

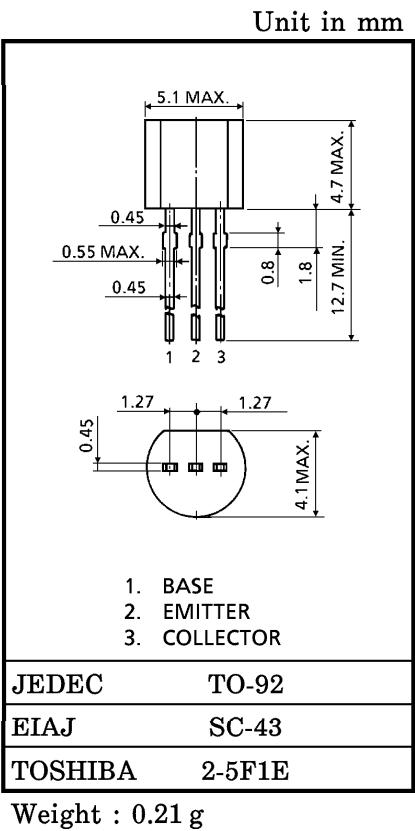
2SC2644

VHF~UHF BAND WIDEBAND AMPLIFIER APPLICATIONS

- High Gain
- Low IMD
- $f_T = 4\text{ GHz (Typ.)}$

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V _{CB0}	25	V
Collector-Emitter Voltage	V _{CE0}	12	V
Emitter-Base Voltage	V _{EB0}	3.0	V
Collector Current	I _C	120	mA
Emitter Current	I _B	40	mA
Collector Power Dissipation	P _C	0.5	W
Junction Temperature	T _j	125	°C
Storage Temperature Range	T _{stg}	-55~125	°C



