

Silicon NPN SMD triode;

1: base 2: emitter 3: collector

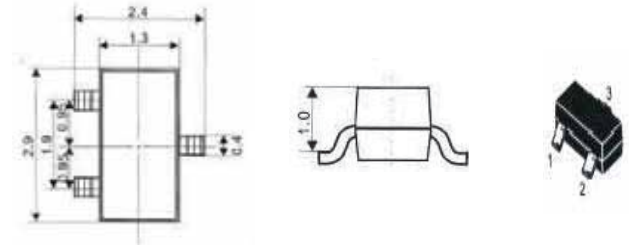
encapsulation mode: SOT-23

Marking code: BC817

Classification of hFE

Rank	BC817-16	BC817-25	BC817-40
Range	100-250	160-400	250-600
Marking	6A	6B	6C

Outline example



Maximum ratings ( $T_a=25^\circ\text{C}$  unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Breakdown Voltage	V <sub>CB0</sub>	50	V
Collector-Emitter Breakdown Voltage	V <sub>CE0</sub>	45	V
Emitter-Base Breakdown Voltage	V <sub>EB0</sub>	5	V
Collector Current	I <sub>C</sub>	500	mA
Collector Power Dissipation	P <sub>C</sub>	300	mW
Junction Temperature	T <sub>J</sub>	-65~150	°C
Storage Temperature	T <sub>stg</sub>	-65~150	°C

Electrical Characteristics ( $T_a = 25^\circ\text{C}$  unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Max	Unit
Collector-Base Breakdown Voltage	V <sub>CB0</sub>	I <sub>C</sub> =100μA I <sub>E</sub> =0	50		V
Collector-Emitter Breakdown Voltage	V <sub>CE0</sub>	I <sub>C</sub> =1mA I <sub>B</sub> =0	45		V
Emitter-Base Breakdown Voltage	V <sub>EB0</sub>	I <sub>E</sub> =100μA I <sub>C</sub> =0	5		V
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> =50V I <sub>E</sub> =0		100	nA
Collector Cutoff Current	I <sub>CE0</sub>	V <sub>CE</sub> =45V I <sub>B</sub> =0		100	nA
Emitter Cutoff Current	I <sub>EB0</sub>	V <sub>EB</sub> =5V I <sub>B</sub> =0		100	nA
DC Current Gain	HFE(A)	V <sub>CE</sub> =1V I <sub>C</sub> =100mA	100	600	
	HFE(B)	V <sub>CE</sub> =1V I <sub>C</sub> =500mA	40		
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =500mA I <sub>B</sub> =50mA		0.7	V
Collector-Base Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =500mA I <sub>B</sub> =50mA		1.2	V
Base-Emitter Voltage	V <sub>BE(on)</sub>	I <sub>C</sub> =500mA V <sub>CE</sub> =1V		1.2	V
transition frequency	f <sub>T</sub>	V <sub>CE</sub> =5V I <sub>C</sub> =10mA f=100MHz	100		MHz

