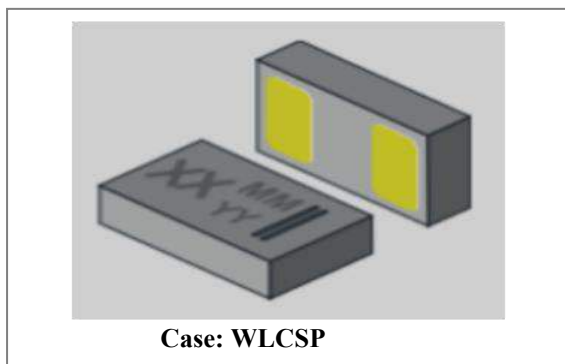


## SFC5V650 Thru SFC1250 Flip Chip Zener Diode



### Features

- Zener Voltage: 5.6V 6.2V 6.8V 10V 12V
- Case: WLCSP
- Space saving, low profile
- Very small dimensions: 1.0mm\*0.6mm\*0.28mm
- 20mA forward current
- 500mW Power dissipation

### Circuit Diagram



### Applications

- Voltage Regulation
- Voltage Reference
- Protection and Clamping

### Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Nominal Power Dissipation	$P_D$	Derate above 25°C	500	mW
Forward Voltage	$V_F$	@ $I_F=10mA$ , Pulse, $T_J=25^\circ C$	0.9	V
Operating Temperature Range	$T_J$	-	-55 to +150	°C
Storage Temperature Range	$T_{stg}$	-	-55 to +150	°C

**Electrical Characteristics @ T<sub>J</sub>=25 °C:**

Device	Zener voltage		Zener Impedence			Leakage Current	
	Nom. VZ ①	@ I <sub>ZT</sub>	Max.	Max.	@ I <sub>ZK</sub>	Max. I <sub>R</sub> @ V <sub>R</sub>	
			Z <sub>ZT</sub> @ I <sub>ZT</sub>	Z <sub>ZK</sub> @ I <sub>ZK</sub>		uA	Volts
	Volts	mA	Ω	Ω	mA	uA	Volts
SFC5V650	5.6	20	11	1600	0.25	5	3
SFC6V250	6.2	20	7	1000	0.25	5	4
SFC6V850	6.8	20	5	750	0.25	3	5
SFC1050	10	20	17	600	0.25	3	8
SFC1250	12	20	30	600	0.25	1	9.1

