WSB5523D

Middle Power Schottky Barrier Diode **Http://www.sh-willsemi.com**

Features

- 1 A rectified forward current
- Low forward voltage
- Low leakage current
- FBP package

FBP1608-02L

Circuit

Marking

Applications

- Switching circuit
- Middle current rectification

Absolute maximum ratings

Parameter	Symbol	Value	Unit
Reverse voltage (repetitive peak)	V_{RM}	40	V
Reverse voltage (DC)	V_R	40	V
Average Forward current (1)	$I_{F(AV)}$	1.0	A
Repetitive Peak Forward Current@tp≤1ms, duty≤25%	I_{FRM}	4	A
Forward Peak Surge Current @t=8.3ms (single pluse)	I_{FSM}	7	A
Junction temperature	T_J	150	°C
Operating temperature	Topr	-40 ~ 150	°C
Storage temperature	Tstg	-55 ~ 150	°C

Electronics characteristics (T_A=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward voltage	V_F	I_F=500mA(2)		0.40	0.5	V
		I_F=1A(2)		0.48	0.62	V
Reverse current	I_R	V_R=40V			0.1	mA
Junction capacitance	C_J	V_R=4V, F=1MHz			35	pF

Order Informations

Device	Package	Marking	Shipping
WSB5523D-2/TR	FBP1608-02L(1.6*0.8)	*23(3)	10000/Reel&Tape

Thermal Resistance Ratings

Symbol	Parameter	Max.	Unit
$R_{\theta Jsp}$	Thermal Resistance, Junction to soldering point of cathode tab	20	K/W

Note 1: Duty cycle=0.5, f=20kHz, square wave；

Note 2: Pulsed test, $t_p \leqslant 380us$, T_j=25℃；

Note 3: ＊= Month code (A~Z); 23= Device code；

Typical characteristics (Ta=25°C, unless otherwise noted)

