

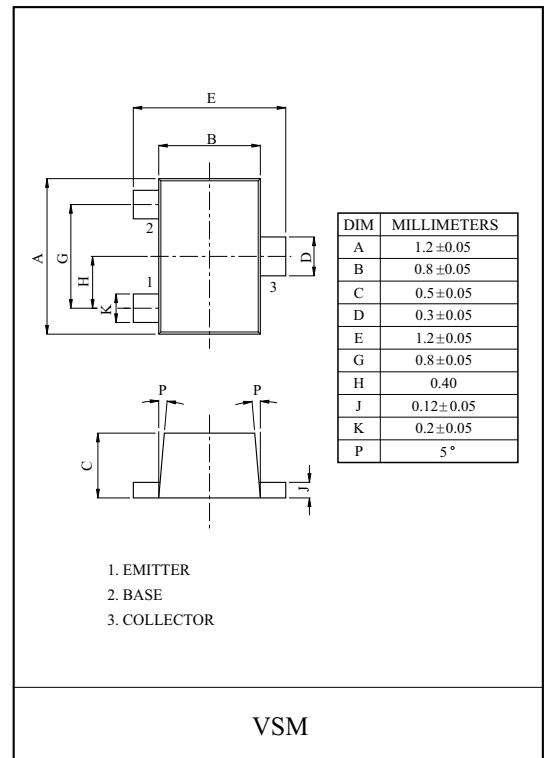
VHF/UHF WIDE BAND AMPLIFIER APPLICATION.

#### FEATURES

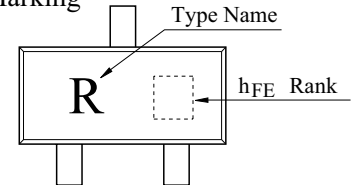
- Low Noise Figure, High Gain.
- Small  $r_{bb'}C_c$  (Typ. 4pS).

#### MAXIMUM RATING (Ta=25 °C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	20	V
Collector-Emitter Voltage	$V_{CEO}$	11	V
Emitter-Base Voltage	$V_{EBO}$	3	V
Collector Current	$I_C$	50	mA
Collector Power Dissipation	$P_C$	100	mW
Junction Temperature	$T_j$	150	°C
Storage Temperature Range	$T_{stg}$	-55 ~ 150	°C



