WANGFENG ELECTRON

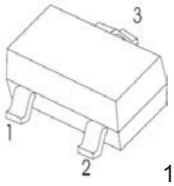
旺峰电子

BCV47

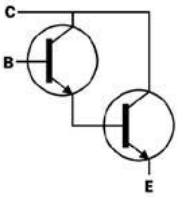
TRANSISTOR (NPN)

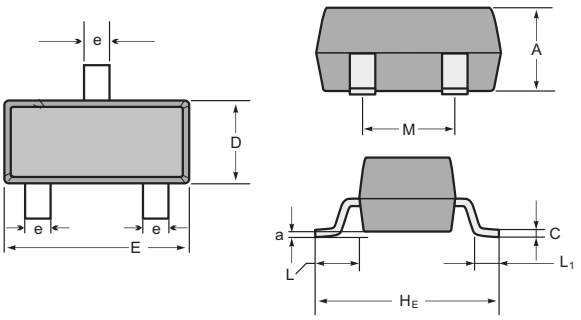
FEATURES

- High Collector Current
- High Current Gain



1.BASE
2.EMITTER
3.COLLECTOR





SOT-23 mechanical data

UNIT		A	C	D	E	H_E	e	M	L	L_1	a
mm	max	1.1	0.15	1.4	3.0	2.6	0.5	1.95	0.55 (ref)	0.36 (ref)	0.0
	min	0.9	0.08	1.2	2.8	2.2	0.3	1.7			0.15
mil	max	43	6	55	118	102	20	77	22 (ref)	14 (ref)	0.0
	min	35	3	47	110	87	12	67			6

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	10	V
I_C	Collector Current	500	mA
P_C	Collector Power Dissipation	300	mW
$R_{\Theta JA}$	Thermal Resistance From Junction To Ambient	416	℃/W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55～+150	℃

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ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA, I_E=0	80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=10mA, I_B=0	60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10μA, I_C=0	10			V
Collector cut-off current	I_{CBO}	V_{CB}=60V, I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=4V, I_C=0			0.1	μA
DC current gain	$h_{FE(1)}$	V_{CE}=1V, I_C=100μA	2000			
	$h_{FE(2)}$	V_{CE}=5V, I_C=10mA	4000			
	$h_{FE(3)}$	V_{CE}=5V, I_C=100mA	10000			
	$h_{FE(4)}$	V_{CE}=5V, I_C=0.5A	2000			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=100mA, I_B=0.1mA			1	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=100mA, I_B=0.1mA			1.5	V
Transition frequency	f_T	V_{CE}=5V,I_C=50mA, f=100MHz		170		MHz
Collector output capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz		3.5		pF

RATING AND CHARACTERISTIC CURVES (BCV47)