

# RT6N230C

TRANSISTOR WITH RESISTOR  
FOR MUTING APPLICATION  
SILICON NPN EPITAXIAL TYPE

## DESCRIPTION

RT6N230C is a silicon NPN epitaxial type transistor. This product is most suitable for muting circuit, switching circuit because of low on resistance, small collector to emitter saturation voltage.

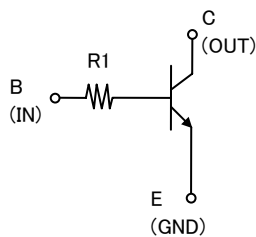
## FEATURE

- Small package for easy mounting.
- High reverse hFE
- Small collector to emitter saturation voltage  
 $V_{CE(sat)}=25\text{mV(TYP.)}(@I_C=50\text{mA}/I_B=2.5\text{mA})$
- Low on Resistance  
 $R_{on}=0.55\ \Omega\ \text{(TYP.)}(@V_I=5\text{V})$

## APPLICATION

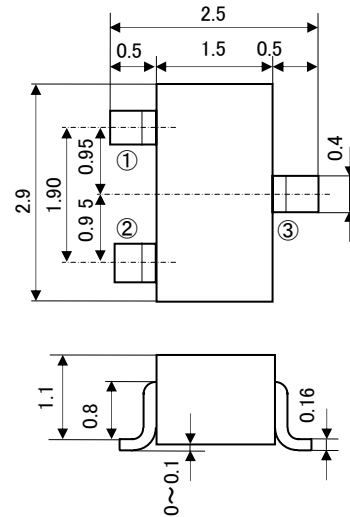
muting circuit, switching circuit

## EQUIVALENT CIRCUIT



## OUTLINE DRAWING

Unit : mm



JEITA: SC-59

## TERMINAL CONNECTOR

- ①: BASE
- ②: EMITTER
- ③: COLLECTOR

## MAXIMUM RATINGS (Ta=25°C)

Symbol	Parameter	Ratings	Unit
$V_{CBO}$	Collector to Base voltage	40	V
$V_{EBO}$	Emitter to Base voltage	40	V
$V_{CEO}$	Collector to Emitter voltage	20	V
$I_C$	Collector current	600	mA
$P_C$	Peak Collector current	200	mW
$T_j$	Collector dissipation (Total Ta=25°C)	+150	°C
$T_{stg}$	Junction temperature	-55~+150	°C

<SMALL-SIGNAL TRANSISTOR>

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### ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C)

Parameter	Symbol	Test conditions	Limits			Unit
			Min	Typ	Max	
C to B break down voltage	V(BR)CBO	I <sub>C</sub> =50 μA, I <sub>E</sub> =0mA	40	–	–	V
E to B break down voltage	V(BR)EBO	I <sub>C</sub> =50 μA, I <sub>C</sub> =0mA	40			V
C to E break down voltage	V(BR)CEO	I <sub>C</sub> =1mA, R <sub>BE</sub> =∞	20			V
Collector cut off current	ICBO	V <sub>CB</sub> =40V, I <sub>E</sub> =0mA	–	–	0.5	μA
Emitter cut off current	IEBO	V <sub>EB</sub> =40V, I <sub>C</sub> =0mA	–	–	0.5	μA
DC forward current gain	hFE	V <sub>CE</sub> =5V, I <sub>C</sub> =50mA	820	–	2500	–
C to E saturation voltage	VCE(sat)	I <sub>C</sub> =50mA, I <sub>B</sub> =2.5mA	–	25	150	mV
Input resistor	R1	–	1.54	2.2	2.86	kΩ
Gain band width product	fT	V <sub>CE</sub> =10V, I <sub>E</sub> =–50mA, f=100MHz	–	110	–	MHz
Output “ON” resistance	Ron	V <sub>i</sub> =5V, R <sub>L</sub> =1kΩ, f=1MHz	–	0.55	–	Ω



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