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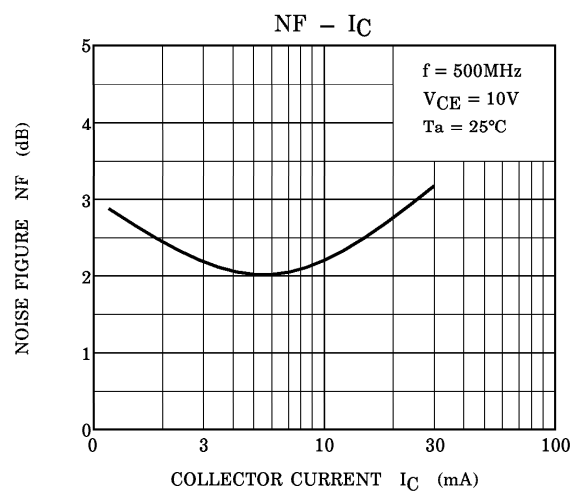
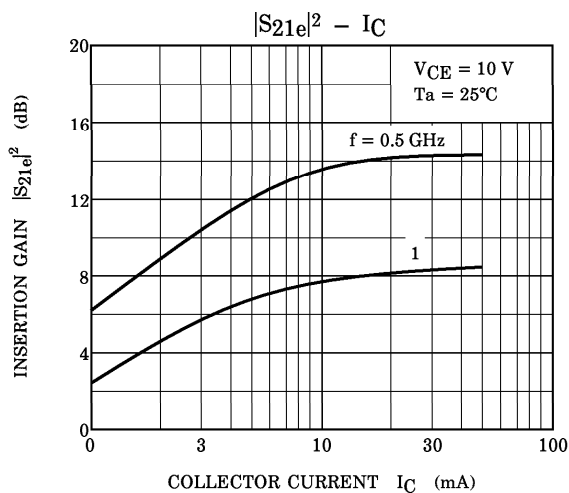
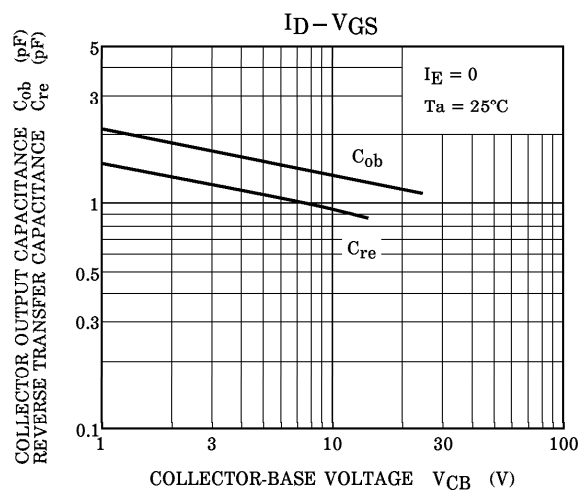
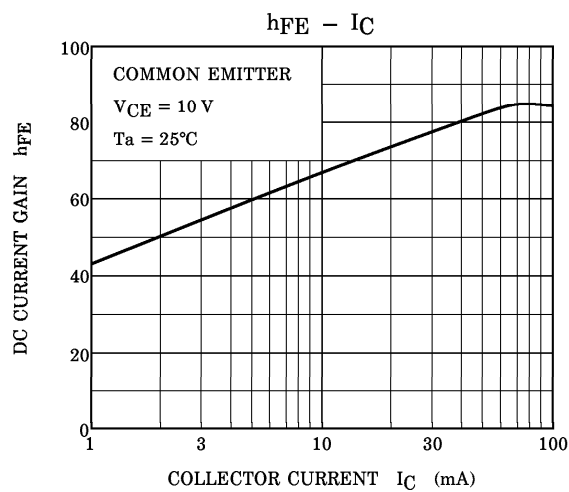
MICROWAVE CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Transition Frequency	f_T	$V_{CE} = 10\text{ V}, I_C = 30\text{ mA}$	—	4.0	—	GHz
Insertion Gain	$ S_{21e} ^2 (1)$	$V_{CE} = 10\text{ V}, I_C = 30\text{ mA}, f = 0.5\text{ GHz}$	—	14.0	—	dB
	$ S_{21e} ^2 (2)$	$V_{CE} = 10\text{ V}, I_C = 30\text{ mA}, f = 1\text{ GHz}$	—	8.5	—	dB
Noise Figure	NF (1)	$V_{CE} = 10\text{ V}, I_C = 10\text{ mA}, f = 0.5\text{ GHz}$	—	2.3	—	dB
	NF (2)	$V_{CE} = 10\text{ V}, I_C = 10\text{ mA}, f = 1\text{ GHz}$	—	3.0	—	dB

