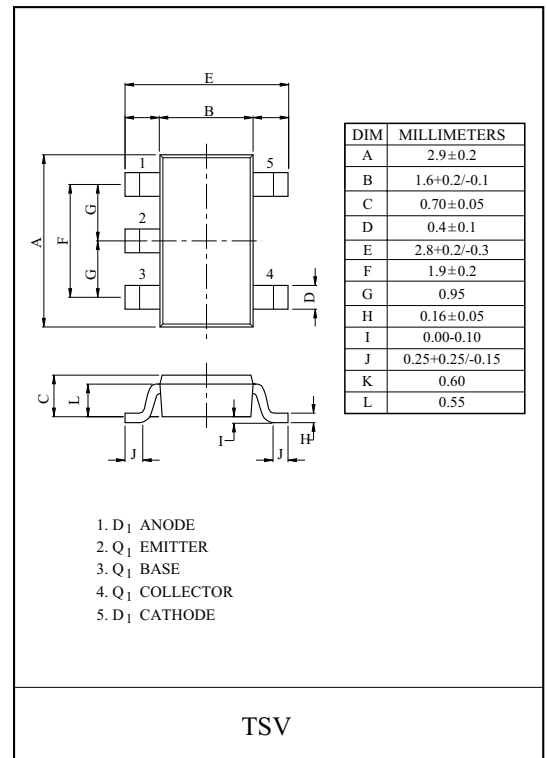
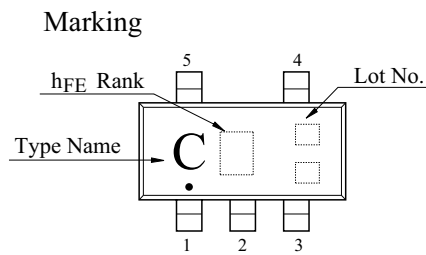
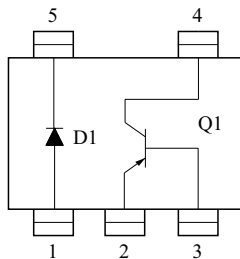


GENERAL PURPOSE APPLICATION.
ULTRA HIGH SPEED SWITCHING APPLICATION.

FEATURES

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

EQUIVALENT CIRCUIT (TOP VIEW)



MARK SPEC

Type	KTX311T	KTX311T
	Q ₁ h _{FE} Rank : Y	Q ₁ h _{FE} Rank : GR
Mark	CB	CC

MAXIMUM RATINGS (Ta=25 °C)

TRANSISTOR Q₁

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V _{CBO}	-30	V
Collector-Emitter Voltage	V _{CEO}	-20	V
Emitter-Base Voltage	V _{EBO}	-5	V
Collector Current	I _C	-1	A
Emitter Current	I _E	1	A
Collector Power Dissipation	P _C *	0.9	W
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _{stg}	-55~150	°C

* Package mounted on a ceramic board (600mm² × 0.8mm)

DIODE D₁

CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Reverse Voltage	V _{RRM}	25	V
Reverse Voltage	V _R	20	V
Average Forward Current	I _O	1.0	A
Non-Repetitive Peak Surge current	I _{FSM}	3	A
Junction Temperature	T _j	125	°C
Storage Temperature	T _{stg}	-55~125	°C

KTX311T

ELECTRICAL CHARACTERISTICS (Ta=25 °C)

TRANSISTOR Q₁

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT.
Collector Cut-off Current	I _{CBO}	V _{CB} =-20V, I _E =0	-	-	-0.1	μA
Emitter Cut-off Current	I _{EBO}	V _{EB} =-5V, I _C =0	-	-	-0.1	μA
DC Current Gain	h _{FE} (1) (Note)	V _{CE} =-2V, I _C =-50mA	120	-	400	
	h _{FE} (2)	V _{CE} =-2V, I _C =-1A (Pulse)	30	-	-	
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	I _C =-500 mA, I _B =-50 mA	-	-0.15	-0.3	V
Base-Emitter Saturation Voltage	V _{BE(SAT)}	I _C =-500 mA, I _B =-50 mA	-	-0.85	-1.2	V
Transition Frequency	f _T	V _{CE} =-10V, I _C =-50mA	-	180	-	MHz
Collector Output Capacitance	C _{ob}	V _{CB} =-10V, I _E =0, f=1MHz	-	25	-	pF

Note) h_{FE} Classification Y:120~240, GR:200~400.

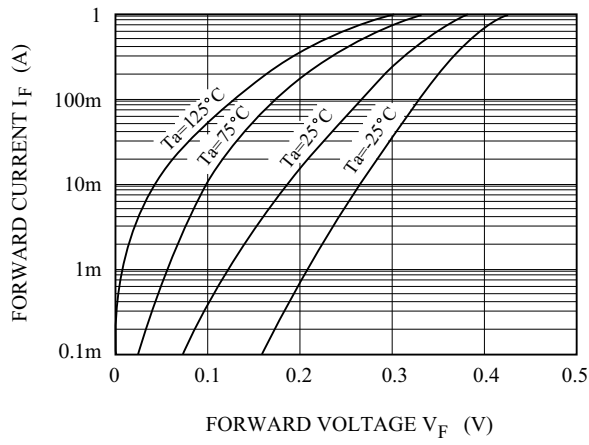
DIODE D₁

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT.
Forward Voltage	V _F	I _F =1.0A	-	0.4	0.45	V
Reverse Current	I _R	V _R =20V	-	-	200	μA

