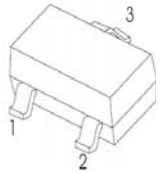
TRANSISTOR (PNP)

SOT－23



1. BASE

2. EMITTER

3. COLLECTOR

FEATURES

- Low current
- Low voltage
- General Purpose Transistor

MARKING:

BCW61A: BA

BCW61B: BB

BCW61C: BC

BCW61D: BD

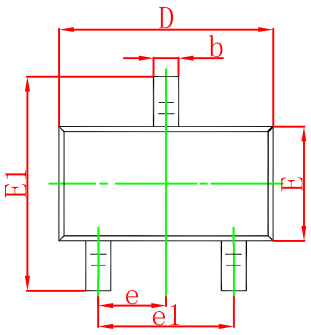
MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

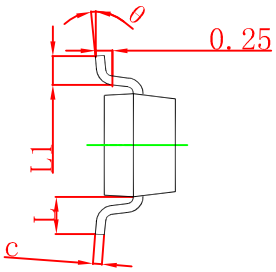
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-32	V
V_{CEO}	Collector-Emitter Voltage	-32	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-100	mA
P_C	Collector Power Dissipation	250	mW
$R_{\Theta JA}$	Thermal Resistance From Junction To Ambient	500	℃/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55～+150	℃

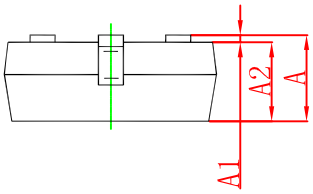
ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions		Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-10μA, I_E=0		-32			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=-1mA, I_B=0		-32			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-10μA, I_C=0		-5			V
Collector cut-off current	I_{CBO}	V_{CB}=-32V, I_E=0				-0.02	μA
Emitter cut-off current	I_{EBO}	V_{EB}=-4V, I_C=0				-0.02	μA
DC current gain	$h_{FE(1)}$	V_{CE}=-5V, I_C=-10μA	BCW61B	30			
			BCW61C	40			
			BCW61D	100			
	$h_{FE(2)}$	V_{CE}=-5V, I_C=-2mA	BCW61A	120		220	
			BCW61B	180		310	
			BCW61C	250		460	
			BCW61D	380		630	
	$h_{FE(3)}$	V_{CE}=-1V, I_C=-50mA	BCW61A	60			
			BCW61B	80			
			BCW61C	100			
			BCW61D	110			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-10mA, I_B=-0.25mA		-60		-250	mV
		I_C=-50mA, I_B=-1.25mA		-120		-550	mV
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=-10mA, I_B=-0.25mA		-0.6		-0.85	V
		I_C=-50mA, I_B=-1.25mA		-0.68		-1.05	V
Base-emitter voltage	V_{BE}	V_{CE}=-5V, I_C=-2mA		-0.6		-0.75	V
Transition frequency	f_T	V_{CE}=-5V,I_C=-10mA, f=100MHz		100			MHz
Collector output capacitance	C_{ob}	V_{CB}=-10V, I_E=0, f=1MHz			4.5		pF
Emitter input capacitance	C_{ib}	V_{EB}=-0.5V, I_C=0, f=1MHz			11		pF

SOT-23 Package Outline Dimensions

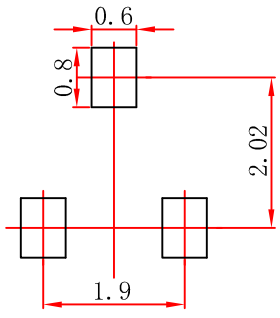






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.