

TV TUNER, UHF OSCILLATOR APPLICATION.
(COMMON BASE)

TV TUNER, UHF CONVERTER APPLICATION.
(COMMON BASE)

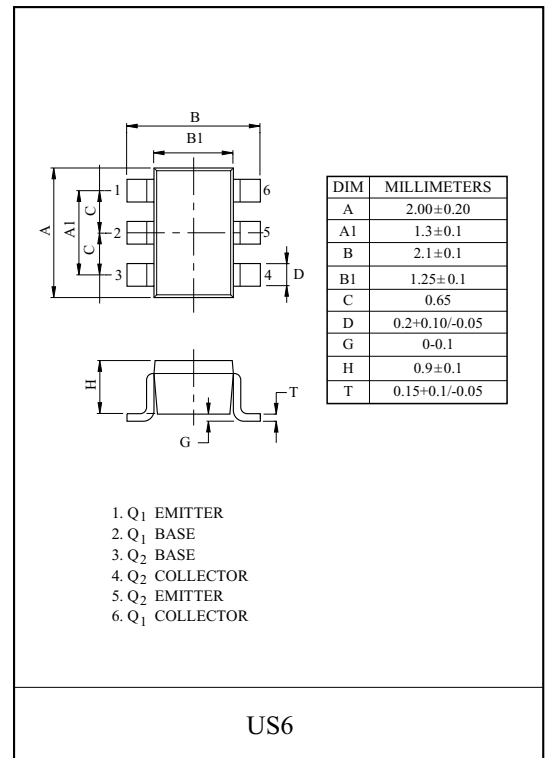
FEATURES

- High Transition Frequency : $f_T=1500\text{MHz}$ (Typ.).
- Excellent h_{FE} Linearity.

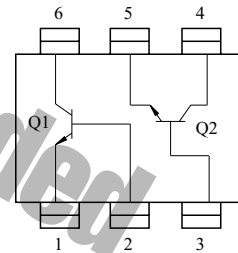
MAXIMUM RATING (Ta=25 °C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	30	V
Collector-Emitter Voltage	V_{CEO}	15	V
Emitter-Base Voltage	V_{EBO}	3	V
Base Current	I_B	25	mA
Collector Current	I_C	50	mA
Collector Power Dissipation	P_C^*	200	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

* Total Rating

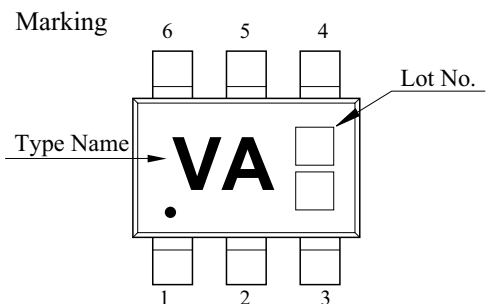


EQUIVALENT CIRCUIT (TOP VIEW)



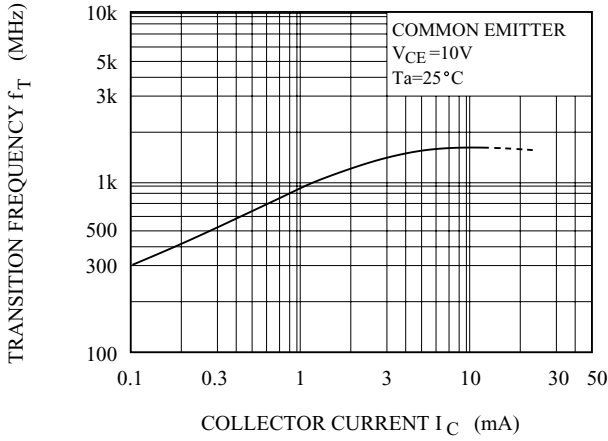
ELECTRICAL CHARACTERISTICS (Ta=25 °C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=15\text{V}, I_E=0$	-	-	0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=3\text{V}, I_C=0$	-	-	1.0	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	15	-	-	V
DC Current Gain	h_{FE}	$V_{CE}=3\text{V}, I_C=8\text{mA}$	60	150	320	
Transition Frequency	f_T	$V_{CE}=10\text{V}, I_C=8\text{mA}$	1100	1500	-	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=2\text{mA}, f=1\text{MHz}$	-	0.9	1.3	pF
Collector-Base Time Constant	$C_C \cdot r_{bb}'$	$V_{CB}=10\text{V}, I_E=-8\text{mA}, f=30\text{MHz}$	-	7.0	12	pS

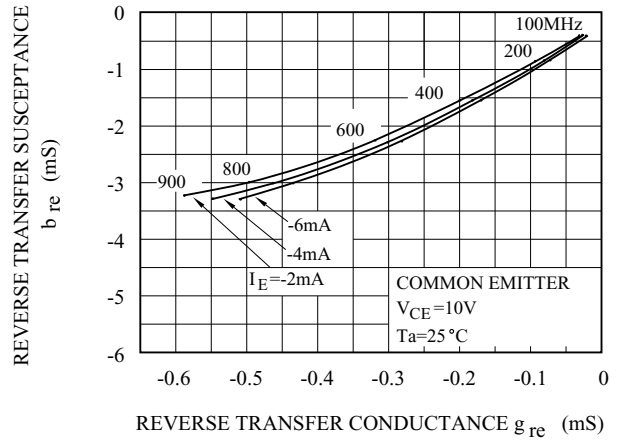


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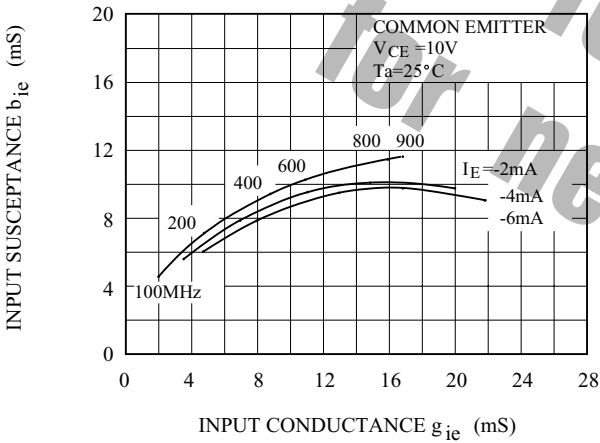
$f_T - I_C$