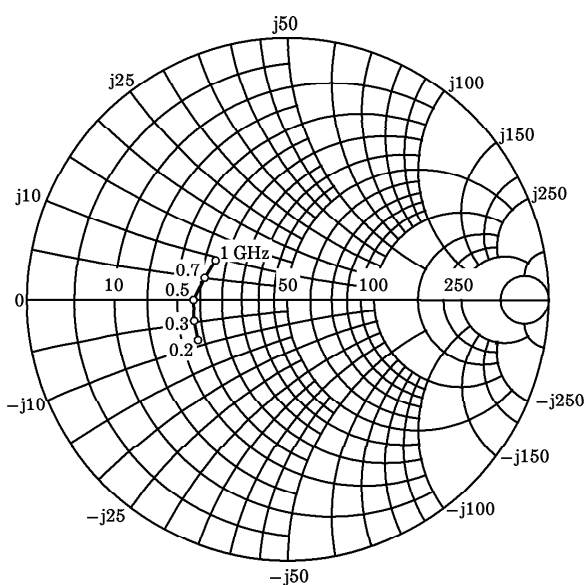
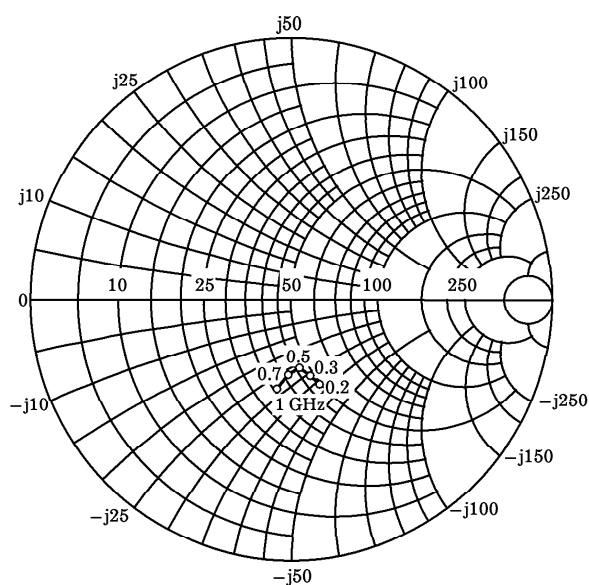
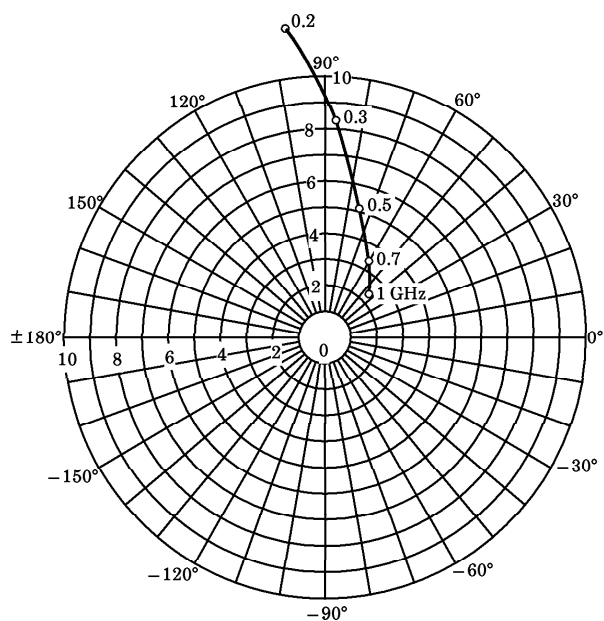
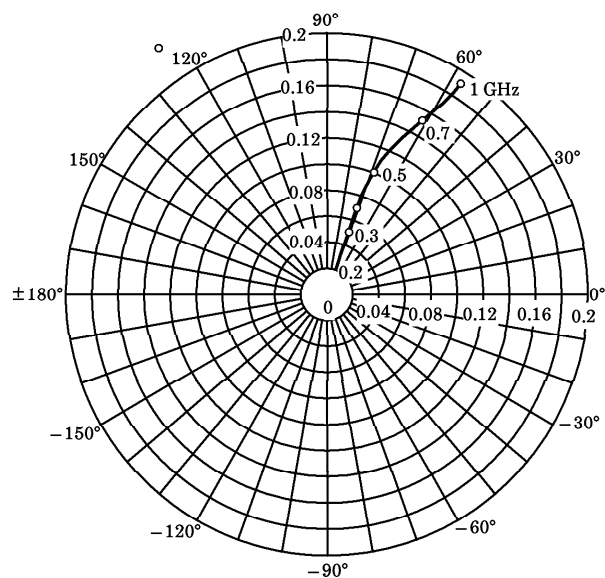
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITON	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 10\text{ V}, I_E = 0$	—	—	1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 1.0\text{ V}, I_C = 0$	—	—	10	μA
DC Current Gain	h_{FE}	$V_{CE} = 5\text{ V}, I_C = 50\text{ mA}$	20	50	—	—
Collector Output Capacitance	C_{ob}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz (Note)}$	—	1.6	—	pF
Reverse Transfer Capacitance	C_{re}		—	1.1	—	pF

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



COMMON EMITTER SMALL S-PARAMETERS OF 2SC2644

 $V_{CE} = 10\text{ V}$, $I_C = 30\text{ mA}$  S_{11e} (UNIT : Ω) S_{22e} (UNIT : Ω) S_{21e}  S_{12e}