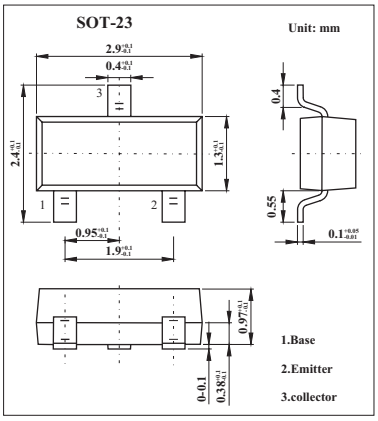
NPN General Purpose Transistors

BCV71,BCV72



■ Features

- Low current (max. 100 mA).
- Low voltage (max. 60 V).

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	80	V
Collector-emitter voltage	V_{CEO}	60	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	100	mA
Peak collector current	I_{CM}	200	mA
Peak base current	I_{BM}	200	mA
Total power dissipation	P_{tot}	250	mW
Storage temperature	T_{stg}	-65 to +150	℃
Junction temperature	T_j	150	℃
Operating ambient temperature	R_{amb}	-65 to +150	℃
Thermal resistance from junction to ambient *	$R_{th\ j\text{-}a}$	500	K/W

* Transistor mounted on an FR4 printed-circuit board.

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■ Electrical Characteristics Ta = 25℃

Parameter		Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current		I_{CBO}	I_E = 0; V_{CB} = 20 V			100	nA
		I_{CBO}	I_E = 0; V_{CB} = 20 V; T_j = 100 ℃			10	μA
Emitter cutoff current		I_{EBO}	I_C = 0; V_{EB} = 5 V			100	nA
DC current gain	BCV71	h_{FE}	I_C = 10 μA; V_{CE} = 5 V		90		
	BCV72				150		
DC current gain	BCV71	h_{FE}	I_C = 2 mA; V_{CE} = 5 V	110		220	
	BCV72			200		450	
Collector-emitter saturation voltage		$V_{CE(sat)}$	I_C = 10 mA; I_B = 0.5 mA		120	250	mV
			I_C = 50 mA; I_B = 2.5 mA		210		mV
Base to emitter saturation voltage		$V_{BE(sat)}$	I_C = 10 mA; I_B = 0.5 mA		750		mV
			I_C = 50 mA; I_B = 2.5 mA		850		mV
Base to emitter voltage		V_{BE}	I_C = 2 mA; V_{CE} = 5 V	550		700	mV
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 = 10 mA; V_{CE} = 5 V; f = 100 MHz	100			MHz
Noise figure		NF	I_C = 200 μA; V_{CE} = 5 V; R_S = 2 kΩ;f = 1 kHz; B = 200 Hz			10	dB

■ h_{FE} Classification

TYPE	BCV71	BCV72
Marking	K7	K8