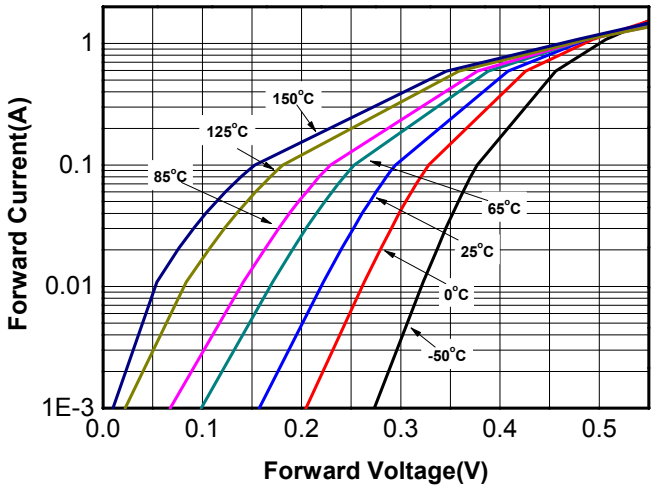


Fig.1 Forward voltage vs. Forward current

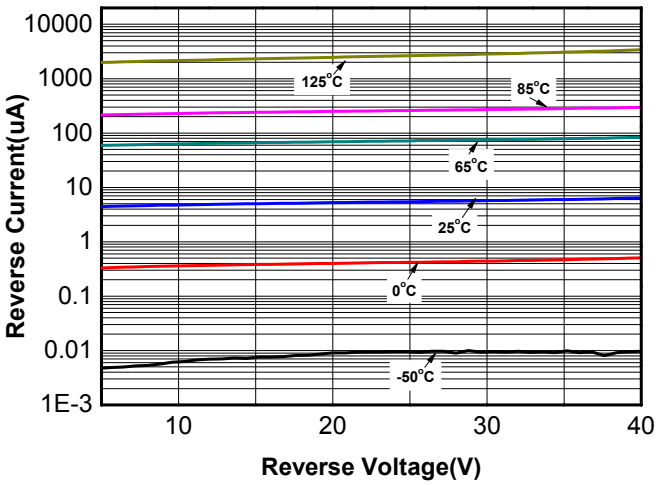


Fig.2 Reverse current vs. Reverse voltage

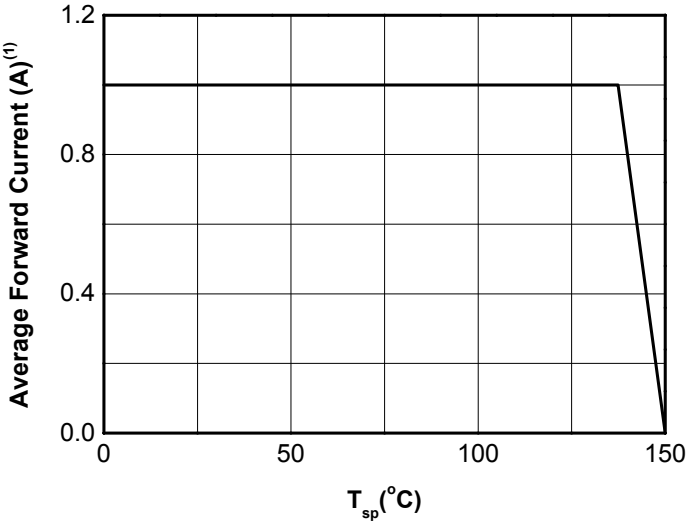


Fig.3 Average Forward Current Derating Curve

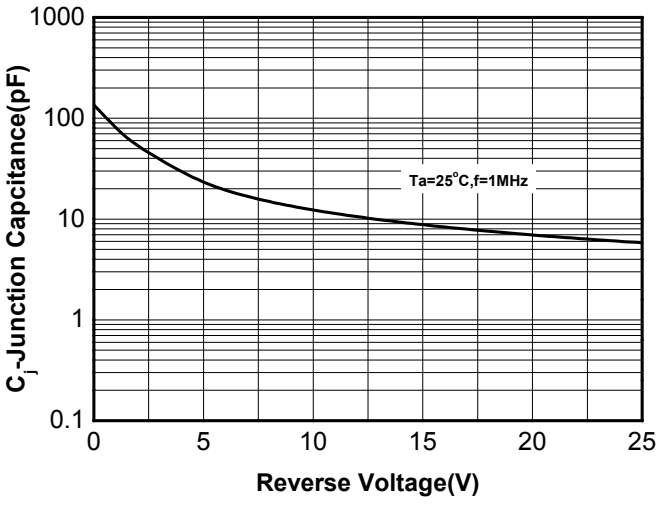
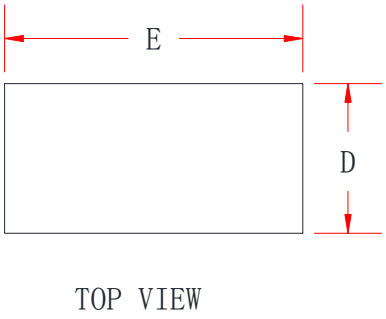


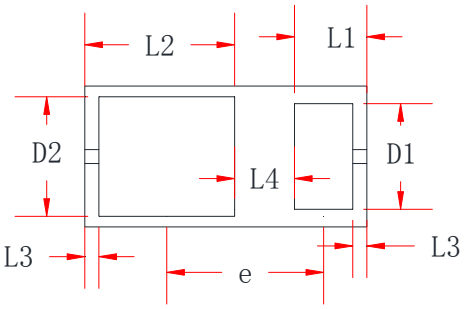
Fig.4 Junction capacitance vs. Reverse voltage

