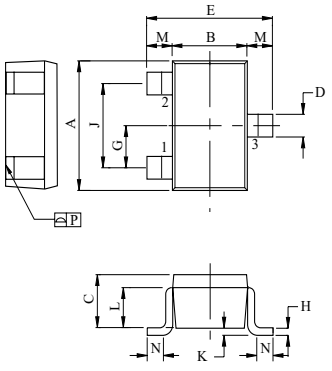
KTC4081

EPITAXIAL PLANAR NPN TRANSISTOR

HIGH FREQUENCY APPLICATION.
VHF BAND AMPLIFIER APPLICATION.

FEATURES

· Good Linearity of f_T.



DIM	MILLIMETERS
A	2.00±0.20
B	1.25±0.15
C	0.90±0.10
D	0.3+0.10/-0.05
E	2.10 ± 0.20
G	0.65
H	0.15+0.1/-0.06
J	1.30
K	0.00~0.10
L	0.70
M	0.42±0.10
N	0.10 MIN
P	0.1 MAX

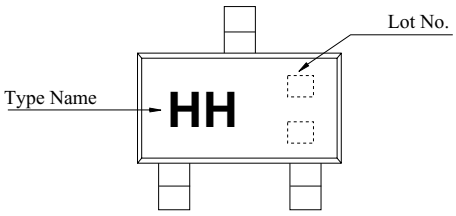
1. EMITTER
2. BASE
3. COLLECTOR

USM

MAXIMUM RATING (Ta=25℃)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	30	V
Collector-Emitter Voltage	V_{CEO}	25	V
Emitter-Base Voltage	V_{EBO}	4	V
Collector Current	I_C	50	mA
Base Current	I_B	25	mA
Collector Power Dissipation	P_C	100	mW
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-55 150	℃

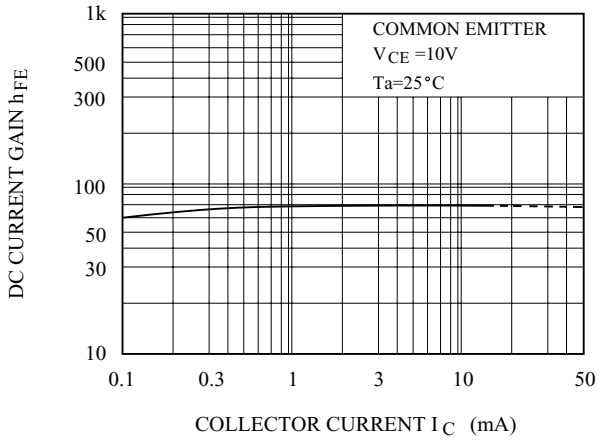
Marking



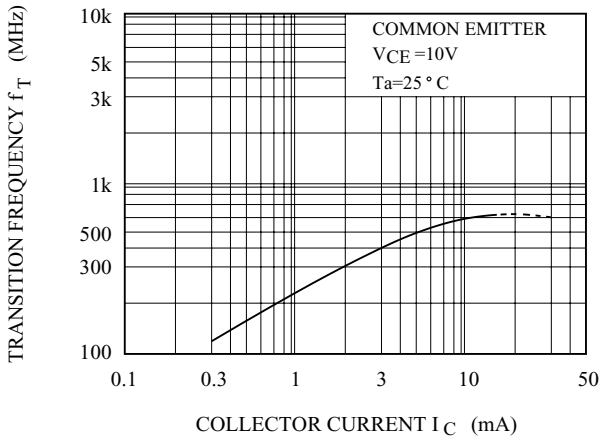
ELECTRICAL CHARACTERISTICS (Ta=25℃)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB}=30V, I_E=0	-	-	0.1	μA
Emitter Cut-off Current		I_{EBO}	V_{EB}=3V, I_C=0	-	-	0.1	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	I_C=10mA, I_B=0	25	-	-	V
DC Current Gain		h_{FE}	V_{CE}=10V, I_C=10mA	20	70	200	
Saturation Voltage	Collector-Emitter	$V_{CE(sat)}$	I_C=15mA, I_B=1.5mA	-	-	0.2	V
	Base-Emitter	$V_{BE(sat)}$		-	-	1.5	
Collector Output Capacitance		C_{ob}	V_{CB}=10V, I_E=0, f=1MHz	-	1.1	1.6	pF
Collector-Base Time Constant		C_C · rbb'	V_{CB}=10V, I_E=-1mA, f=30MHz	-	-	25	pS
Transition Frequency		f_T	V_{CE}=10V, I_C=10mA	250	600	-	MHz

