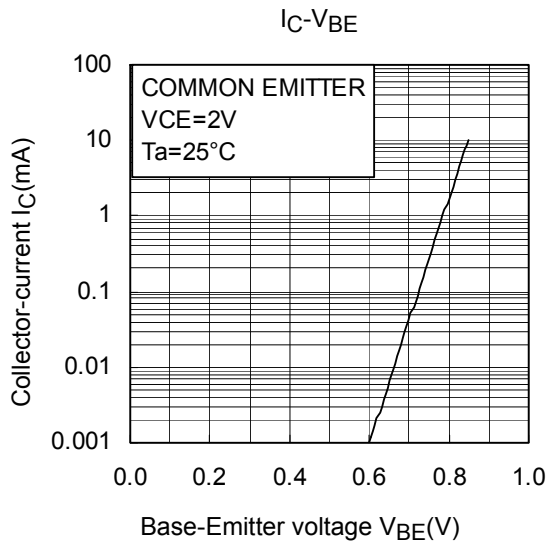
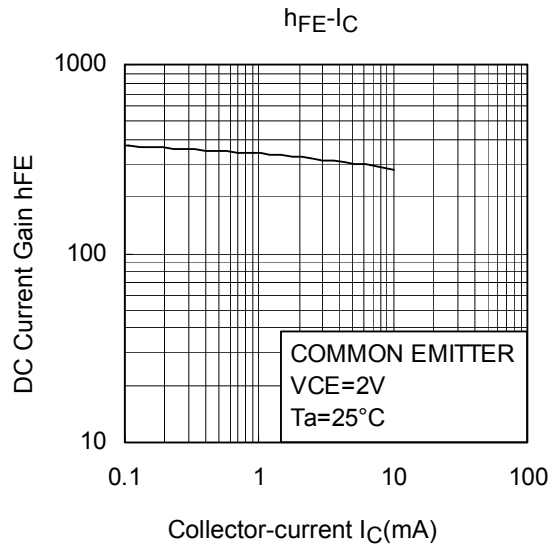
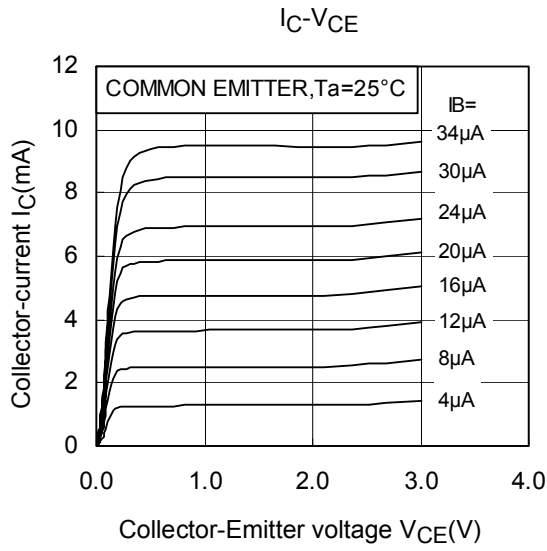
Electrical Characteristics (Ta = 25°C)

