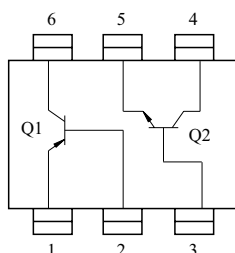


GENERAL PURPOSE APPLICATION.

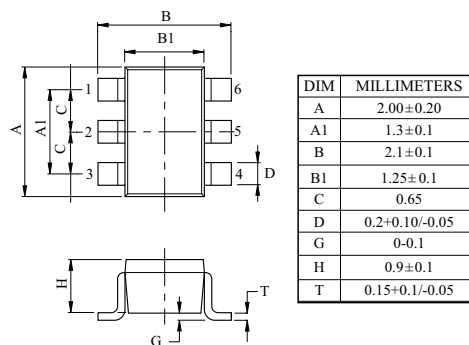
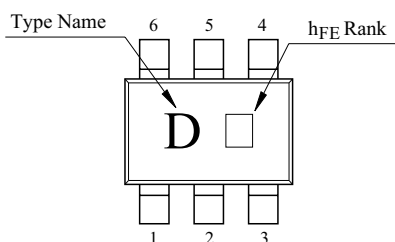
FEATURES

- Including two devices in US6.
- (Ultra Super mini type with 6 leads)
- Simplify circuit design.
- Reduce a quantity of parts and manufacturing process.

EQUIVALENT CIRCUIT (TOP VIEW)



MARKING



1. Q₁ EMITTER
2. Q₁ BASE
3. Q₂ BASE
4. Q₂ COLLECTOR
5. Q₂ EMITTER
6. Q₁ COLLECTOR

US6

Q₁ MAXIMUM RATING (Ta=25 °C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V _{CBO}	-50	V
Collector-Emitter Voltage	V _{CEO}	-50	V
Emitter-Base Voltage	V _{EBO}	-5	V
Collector Current	I _C	-150	mA
Base Current	I _B	-30	mA

Q₂ MAXIMUM RATING (Ta=25 °C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V _{CBO}	60	V
Collector-Emitter Voltage	V _{CEO}	50	V
Emitter-Base Voltage	V _{EBO}	5	V
Collector Current	I _C	150	mA
Base Current	I _B	30	mA

Q₁, Q₂ MAXIMUM RATING (Ta=25 °C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector Power Dissipation	P _C *	200	mW
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _{stg}	-55 ~ 150	°C

* Total Raing.

KTX102U

Q₁ ELECTRICAL CHARACTERISTICS (Ta=25 °C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT.
Collector Cut-off Current	I _{CBO}	V _{CB} =-50V, 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} (Note)	V _{CE} =-6V, I _C =-2 mA	120	-	400	
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C =-100 mA, I _B =-10 mA	-	-0.1	-0.3	V
Transition Frequency	f _T	V _{CE} =-10V, I _C =-1 mA	80	-	-	MHz
Collector Output Capacitance	C _{ob}	V _{CB} =-10V, I _E =0, f=1MHz	-	4.0	7.0	pF
Noise Figure	NF	V _{CE} =-6V, I _C =-0.1 mA, f=1kHz, R _g =10kΩ	-	1.0	10	dB