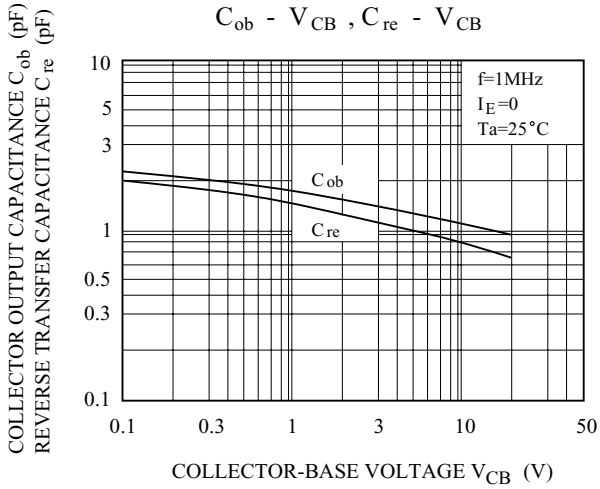
h_{FE} - I_C



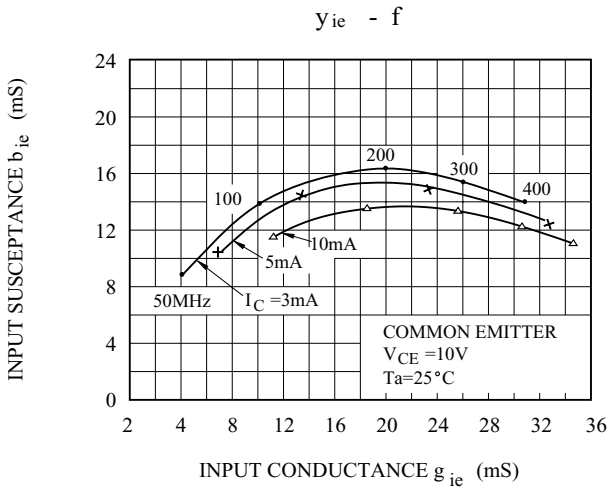
f_T - I_C



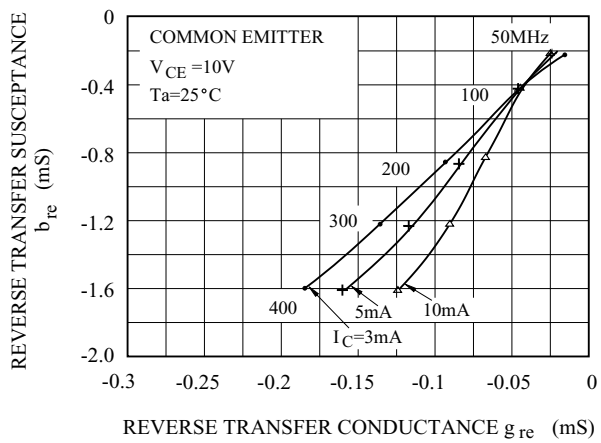
C_{ob} - V_{CB} , C_{re} - V_{CB}



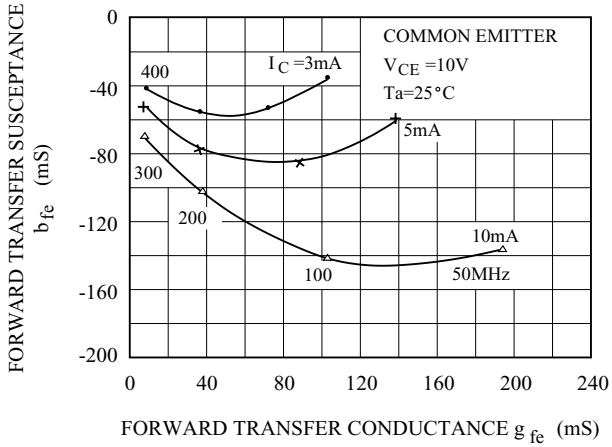
y_{ie} - f



