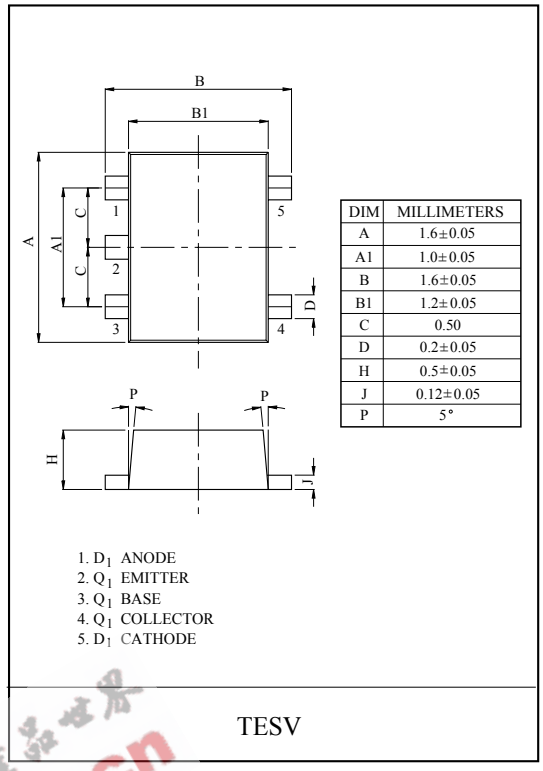
KTX301E

EPITAXIAL PLANAR PNP TRANSISTOR
SILICON EPITAXIAL PLANAR TYPE DIODE

GENERAL PURPOSE APPLICATION.
ULTRA HIGH SPEED SWITCHING APPLICATION.

FEATURES

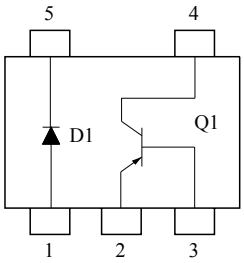
- Including two(TR, Diode) devices in TESV.
  (Thin Extreme Super mini type with 5pin.)
- Simplify circuit design.
- Reduce a quantity of parts and manufacturing process.



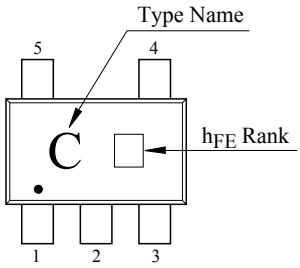
DIM	MILLIMETERS
A	1.6±0.05
A1	1.0±0.05
B	1.6±0.05
B1	1.2±0.05
C	0.50
D	0.2±0.05
H	0.5±0.05
J	0.12±0.05
P	5°

TESV

EQUIVALENT CIRCUIT (TOP VIEW)



Marking



MARK SPEC

Type	KTX301E	KTX301E
	Q_1 h_{FE} Rank : Y	Q_1 h_{FE} Rank : GR
Mark	CA	CB

MAXIMUM RATINGS (Ta=25℃)

TRANSISTOR Q_1

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	㎃
Base Current	I_B	-30	㎃
Collector Power Dissipation	P_C	100	㎽
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-55~150	℃

DIODE D_1

CHARACTERISTIC	SYMBOL	RATING	UNIT
Maximum (Peak) Reverse Voltage	V_{RM}	85	V
Reverse Voltage	V_R	80	V
Maximum (Peak) Forward Current	I_{FM}	300	㎃
Average Forward Current	I_O	100	㎃
Surge Current (10mS)	I_{FSM}	2	A
Power Dissipation	P_D	-	㎽
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-55 ~ 150	℃

ELECTRICAL CHARACTERISTICS (Ta=25℃)

TRANSISTOR Q_1

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB}=-50V, I_E=0	-	-	-0.1	㎂
Emitter Cut-off Current	I_{EBO}	V_{EB}=-5V, I_C=0	-	-	-0.1	㎂
DC Current Gain	h_{FE} (Note)	V_{CE}=-6V, I_C=-2㎃	120	-	400	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=-100㎃, I_B=-10㎃	-	-0.1	-0.3	V
Transition Frequency	f_T	V_{CE}=-10V, I_C=-1㎃	80	-	-	㎒
Collector Output Capacitance	C_{ob}	V_{CB}=-10V, I_E=0, f=1㎒	-	4	7	㎊
Noise Figure	NF	V_{CE}=-6V, I_C=-0.1㎃, f=1㎑, Rg=10㏀	-	1.0	10	dB

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

DIODE D_1

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	$V_{F(1)}$	I_F=1mA	-	0.60	-	V
	$V_{F(2)}$	I_F=10mA	-	0.72	-	
	$V_{F(3)}$	I_F=100mA	-	0.90	1.20	
Reverse Current	I_R	V_R=80V	-	-	0.5	㎂
Total Capacitance	C_T	V_R=0, f=1㎒	-	0.9	3.0	㎊
Reverse Recovery Time	t_{rr}	I_F=10㎃	-	1.6	4.0	㎱