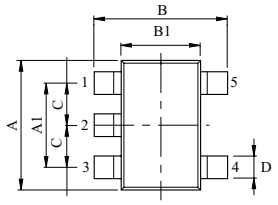
KTX303U

EPITAXIAL PLANAR PNP TRANSISTOR
SCHOTTKY BARRIER TYPE DIODE

SWITCHING APPLICATION.
LOW VOLTAGE HIGH SPEED SWITCHING.

FEATURES

- Including two(TR, Diode) devices in USV.
  (Ultra Super Mini type with 5 leads)
- Simplify circuit design.
- Reduce a quantity of parts and manufacturing process.

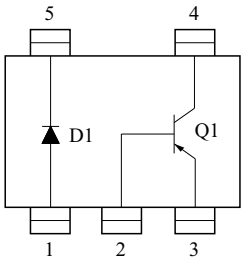


DIM	MILLIMETERS
A	2.00±0.20
A1	1.3±0.1
B	2.1±0.1
B1	1.25±0.1
C	0.65
D	0.2+0.10/-0.05
G	0-0.1
H	0.9±0.1
T	0.15+0.1/-0.05

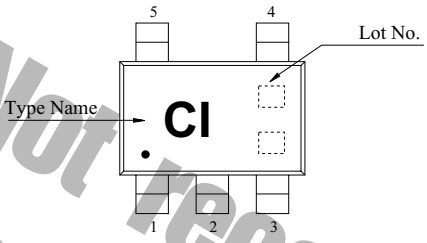
1. D_1 ANODE
2. Q_1 BASE
3. Q_1 EMITTER
4. Q_1 COLLECTOR
5. D_1 CATHODE

USV

EQUIVALENT CIRCUIT (TOP VIEW)



Marking



MAXIMUM RATINGS (Ta=25℃)
TRANSISTOR Q_1

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	-15	V
Collector-Emitter Voltage	V_{CEO}	-12	V
Emitter-Base Voltage	V_{EBO}	-6	mA
Collector Current	I_C	-500	mA
	I_{CP} *	-1	A
Collector Power Dissipation	P_C	100	mW
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-55~125	℃

DIODE (SBD) D_1

CHARACTERISTIC	SYMBOL	RATING	UNIT
Maximum (Peak) Reverse Voltage	V_{RM}	30	V
Reverse Voltage	V_R	30	V
Maximum (Peak) Forward Current	I_{FM}	300	mA
Average Forward Current	I_O	200	mA
Surge Current (10mS)	I_{FSM}	1	A
Junction Temperature	T_j	125	℃
Storage Temperature Range	T_{stg}	-55 125	℃

ELECTRICAL CHARACTERISTICS (Ta=25°C)

TRANSISTOR Q_1

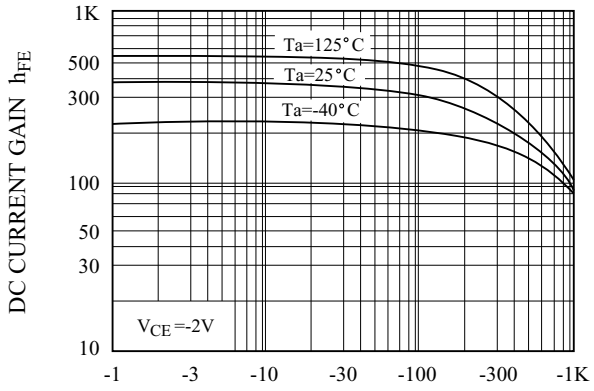
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB}=-15V, I_E=0	-	-	-100	nA
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_E=-10μA	-15	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=-1mA	-12	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=-10μA	-6	-	-	V
DC Current Gain	h_{FE}	V_{CE}=-2V, I_C=-10mA	270	-	680	-
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=-200mA, I_B=-10mA	-	-100	-250	mV
Transition Frequency	f_T	V_{CE}=-2V, I_C=-10mA, f=100MHz	-	260	-	MHz
Collector Output Capacitance	C_{ob}	V_{CB}=-10V, I_E=0, f=1MHz	-	6.5	-	pF

