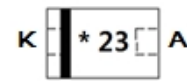


WSB5523D
Middle Power Schottky Barrier Diode
[Http://www.sh-willsemi.com](http://www.sh-willsemi.com)
Features

- 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@ $t_p \leq 1ms$, duty $\leq 25\%$	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	T_{opr}	-40 ~ 150	°C
Storage temperature	T_{stg}	-55 ~ 150	°C

Electronics characteristics ($T_A=25^\circ C$)

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, $t_p \leq 380\mu s$, $T_j=25^\circ C$;

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

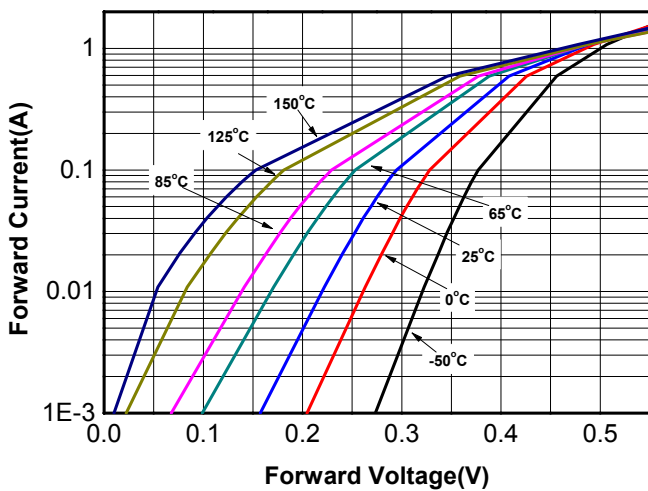
Typical characteristics (Ta=25°C, unless otherwise noted)


Fig.1 Forward voltage vs. Forward current

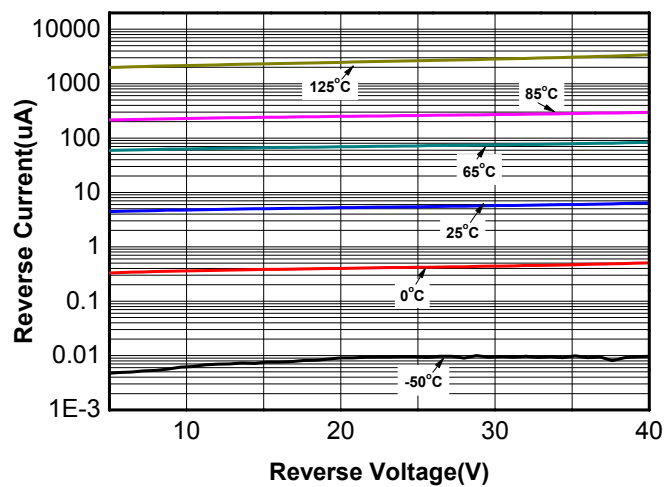


Fig.2 Reverse current vs. Reverse voltage

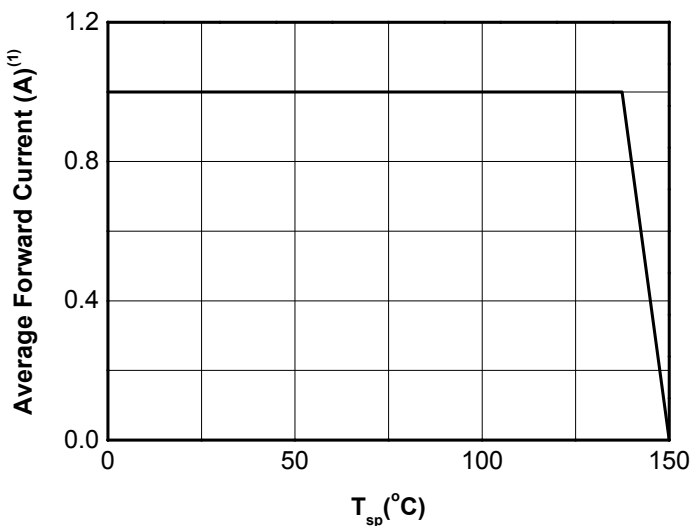


Fig.3 Average Forward Current Derating Curve

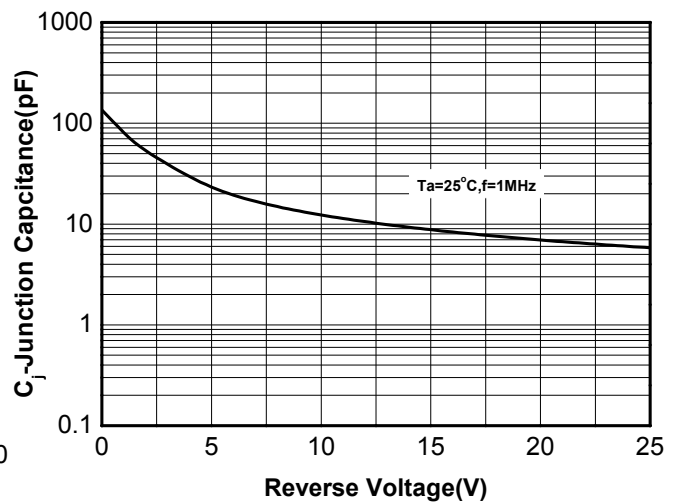
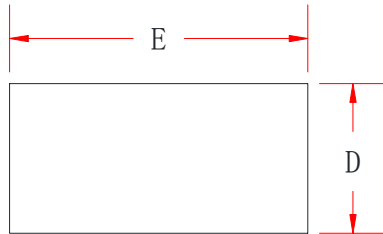
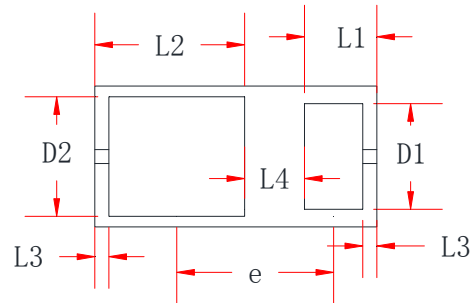