# REEL TAPING SPECIFICATIONS FOR SURFACE MOUNT DEVICES-SOT-23

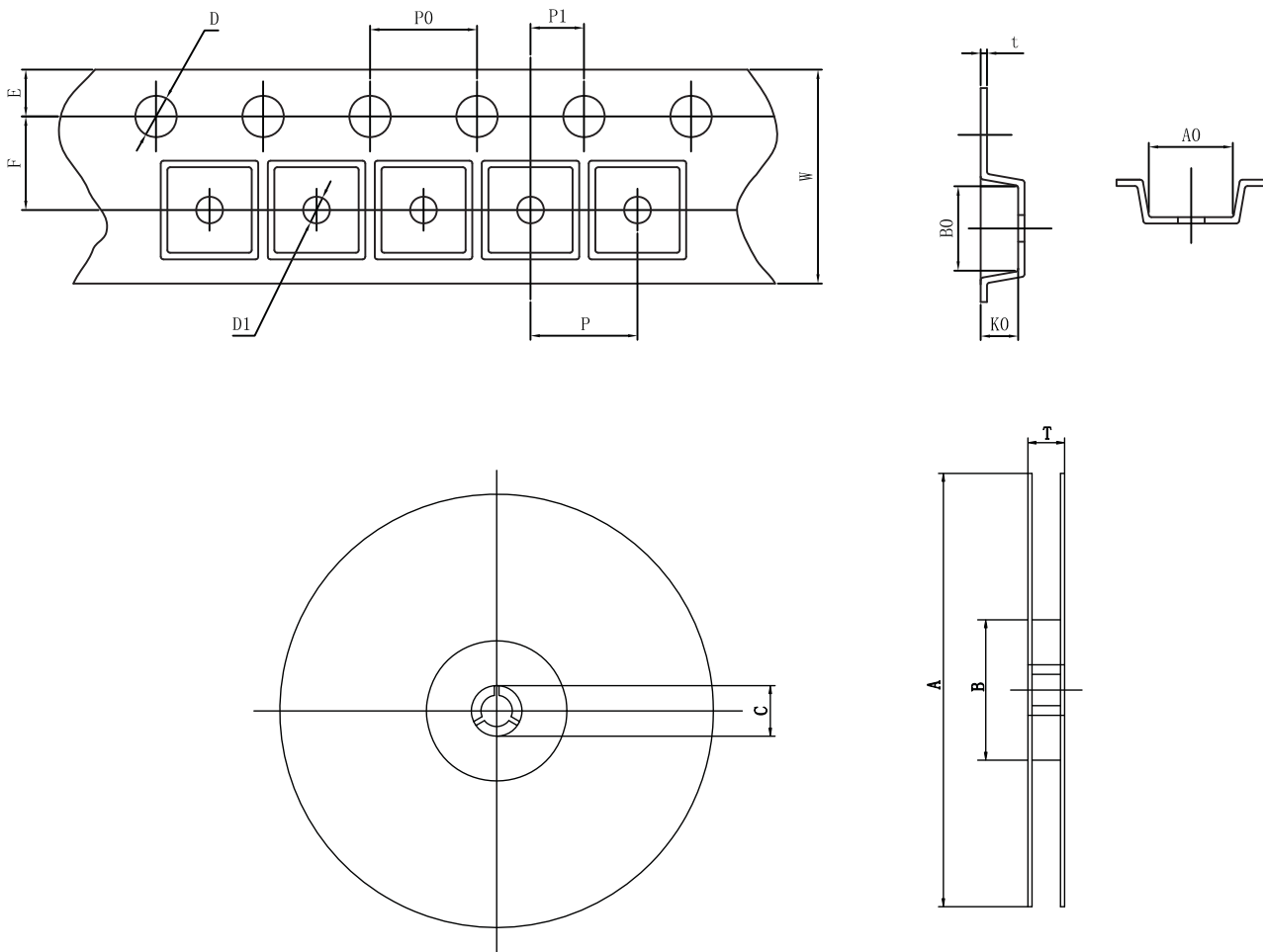


Fig.: Configuration of SOT-23 TAPING

ITEM	SYMBOL	SPECIFICATIONS (mm)	SPECIFICATIONS (inch)
Carrier width	A0	3.25 Max.	0.128 Max.
Carrier length	B0	2.87 Max.	0.113 Max.
Carrier depth	K0	1.32 Max.	0.052 Max.
Sprocket hole	D	1.5+0.1/0	0.059+0.004/0
Reel outside diameter	A	178±1.0	7.009±0.039
Reel inner diameter	B	54 Min.	2.126 Min.
Feed hole diameter	C	13.0±0.20	0.512±0.008
Strocket hole position	E	1.75±0.10	0.069±0.004
Punch hole position	F	3.5±0.05	0.138±0.002
Punch hole pitch	P	4.0±0.10	0.158±0.004
Sprocket hole pitch	P0	4.0±0.10	0.158±0.004
Embossment center	P1	2.0±0.05	0.079±0.002
Overall tape thickness	t	0.242 Max.	0.010 Max.
Tape width	W	8.0+0.3/-0.1	0.315+0.012/-0.004
Reel width	T	12.5 Max.	0.492 Max.
Punch hole diameter	D1	1.05 Max.	0.041 Max.

Note : Devices are packed in accordance with EIA standard RS-481-A and specification given above. Available only for SOT-23 devices.

# PACKAGING OF DIODE

## REEL PACK

PACKAGE	PACKING CODE	REEL ( EA )	COMPONENT SPACE(mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SOT-23/-3L	-T	3,000	---	---	178	438*438*220	180,000	---

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