DIODE (SBD) D_1

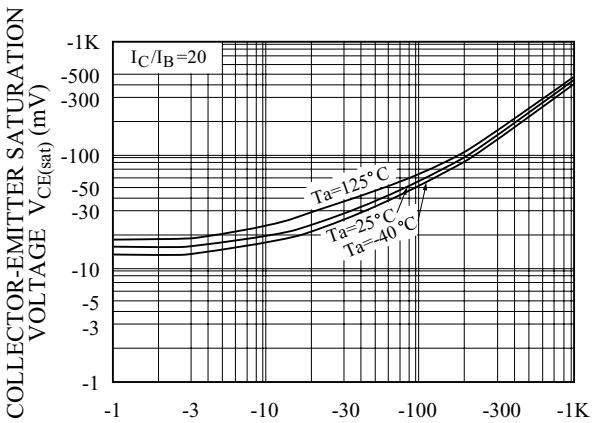
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	$V_{F(1)}$	I_F=1mA	-	0.22	-	V
	$V_{F(2)}$	I_F=10mA	-	0.29	-	
	$V_{F(3)}$	I_F=100mA	-	0.38	-	
	$V_{F(4)}$	I_F=200mA	-	0.43	0.55	
Reverse Current	I_R	V_R=30V	-	-	50	μA
Total Capacitance	C_T	V_R=0, f=1MHz	-	50	-	pF

Q_1 (PNP TRANSISTOR)

