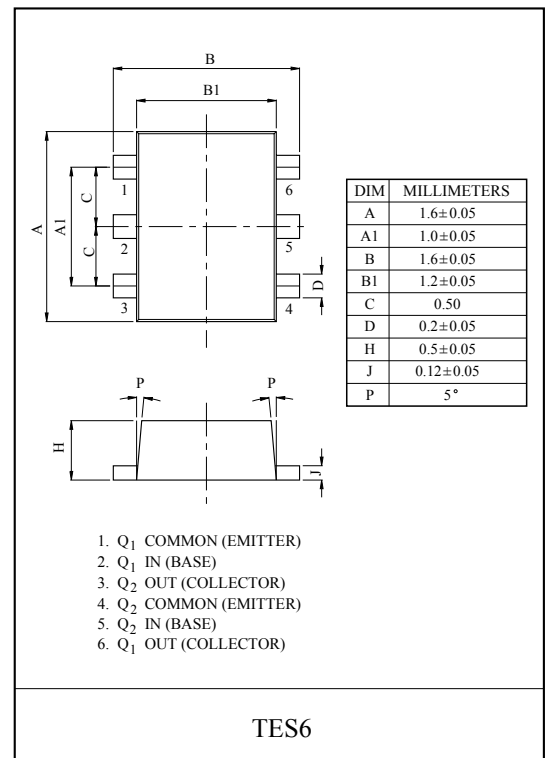
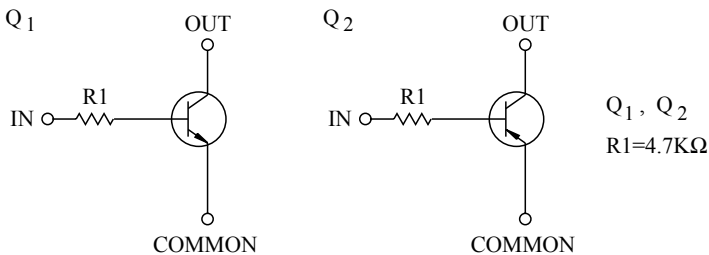


SWITCHING APPLICATION.  
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION.

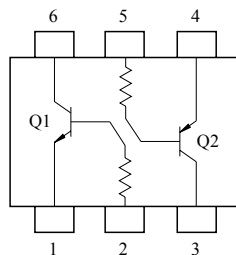
#### FEATURES

- Including two devices in TES6.  
(Thin Extreme Super mini type with 6 pin.)
- With Built-in bias resistors.
- Simplify circuit design.
- Reduce a quantity of parts and manufacturing process.

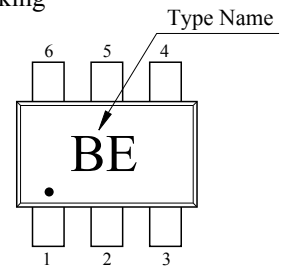
#### EQUIVALENT CIRCUIT



#### EQUIVALENT CIRCUIT (TOP VIEW)



#### Marking



#### Q1 MAXIMUM RATING (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V <sub>CBO</sub>	50	V
Collector-Emitter Voltage	V <sub>CEO</sub>	50	V
Emitter-Base Voltage	V <sub>EBO</sub>	5	V
Collector Current	I <sub>C</sub>	100	mA

#### Q2 MAXIMUM RATING (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V <sub>CBO</sub>	-50	V
Collector-Emitter Voltage	V <sub>CEO</sub>	-50	V
Emitter-Base Voltage	V <sub>EBO</sub>	-5	V
Collector Current	I <sub>C</sub>	-100	mA

#### Q1, Q2 MAXIMUM RATING (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector Power Dissipation	P <sub>C</sub> *	200	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	-55 ~ 150	°C

\* Total Raing.

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## Q1 ELECTRICAL CHARACTERISTICS (Ta=25 °C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT.
Collector Cut-off Current		$I_{CBO}$	$V_{CB}=50V, I_E=0$	-	-	100	nA
Emitter Cut-off Current		$I_{EBO}$	$V_{EB}=5V, I_C=0$	-	-	100	nA
DC Current Gain		$h_{FE}$	$V_{CE}=5V, I_C=1mA$	120	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C=10mA, I_B=0.5mA$	-	0.1	0.3	V
Transition Frequency		$f_T^*$	$V_{CE}=10V, I_C=5mA$	-	250	-	MHz
Input Resistor		$R_1$		-	4.7	-	k $\Omega$
Switching Time	Ries time	$t_r$	$V_O=5V, V_{IN}=5V, R_L=1k\Omega$	-	0.025	-	$\mu S$
	Storage Time	$t_{stg}$		-	3.0	-	
	Fall Time	$t_f$		-	0.2	-	

Note : \* Characteristic of Transistor Only.

## Q2 ELECTRICAL CHARACTERISTICS (Ta=25 °C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT.
Collector Cut-off Current		$I_{CBO}$	$V_{CB}=-50V, I_E=0$	-	-	-100	nA
Emitter Cut-off Current		$I_{EBO}$	$V_{EB}=-5V, I_C=0$	-	-	-100	nA
DC Current Gain		$h_{FE}$	$V_{CE}=-5V, I_C=-1mA$	120	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C=-10mA, I_B=-0.5mA$	-	-0.1	-0.3	V
Transition Frequency		$f_T^*$	$V_{CE}=-10V, I_C=-5mA$	-	250	-	MHz
Input Resistor		$R_1$		-	4.7	-	k $\Omega$
Switching Time	Ries time	$t_r$	$V_O=-5V, V_{IN}=-5V, R_L=1k\Omega$	-	0.2	-	$\mu S$
	Storage Time	$t_{stg}$		-	2.0	-	
	Fall Time	$t_f$		-	0.3	-	

Note : \* Characteristic of Transistor Only.

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