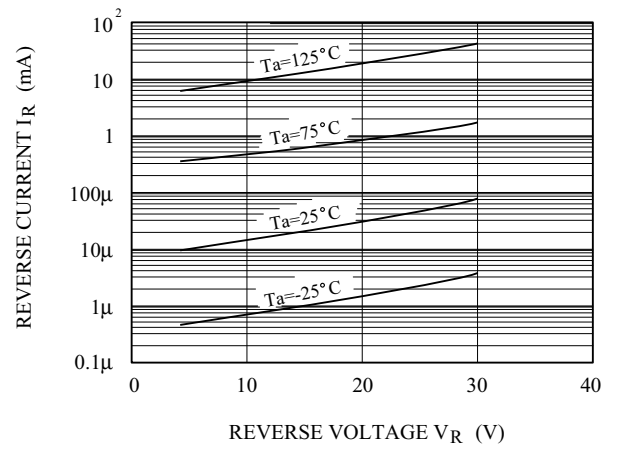
KTX311T

D₁ (DIODE)

$I_F - V_F$

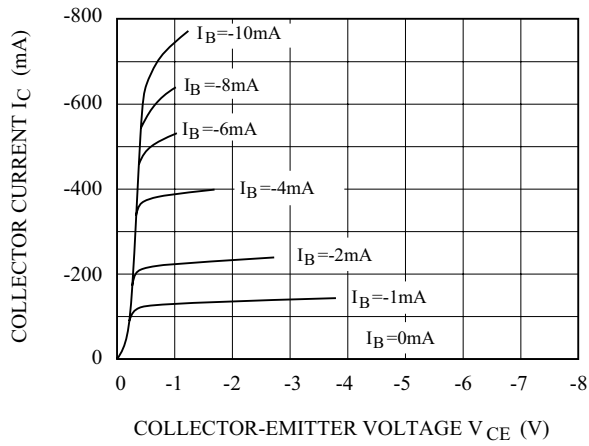


$I_R - V_R$

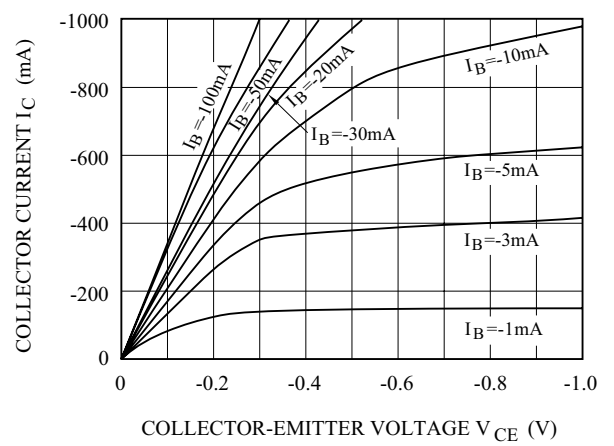


Q₁ (PNP TRANSISTOR)

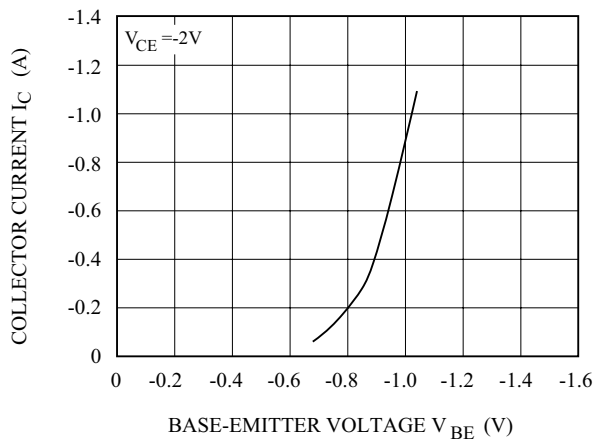
$I_C - V_{CE}$



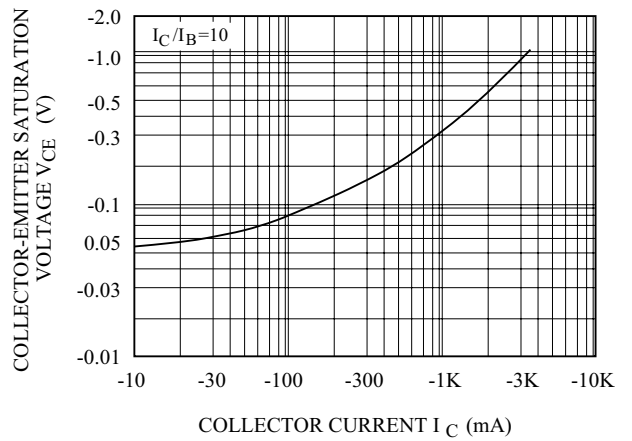
$I_C - V_{CE}$



$I_C - V_{BE}$



$V_{CE(\text{sat})} - I_C$



KTX311T