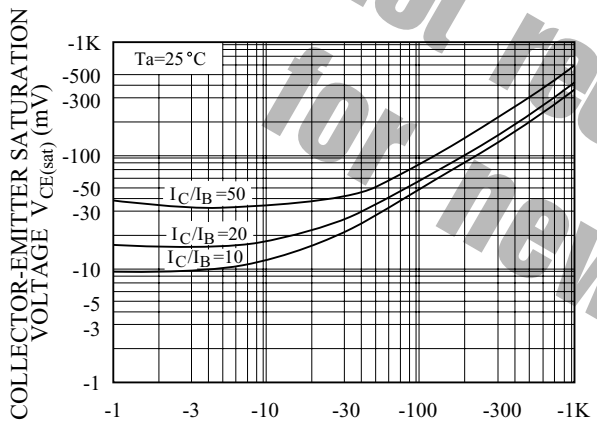
h_{FE} - I_C



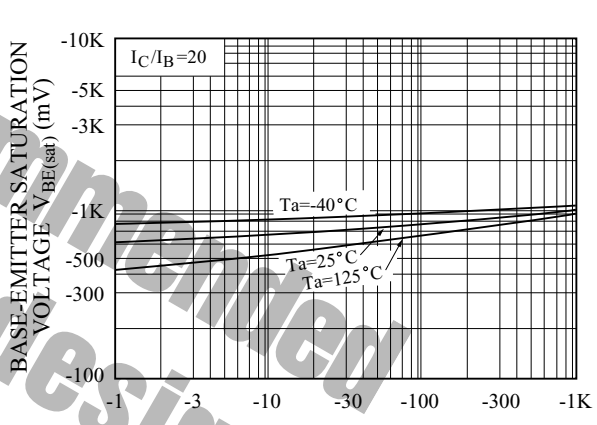
$V_{CE(sat)}$ - I_C



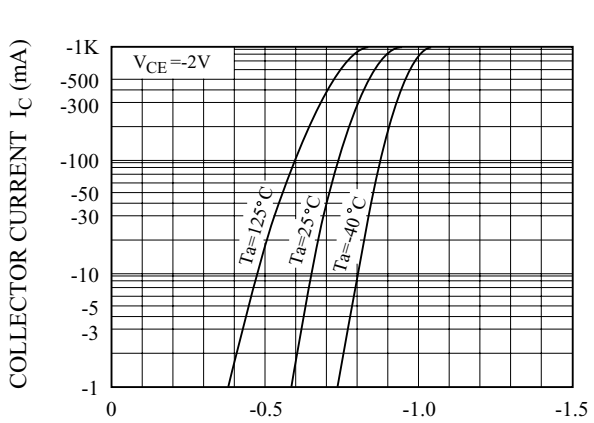
$V_{CE(sat)}$ - I_C



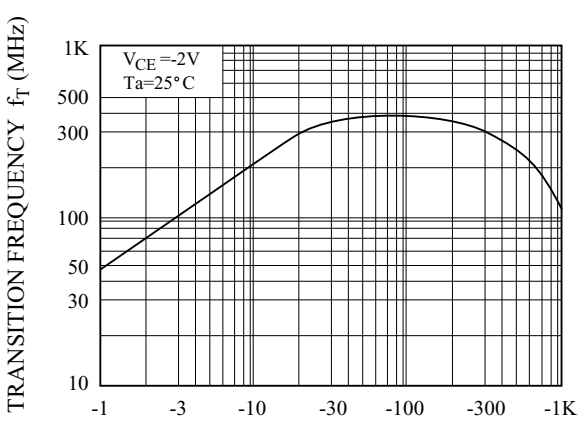
$V_{BE(sat)}$ - I_C



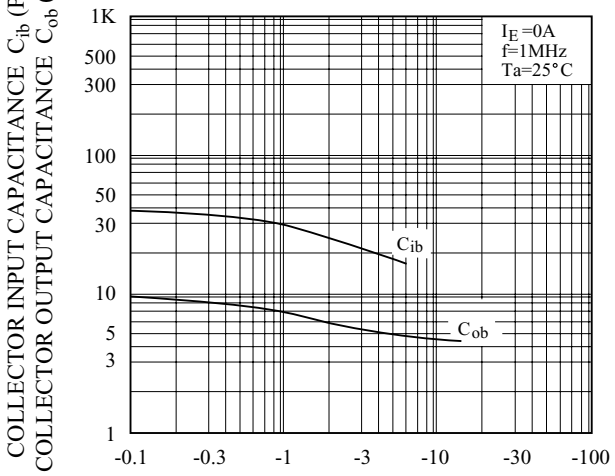
I_C - V_{BE}



f_T - I_C

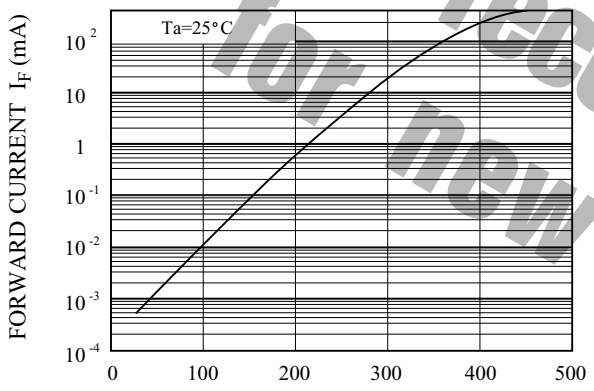


C_{ob} - V_{CB} , C_{ib} - V_{EB}

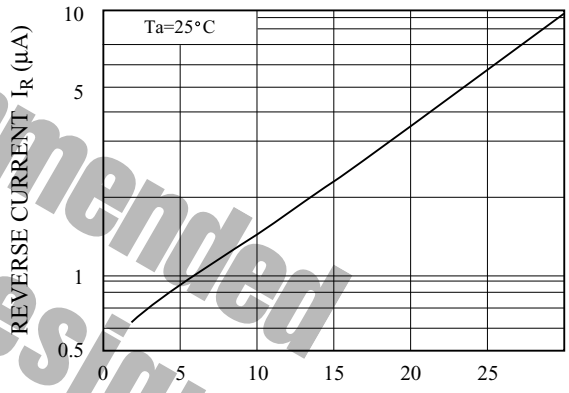


D_1 (SBD)

I_F - V_F



I_R - V_R



C_T - V_R