

TV TUNER, UHF OSCILLATOR APPLICATION.  
(COMMON BASE)

TV TUNER, UHF CONVERTER APPLICATION.  
(COMMON BASE)

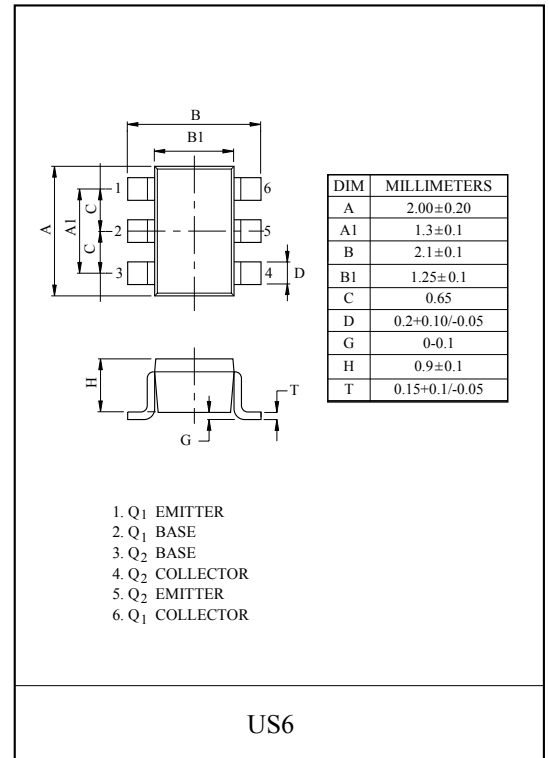
### FEATURES

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

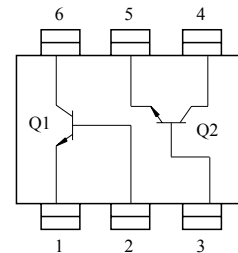
### MAXIMUM RATING (Ta=25°C)

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	°C
Storage Temperature Range	$T_{stg}$	-55 ~ 150	°C

\* Total Rating



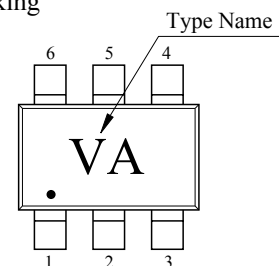
### EQUIVALENT CIRCUIT (TOP VIEW)