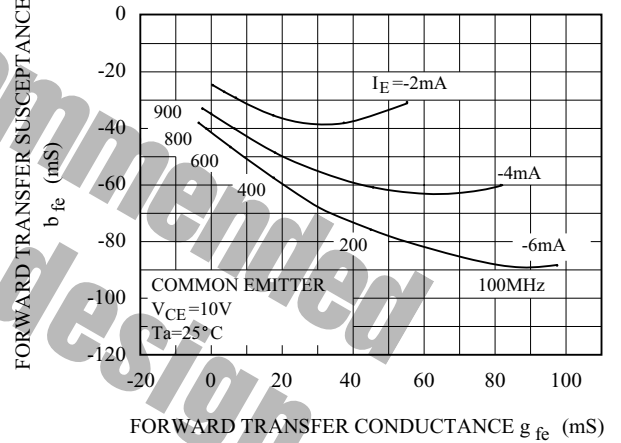
$y_{re} - f$



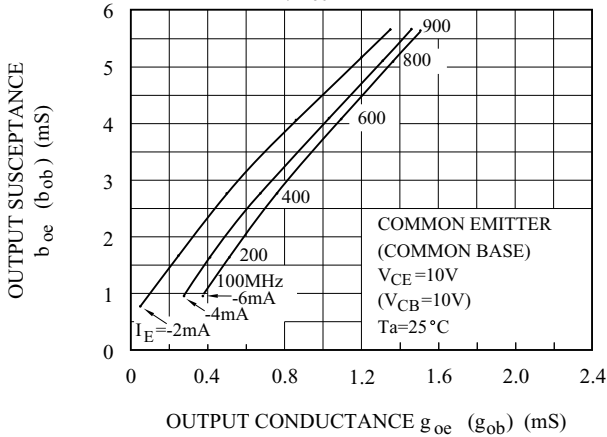
$y_{ie} - f$



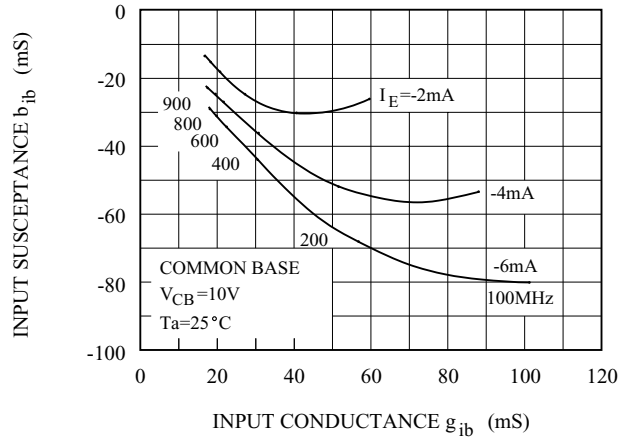
$y_{fe} - f$



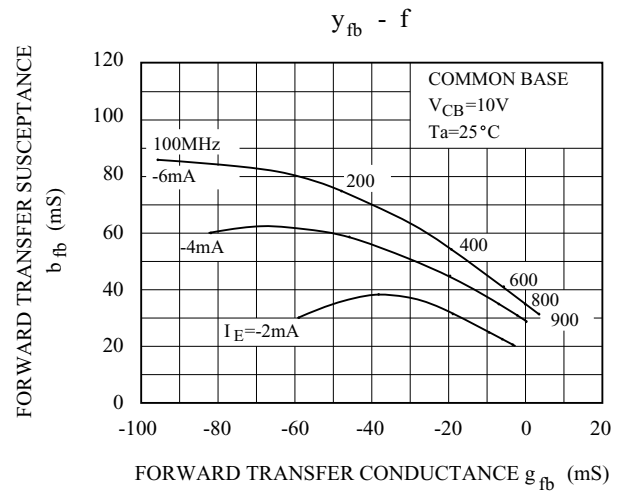
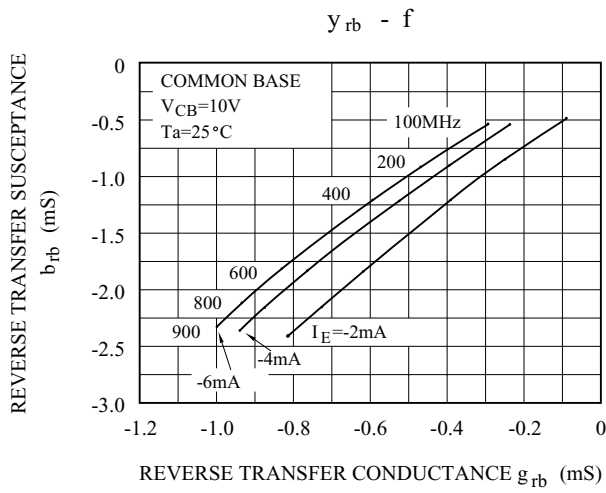
$y_{oe} - f$
($y_{ob} - f$)



$y_{ib} - f$



KTC813U



Not recommended
for new design