SOT-23 Formed SMD Package

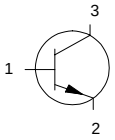
BCV71
BCV72

SILICON PLANAR EPITAXIAL TRANSISTORS

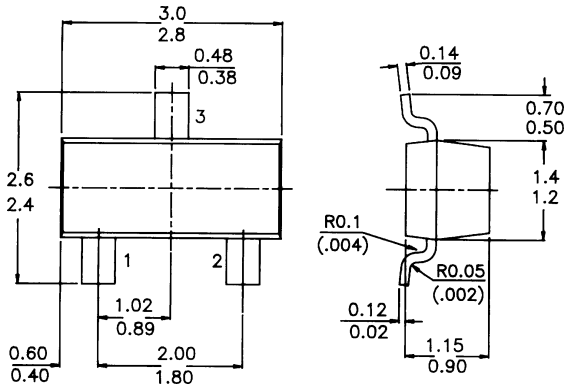
N–P–N transistors

Marking
BCV71 = K7
BCV72 = K8

Pin configuration
1 = BASE
2 = EMITTER
3 = COLLECTOR



PACKAGE OUTLINE DETAILS
ALL DIMENSIONS IN mm



ABSOLUTE MAXIMUM RATINGS

			BCV71	BCV72	
D.C. current gain at T_j = 25 °C		>	*110*	*200*	
I_C = 2 mA; V_{CE} = 5 V	h_{FE}	<	*220*	*450*	
Collector–base voltage (open emitter)	V_{CB0}	*max.*	*80*		*V*
Collector–emitter voltage (open base)	V_{CE0}	*max.*	*60*		*V*
Collector current (peak value)	I_{CM}	*max.*	*200*		*mA*
Total power dissipation up to T_{amb} = 25 °C	P_{tot}	*max.*	*250*		mW
Junction temperature	T_j	*max.*	*150*		*° C*
Transition frequency at f = 35 MHz					
I_C = 10 mA; V_{CE} = 5 V	f_T	*typ.*	*300*		MHz
Noise figure at R_S = 2 kW					
I_C = 200 mA; V_{CE} = 5 V;					
f = 1 kHz; B = 200 Hz	*F*	<	*10*		*dB*

RATINGS *(at T_A = 25°C unless otherwise specified)*

Limiting values			
Collector–base voltage (open emitter)	V_{CB0}	*max.*	*80 V*
Collector–emitter voltage (open base)			
I_C = *2 mA*	V_{CE0}	*max.*	*60 V*
Emitter–base voltage (open collector)	V_{EB0}	*max.*	*5 V*
Collector current (d.c.)	I_C	*max.*	*100 mA*
Collector current (peak value)	I_{CM}	*max.*	*200 mA*
Total power dissipation up to T_{amb} = 25 °C	P_{tot}	*max.*	*250* mW
Storage temperature	T_{stg}	*–55 to +150*	°C
Junction temperature	T_j	*max.*	*150* °C

THERMAL RESISTANCE

From junction to ambient	$R_{th\ j-a}$	=	*500* KW

CHARACTERISTICS

T_j = *25 °C unless otherwise specified*

Collector cut–off current			
I_E = *0;* V_{CB} = *20 V*	I_{CB0}	<	*100 nA*
I_E = *0;* V_{CB} = *20V;* T_j = *100°C*	I_{CB0}	<	*10* mA
Base emitter voltage			
I_C = *2 mA;* V_{CE} = *5 V*	V_{BE}	*550 to*	*700 mV*
Saturation voltages			
I_C = *10 mA;* I_B = *0,5 mA*		*typ.*	*120 mV*
	V_{CEsat}	<	*250 mV*
	V_{BEsat}	*typ.*	*750 mV*
I_C = *50 mA;* I_B = *2,5 mA*	V_{CEsat}	*typ.*	*210 mV*
	V_{BEsat}	*typ.*	*850 mV*

				BCV71	***BCV72***
D.C. current gain					
I_C = *10* mA; V_{CE} = *5 V*	h_{FE}	*typ.*		*90*	*150*
I_C = *2 mA;* V_{CE} = *5 V*	h_{FE}	>		*110*	*200*
		<		*220*	*450*
Collector capacitance at f = 1 MHz					
$I_E = I_e$ = *0;* V_{CB} = *10V*	C_c	*typ.*		*2,5*	pF
Transition frequency at f = 35 MHz					
I_C = *10 mA;* V_{CE} = *5 V*	f_T	*typ.*		*300*	MHz
Noise figure at R_S = *2* kW					
I_C = *200* mA; V_{CE} = *5 V*					
f = 1 kHz; B = 200 Hz	*F*	<		*10*	*dB*

Notes

Disclaimer

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CDIL is a registered Trademark of
Continental Device India Limited
C-120 Naraina Industrial Area, New Delhi 110 028, India.
Telephone + 91-11-579 6150 Fax + 91-11-579 9569, 579 5290
e-mail sales@cdil.com www.cdil.com