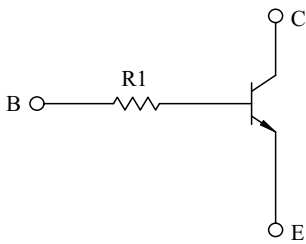


SWITCHING APPLICATION.  
AUDIO MUTING APPLICATION.

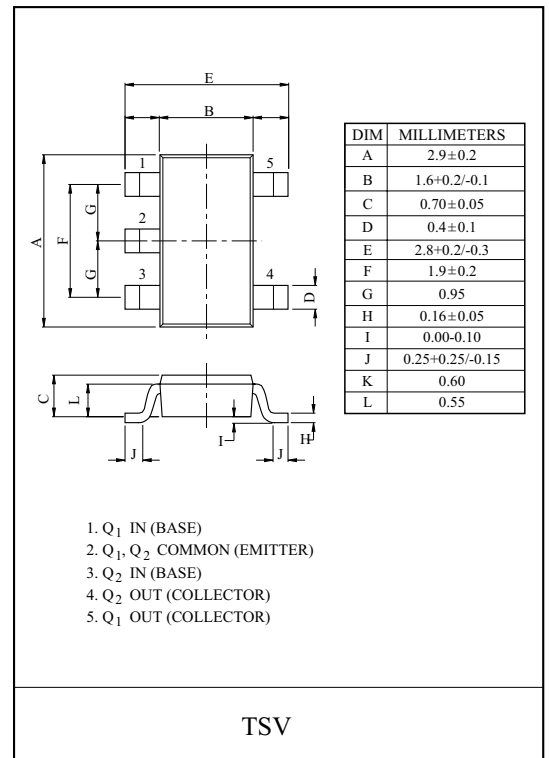
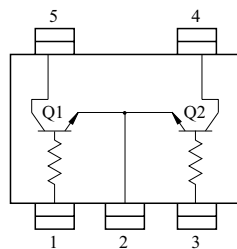
### FEATURES

- High emitter-base voltage :  $V_{EBO}=25V(\text{Min})$
- High reverse  $h_{FE}$  : reverse  $h_{FE}=150(\text{Typ.}) (V_{CE}=-2V, I_C=-4mA)$
- Low on resistance :  $R_{on}=1\ \Omega(\text{Typ.}) (I_B=5mA)$
- With Built-in Bias Resistors.
- Simplify Circuit Design.
- Reduce a Quantity of Parts and Manufacturing Process.

### EQUIVALENT CIRCUIT



### EQUIVALENT CIRCUIT (TOP VIEW)



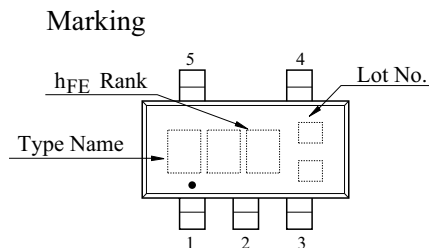
### MAXIMUM RATING (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	50	V
Collector-Emitter Voltage	$V_{CEO}$	20	V
Emitter-Base Voltage	$V_{EBO}$	25	V
Collector Current	$I_C$	300	mA
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 (600mm<sup>2</sup> × 0.8mm)

### MARK SPEC

TYPE	h <sub>FE</sub> classification
	B
KRC681T	MQB
KRC682T	MRB
KRC683T	MSB
KRC684T	MTB
KRC685T	MUB
KRC686T	MVB



# KRC681T~KRC686T

## ELECTRICAL CHARACTERISTICS (Ta=25 °C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector-Emitter Breakdown Voltage		$BV_{CEO}$	$I_C=1mA$	20	-	-	V
Collector-Base Breakdown Voltage		$BV_{CBO}$	$I_C=50\mu A$	50	-	-	V
Emitter-Base Breakdown Voltage		$BV_{EBO}$	$I_E=50\mu A$	25	-	-	V
Collector Cut-off Current		$I_{CBO}$	$V_{CB}=50V, I_E=0$	-	-	0.1	$\mu A$
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C=30mA, I_B=3mA$	-	-	0.1	V
DC Current Gain		$h_{FE}$	$V_{CE}=2V, I_C=4mA$	350	-	1200	
Input Resistor	KRC681T	$R_1$		-	2.2	-	k $\Omega$
	KRC682T			-	4.7	-	
	KRC683T			-	5.6	-	
	KRC684T			-	6.8	-	
	KRC685T			-	10	-	
	KRC686T			-	22	-	
Transition Frequency		$f_T^*$	$V_{CE}=6V, I_C=4mA,$	-	30	-	MHz
Collector Output Capacitance		$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$	-	4.8	-	pF

\* Characteristic of Transistor Only.

Note)  $h_{FE}$  Classification B:350 ~ 1200