PACKAGE OUTLINE DIMENSIONS

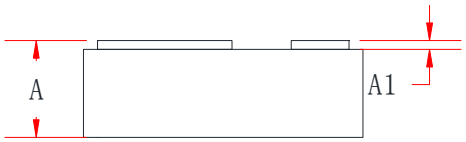
FBP1608-2L



TOP VIEW



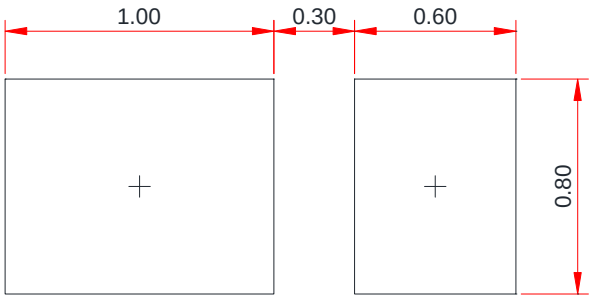
BOTTOM VIEW



SIDE VIEW

Symbol	Dimensions in Millimeters		
	Min.	Typ.	Max.
A	0.45	0.50	0.55
A1	0.01	0.05	0.09
D	0.75	0.80	0.85
D1	0.52	0.60	0.68
D2	0.60	0.68	0.76
E	1.55	—	1.65
L1	0.41Ref		
L2	0.85 Ref		
L3	0.08 Ref		
L4	0.34 Ref		
e	0.90	0.95	1.00

Recommended land pattern (Unit: mm)

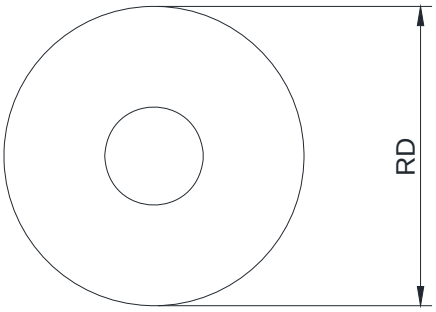


Notes:

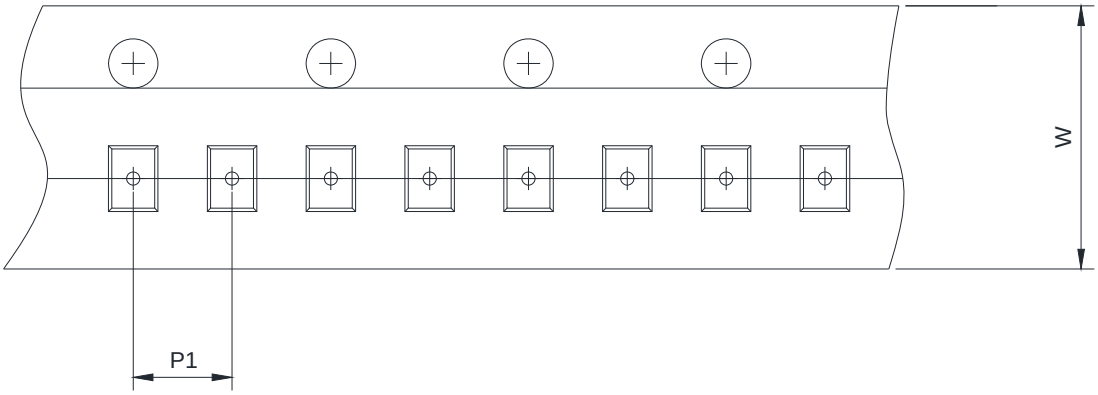
This recommended land pattern is for reference purposes only. Please consult your manufacturing group to ensure your PCB design guidelines are met.

TAPE AND REEL INFORMATION

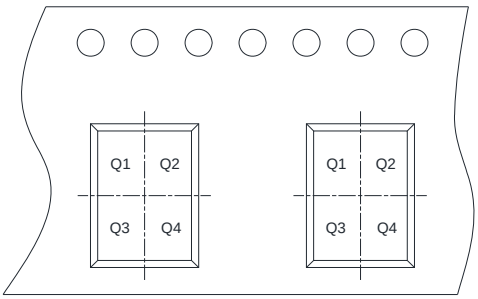
Reel Dimensions



Tape Dimensions



Quadrant Assignments For PIN1 Orientation In Tape



User Direction of Feed

RD	Reel Dimension	☑ 7inch	☐ 13inch		
W	Overall width of the carrier tape	☑ 8mm	☐ 12mm	☐ 16mm	
P1	Pitch between successive cavity centers	☑ 2mm	☐ 4mm	☐ 8mm	
Pin1	Pin1 Quadrant	☑ Q1	☑ Q2	☐ Q3	☐ Q4