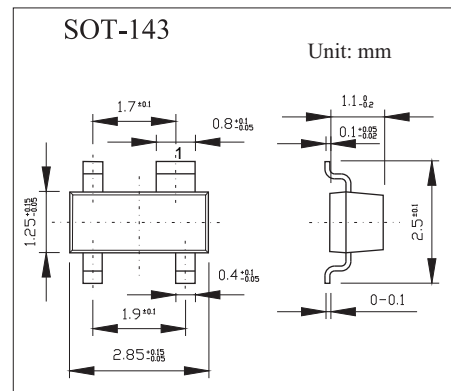
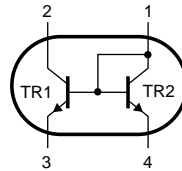


## NPN general purpose double transistor BCV61

### ■ Features

- High current gain
- Low collector-emitter saturation voltage



### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	30	V
Collector-emitter voltage	$V_{CE0}$	30	V
Emitter-base voltage	$V_{EB0}$	6	V
Collector current	$I_c$	100	mA
Power dissipation	$P_D$	250	mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	500	$^\circ\text{C}/\text{W}$
Operating and Storage and Temperature Range	$T_j, T_{STG}$	-55 to +150	$^\circ\text{C}$

## BCV61

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Transistor TR1						
Collector-Base Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = 10 μA, I <sub>E</sub> = 0	30			V
Collector-Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = 10 mA, I <sub>B</sub> = 0	30			V
Emitter-Base Breakdown Voltage	V <sub>(BR)EBO</sub>	I <sub>C</sub> = 10 μA, I <sub>C</sub> = 0	6			V
Collector cutoff current	I <sub>CBO</sub>	V <sub>CB</sub> =30V, I <sub>E</sub> =0			15	nA
Emitter cutoff current	I <sub>EBO</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> =0			100	nA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> = 100μA	100			
		V <sub>CE</sub> =5V, I <sub>C</sub> = 2mA	110		800	
collector-emitter saturation voltage *	V <sub>CE(sat)</sub>	I <sub>C</sub> = 10 mA; I <sub>B</sub> = 0.5 mA			0.25	V
		I <sub>C</sub> = 100 mA; I <sub>B</sub> = 5 mA			0.6	V
base-emitter saturation voltage *	V <sub>BE(sat)</sub>	I <sub>C</sub> = 10 mA; I <sub>B</sub> = 0.5 mA		0.7		V
		I <sub>C</sub> = 100 mA; I <sub>B</sub> = 5 mA		0.9		V
Collector capacitance	C <sub>c</sub>	I <sub>E</sub> = i <sub>e</sub> = 0; V <sub>CB</sub> = 10 V; f = 1 MHz		2.5		pF
Transition frequency	f <sub>T</sub>	I <sub>C</sub> = 20 mA; V <sub>CE</sub> = 20 V; f = 100 MHz	100			MHz
Noise figure	F	I <sub>C</sub> = 200 μA; V <sub>CE</sub> = 5 V; R <sub>s</sub> = 2kΩ; f = 1 kHz; B = 200 Hz			10	dB
Transistor TR2						
Base-emitter forward voltage	V <sub>EBS</sub>	V <sub>CB</sub> = 0; I <sub>E</sub> = -250 mA			-1.8	V
		V <sub>CB</sub> = 0; I <sub>E</sub> = -10μA	-400			mV
DC current gain	h <sub>FE</sub>	I <sub>C</sub> = 2 mA; V <sub>CE</sub> = 5 V				
BCV61A			110		220	
BCV61B			200		450	
BCV61C			420		800	

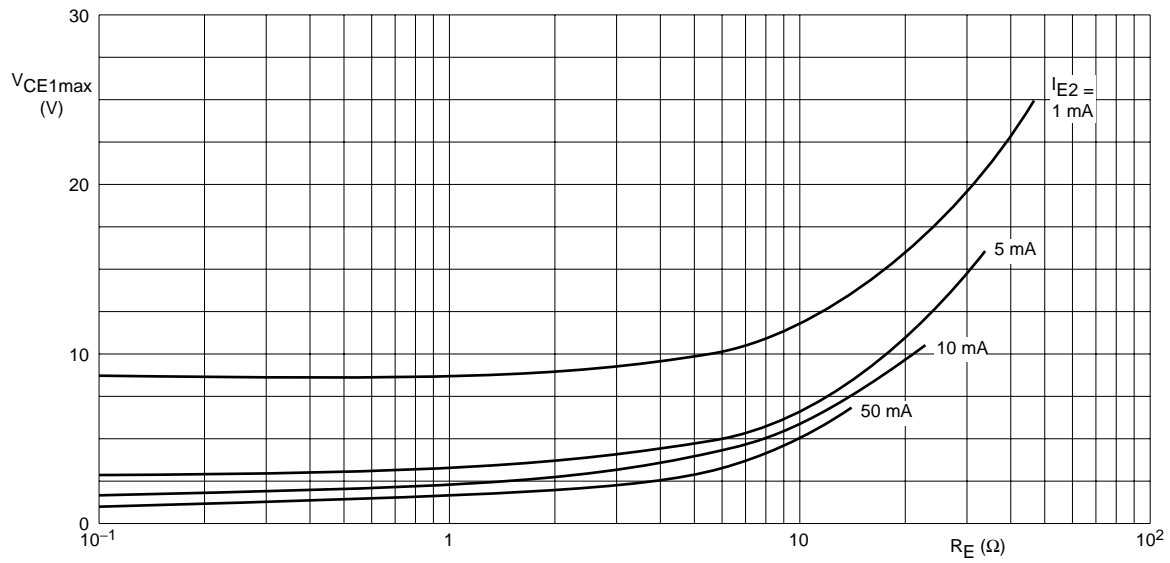
\* pulse test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2.0%.

## ■ Marking

TYPE	BCV61	BCV61A	BCV61B	BCV61C
Marking	1MP	1JP	1KP	1LP

## BCV61

## ■ Typical Characteristics



$$\frac{I_{C1}}{I_{E2}} = 1.3 \text{ (see Fig.3).}$$

Fig.1 Maximum collector-emitter voltage as a function of emitter resistance.