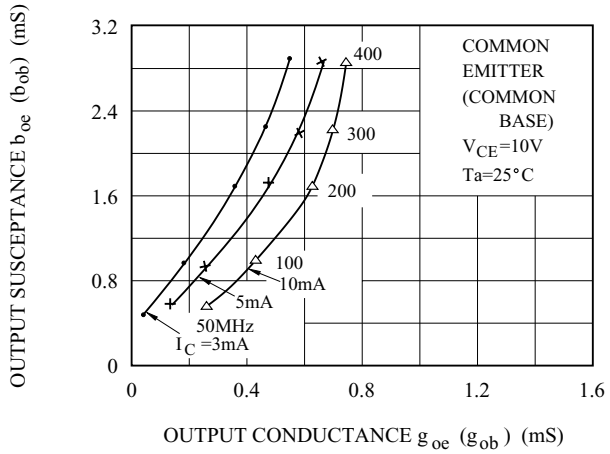
y_{re} - f



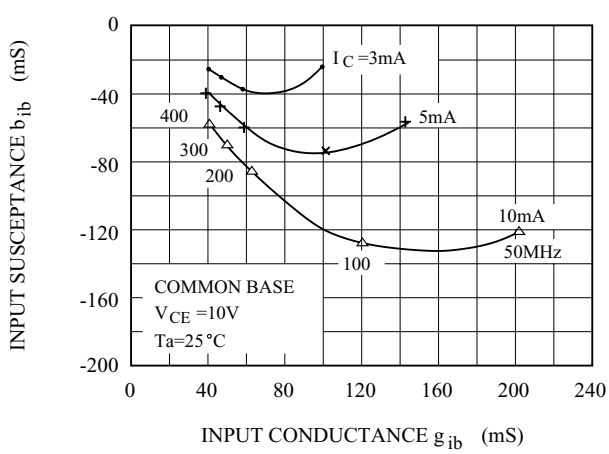
y_{fe} - f



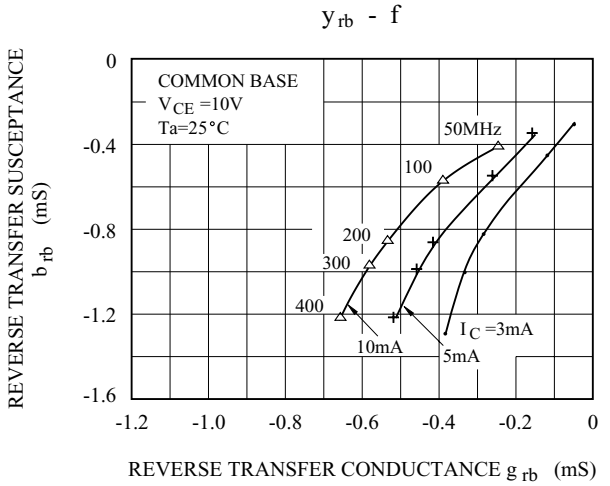
y_{oe} - f (y_{ob} - f)



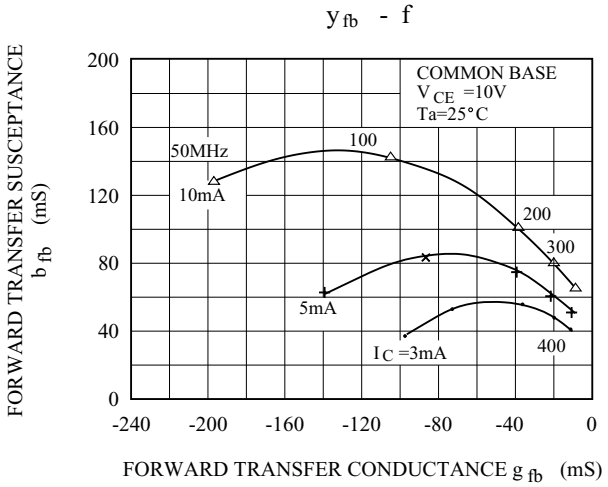
y_{ib} - f



y_{rb} - f



y_{fb} - f



P_C - Ta