#### Marking



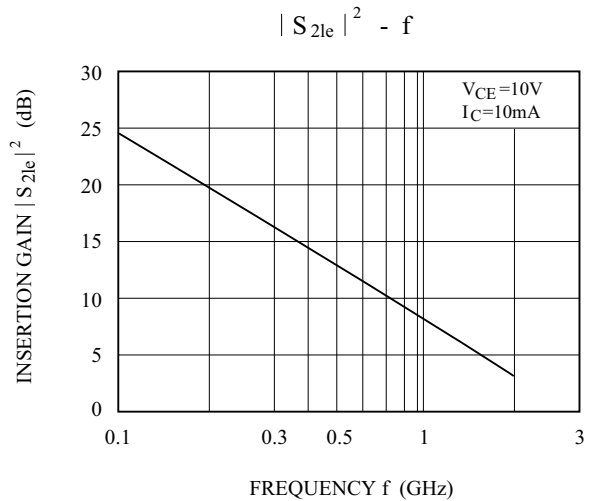
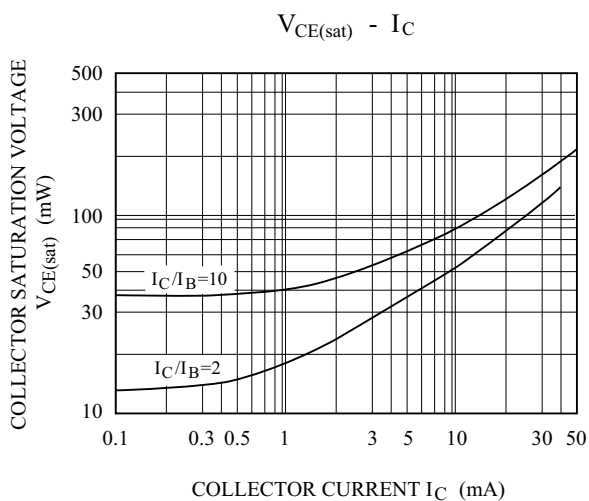
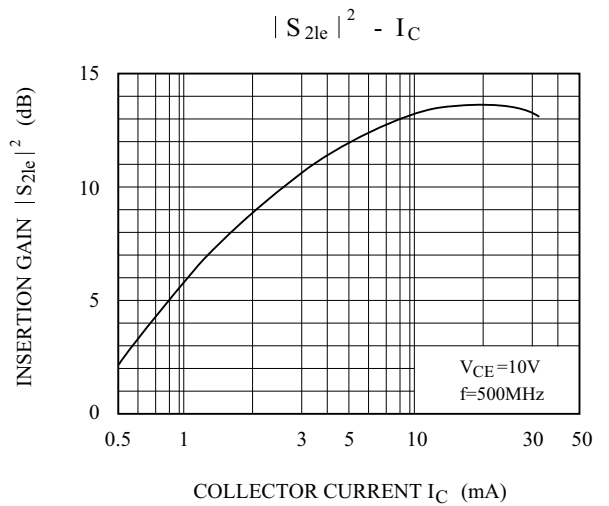
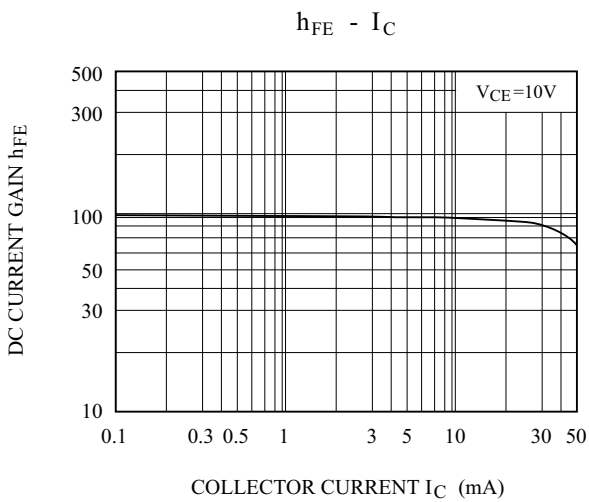
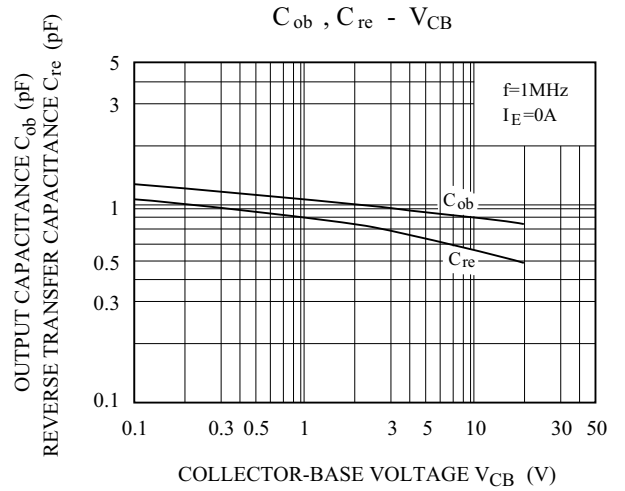
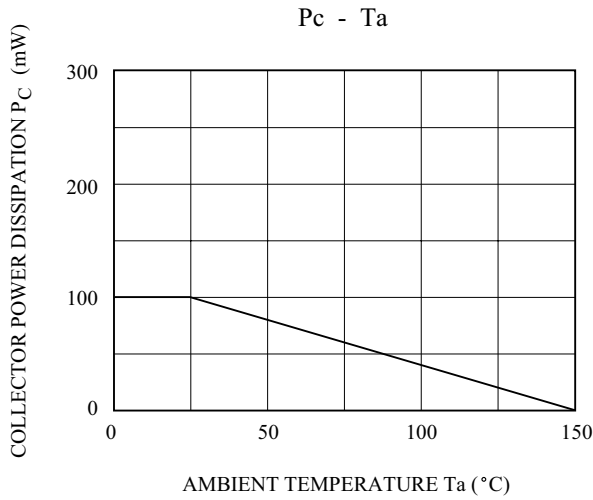
#### ELECTRICAL CHARACTERISTICS (Ta=25 °C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=10V, I_E=0$	-	-	500	nA
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=2V, I_C=0$	-	-	0.5	μA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10mA, I_B=5mA$	-	-	0.5	V
DC Current Gain	$h_{FE}$ (Note)	$V_{CE}=10V, I_C=5mA$	56	-	180	
Collector Output Capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$	-	0.8	1.5	pF
Collector-Base Time Constant	$r_{bb'}C_c$	$V_{CE}=10V, I_E=10mA, f=31.8MHz$	-	4	12	pS
Transition Frequency	$f_T$	$V_{CE}=10V, I_C=10mA, f=500MHz$	1.4	3.2	-	GHz
Noise Figure	NF	$V_{CE}=6V, I_C=2mA, f=500MHz, R_g=50\Omega$	-	3.5	-	dB