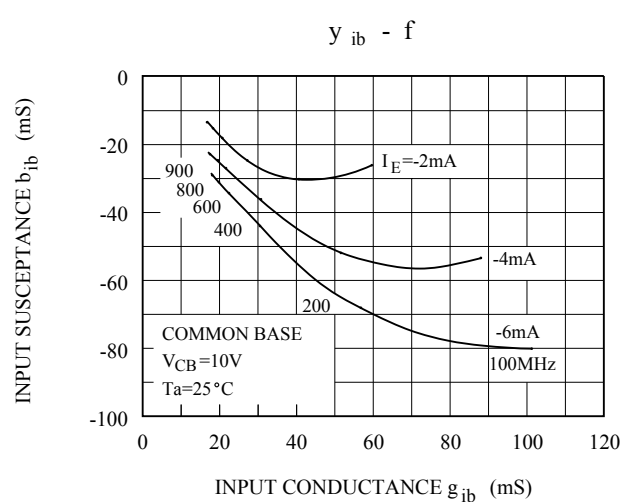
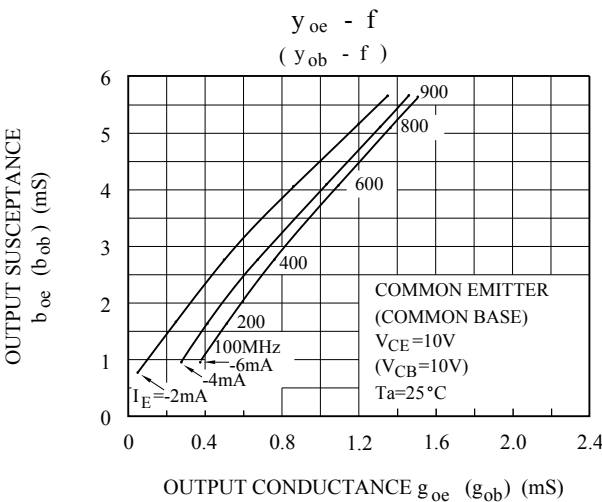
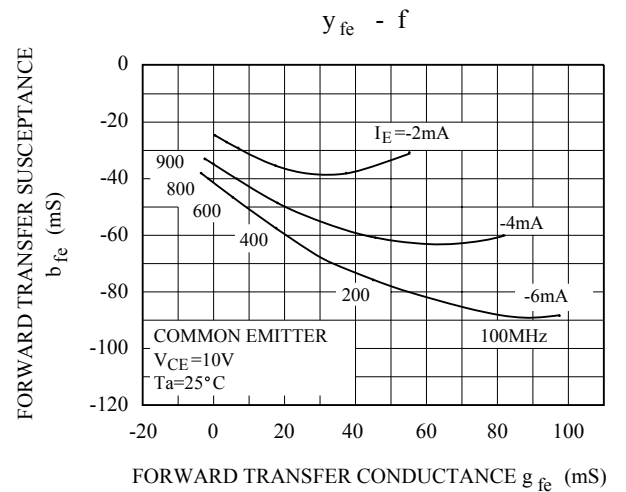
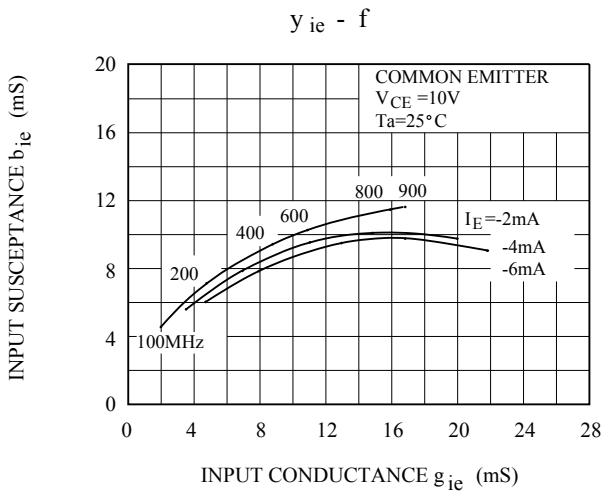
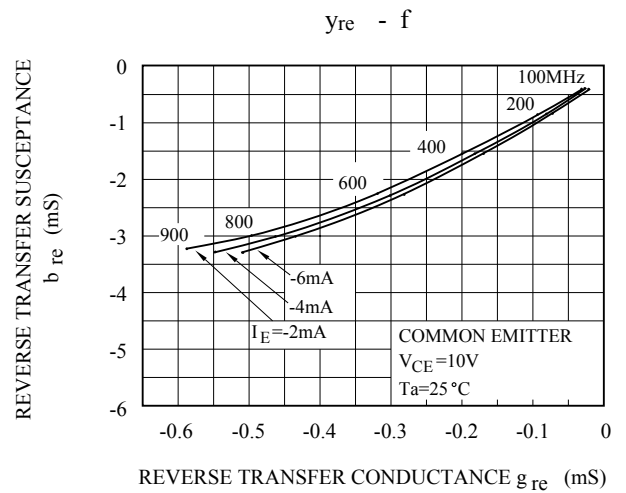
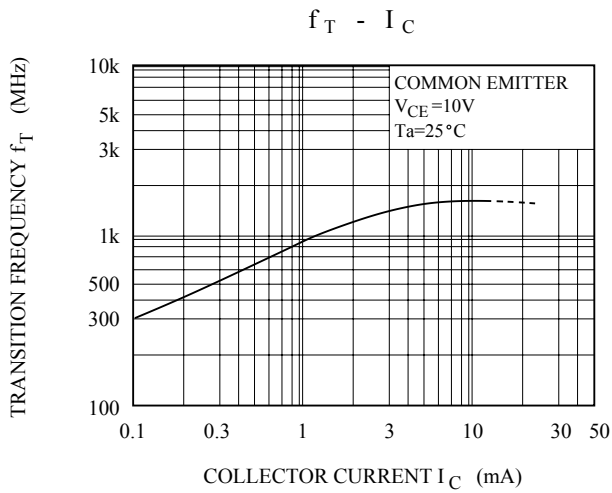
### ELECTRICAL CHARACTERISTICS (Ta=25°C)

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

### Marking



# KTC813U



# KTC813U