Note) h_{FE} Classification : Y(4)120~240, GR(6)200~400

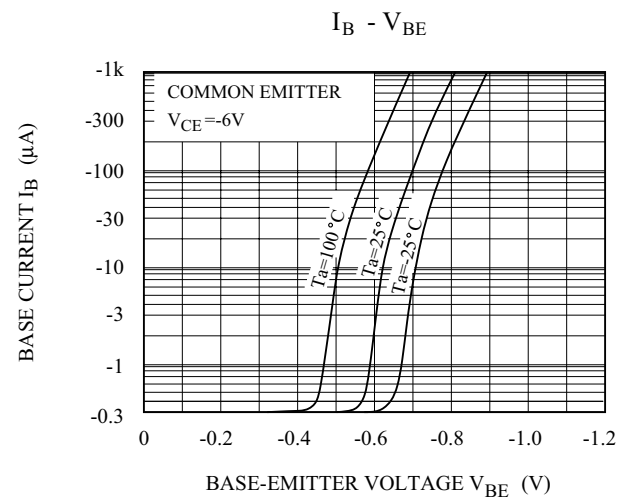
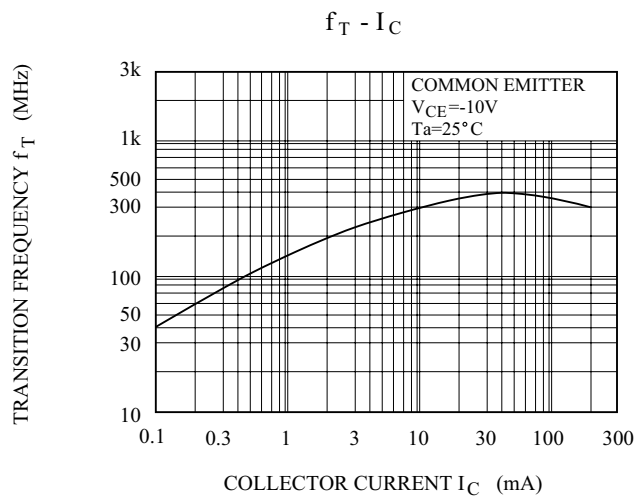
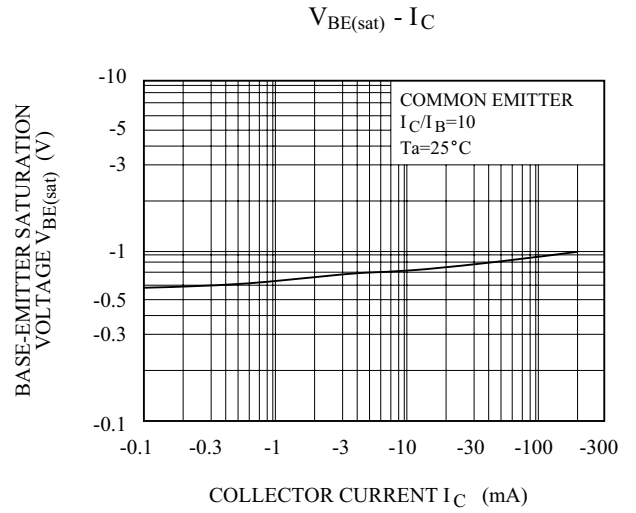
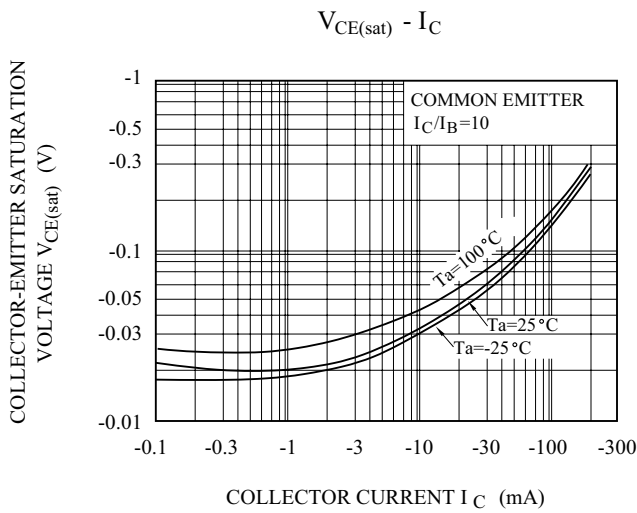
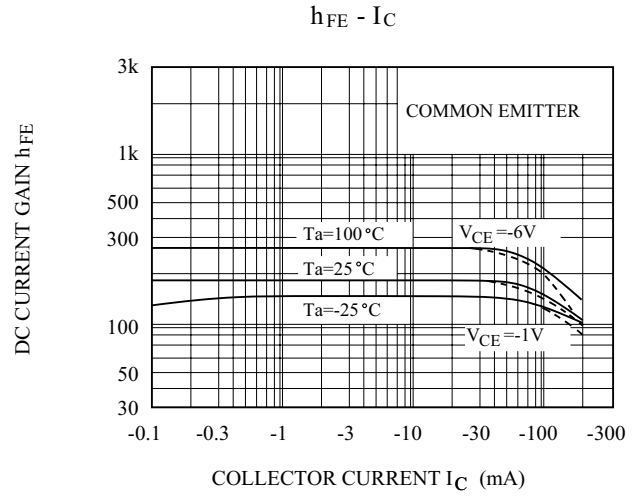
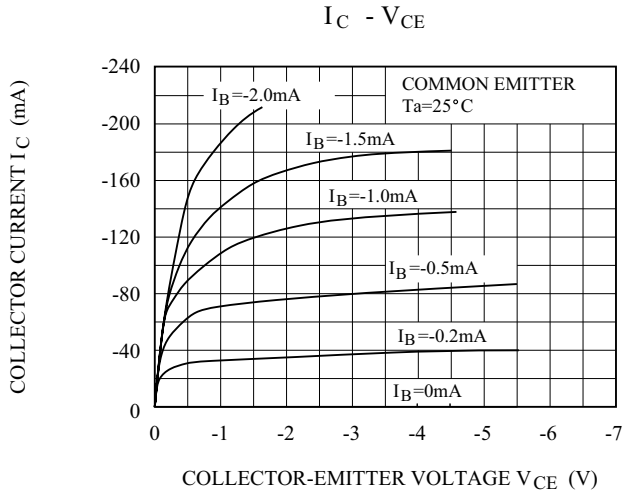
Q₂ ELECTRICAL CHARACTERISTICS (Ta=25 °C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT.
Collector Cut-off Current	I _{CBO}	V _{CB} =60V, 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} (Note)	V _{CE} =6V, I _C =2 mA	120	-	400	
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C =100 mA, I _B =10 mA	-	0.1	0.25	V
Transition Frequency	f _T	V _{CE} =10V, I _C =1 mA	80	-	-	MHz
Collector Output Capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=1MHz	-	2.0	3.5	pF
Noise Figure	NF	V _{CE} =6V, I _C =0.1 mA, f=1kHz, R _g =10kΩ	-	1.0	10	dB

Note) h_{FE} Classification : Y(4)120~240, GR(6)200~400

KTX102U

Q₁ (PNP TRANSISTOR)



KTX102U

Q₂ (NPN TRANSISTOR)