Note)  $h_{FE}$  Classification : F:56~120, G:82~180

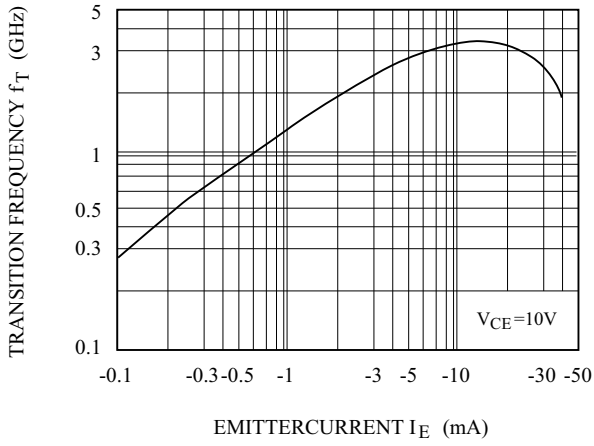
# KTC3730V

## TYPICAL CHARACTERISTICS (Ta=25°C)

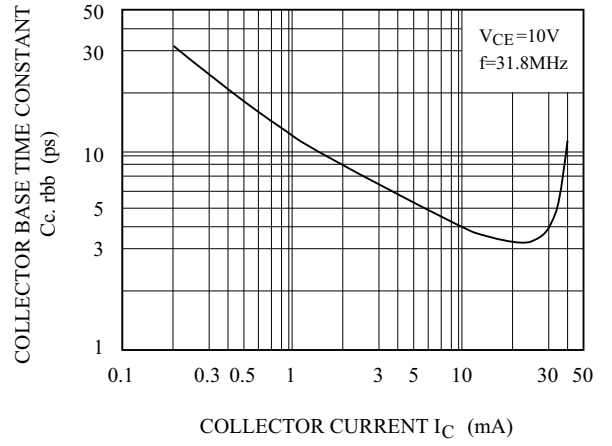


# KTC3730V

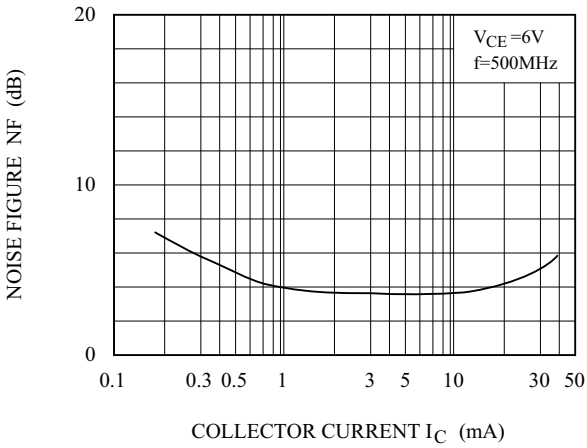
$f_T - I_E$



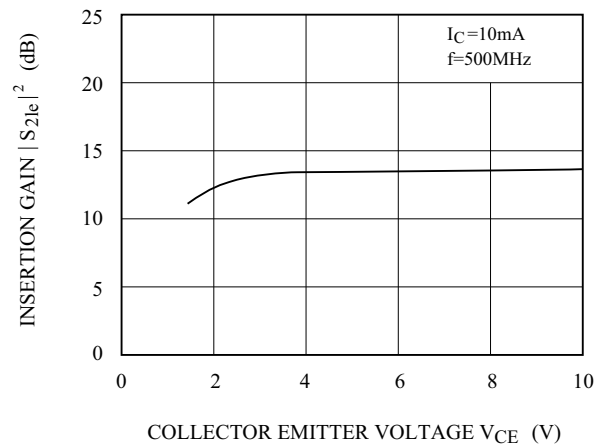
$r_{bb}, C_c - I_C$



NF -  $I_C$



$|S_{21e}|^2 - V_{CE}$



NF -  $V_{CE}$

