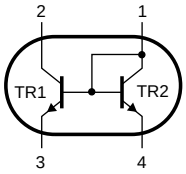
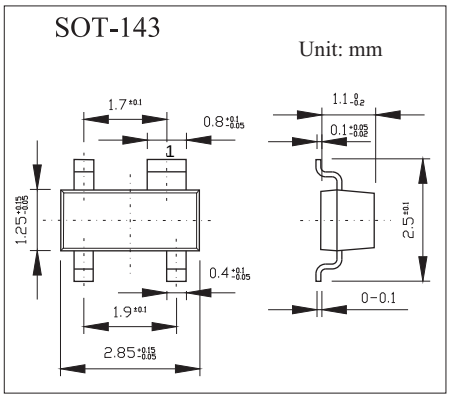
NPN general purpose double transistor
BCV61

■ Features

- High current gain
- Low collector-emitter saturation voltage





■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	30	V
Collector-emitter voltage	V_{CEO}	30	V
Emitter-base voltage	V_{EBO}	6	V
Collector current	I_C	100	mA
Power dissipation	P_D	250	mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	500	℃/W
Operating and Storage and Temperature Range	T_j, T_{STG}	-55 to +150	℃

BCV61

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Transistor TR1						
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = 10 μA, I_E = 0	30			V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 10 mA, I_B = 0	30			V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_C = 10 μA, I_C = 0	6			V
Collector cutoff current	I_{CBO}	V_{CB}=30V, I_E=0			15	nA
Emitter cutoff current	I_{EBO}	V_{EB}=5V, I_C=0			100	nA
DC current gain	h_{FE}	V_{CE}=5V, I_C= 100μA	100			
		V_{CE}=5V, I_C= 2mA	110		800	
collector-emitter saturation voltage *	$V_{CE(sat)}$	I_C = 10 mA; I_B = 0.5 mA			0.25	V
		I_C = 100 mA; I_B = 5 mA			0.6	V
base-emitter saturation voltage *	$V_{BE(sat)}$	I_C = 10 mA; I_B = 0.5 mA		0.7		V
		I_C = 100 mA; I_B = 5 mA		0.9		V
Collector capacitance	C_c	I_E = i_e = 0; V_{CB} = 10 V; f = 1 MHz		2.5		pF
Transition frequency	f_T	I_C = 20 mA; V_{CE} = 20 V; f = 100 MHz	100			MHz
Noise figure	F	I_C =200 μA; V_{CE} =5 V; R_S =2kΩ; f = 1 kHz; B = 200 Hz			10	dB
Transistor TR2						
Base-emitter forward voltage	V_{EBS}	V_{CB} = 0; I_E = -250 mA			-1.8	V
		V_{CB} = 0; I_E = -10μA	-400			mV
DC current gain	h_{FE}	I_C = 2 mA; V_{CE} = 5 V				
BCV61A			110		220	
BCV61B			200		450	
BCV61C			420		800	

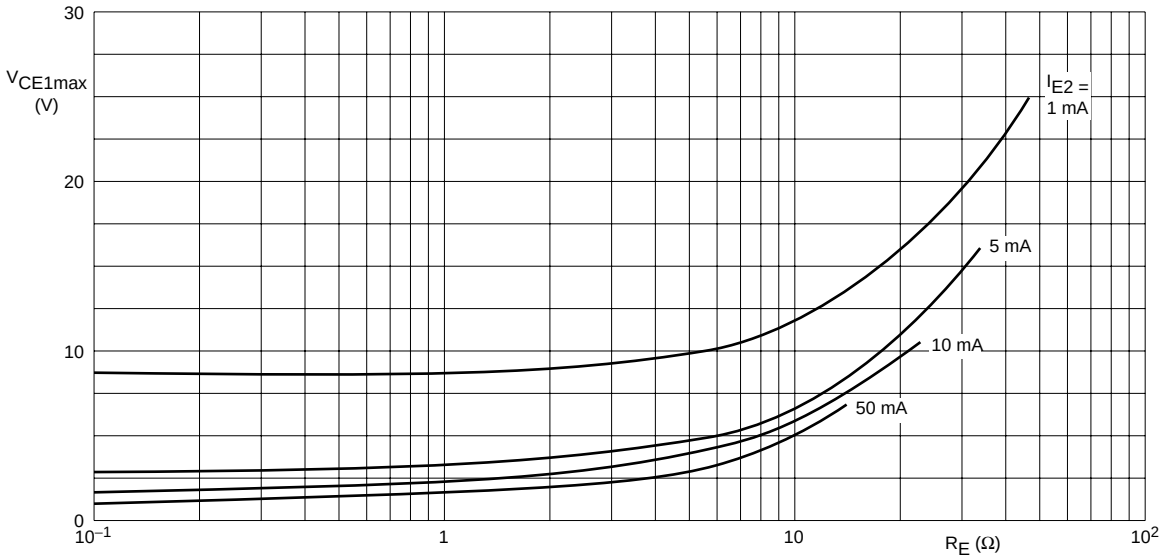
* pulse test: Pulse Width ≤300μs, Duty Cycle≤ 2.0%.

■ Marking

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

BCV61

■ Typical Characteristics



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

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