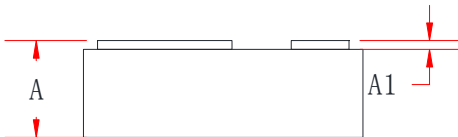
Fig.4 Junction capacitance vs. Reverse voltage

PACKAGE OUTLINE DIMENSIONS
FBP1608-2L


TOP VIEW

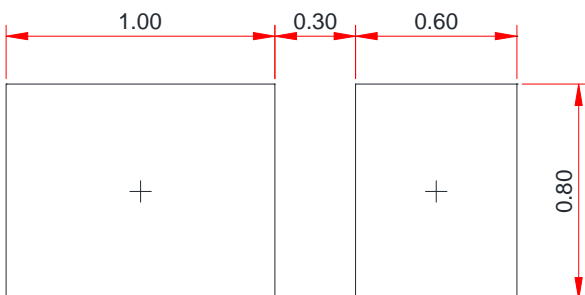


BOTTOM VIEW

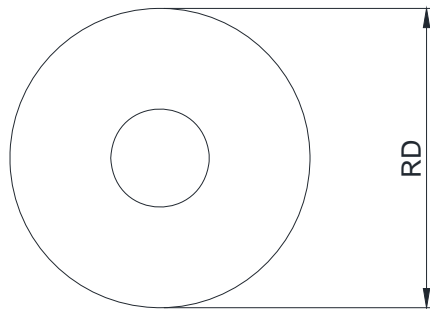
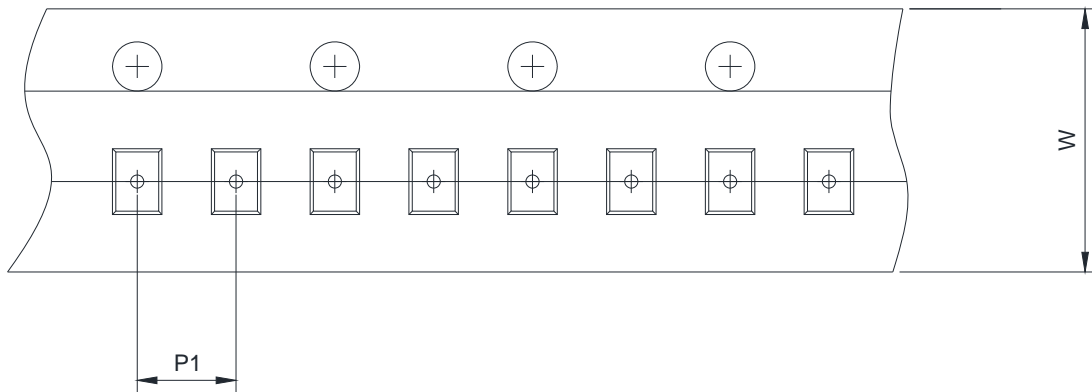
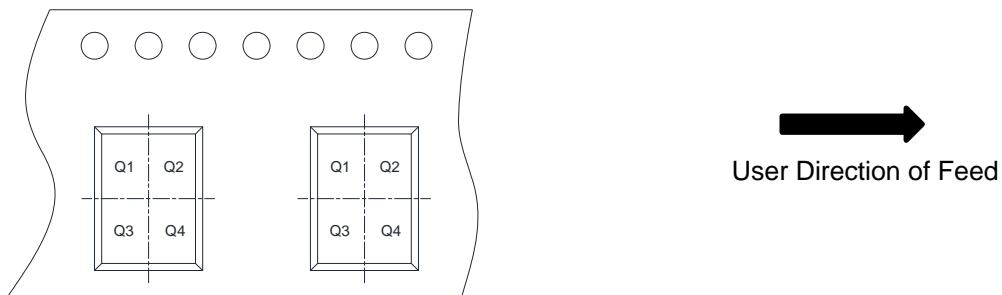


SIDE VIEW

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	0.41 Ref		
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


RD	Reel Dimension	<input checked="" type="checkbox"/> 7inch	<input type="checkbox"/> 13inch
W	Overall width of the carrier tape	<input checked="" type="checkbox"/> 8mm	<input type="checkbox"/> 12mm <input type="checkbox"/> 16mm
P1	Pitch between successive cavity centers	<input checked="" type="checkbox"/> 2mm	<input type="checkbox"/> 4mm <input type="checkbox"/> 8mm
Pin1	Pin1 Quadrant	<input checked="" type="checkbox"/> Q1	<input checked="" type="checkbox"/> Q2 <input type="checkbox"/> Q3 <input type="checkbox"/> Q4

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