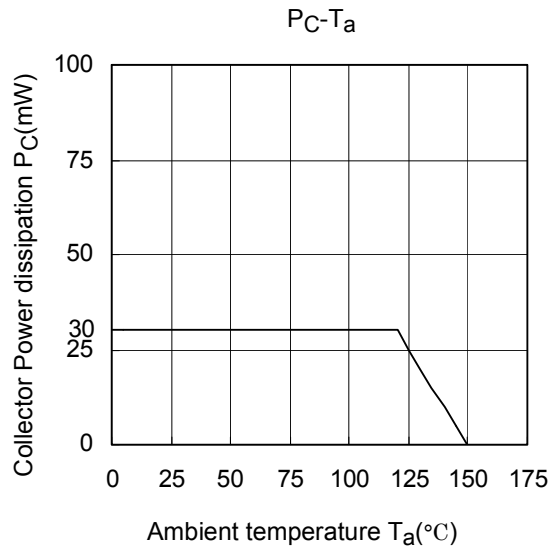
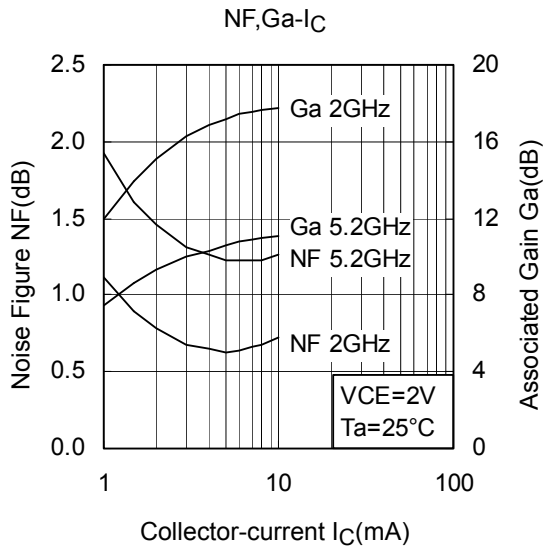
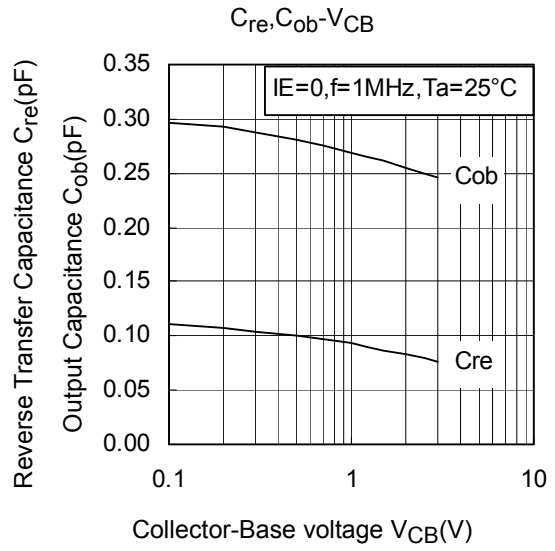
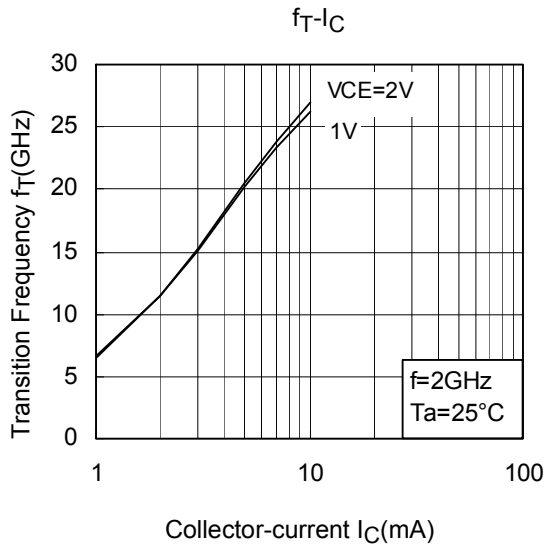
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector Cut-off Current	I_{CBO}	$V_{CB}=6V, I_E=0$	—	—	1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=1V, I_C=0$	—	—	1	μA
DC Current Gain	hFE	$V_{CE}=2V, I_C=7mA$	200	—	400	-
Output Capacitance	C_{ob}	$V_{CB}=2V, I_E=0, f=1MHz$	—	0.26	0.5	pF
Reverse Transfer Capacitance	C_{re}	$V_{CB}=2V, I_E=0, f=1MHz$ (Note 1)	—	0.09	0.18	pF

Note 1: Cre is measured by 3 terminal method with capacitance bridge.

Caution: This device is sensitive to electrostatic discharge.

Please make enough tool and equipment earthed when you handle.





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