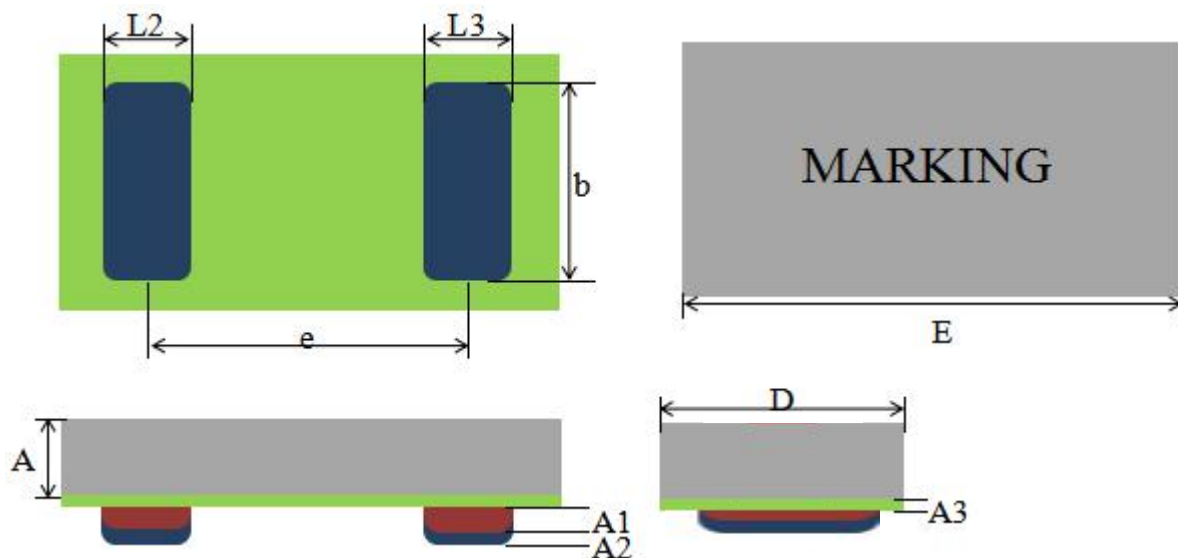
Note: ①V<sub>Z</sub> Tolerance is ±5%

**Ordering Information:**

Device	Package	Plating	Shipping
SFC5V650-SFC1250	WLCSP	Cu+Sn	6000pcs/reel

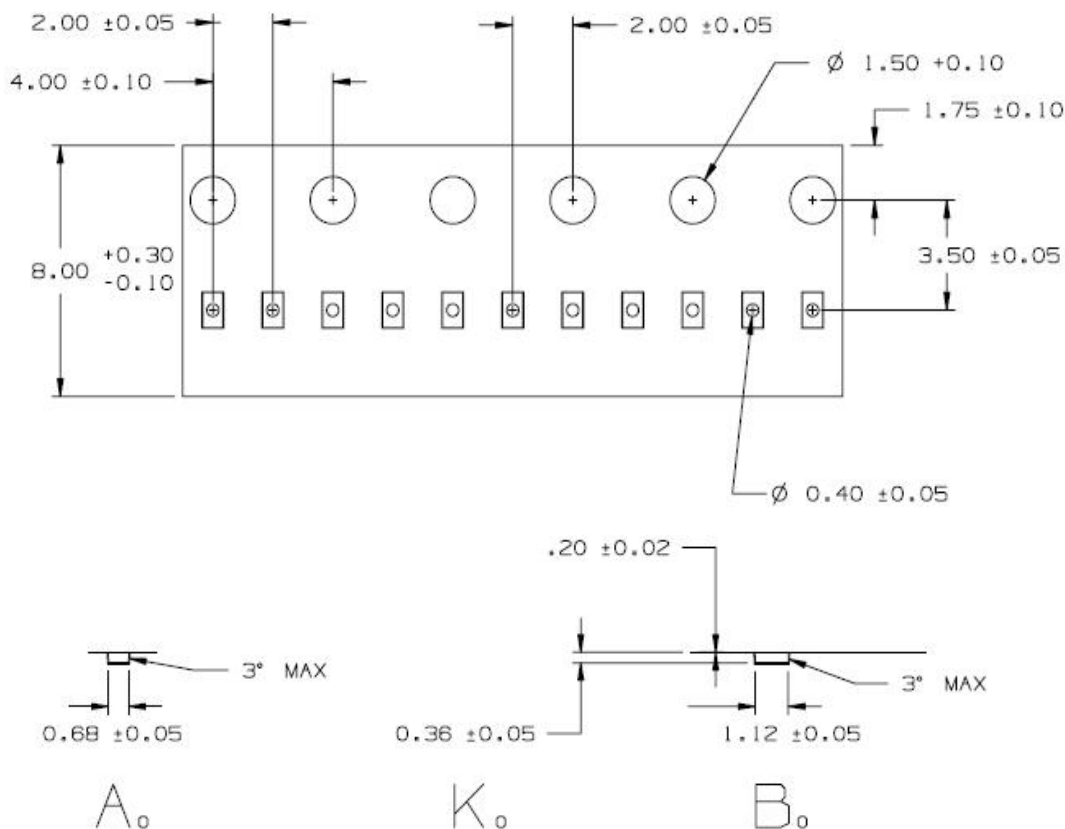
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**Mechanical Dimensions (in millimeters:WLCSP)**

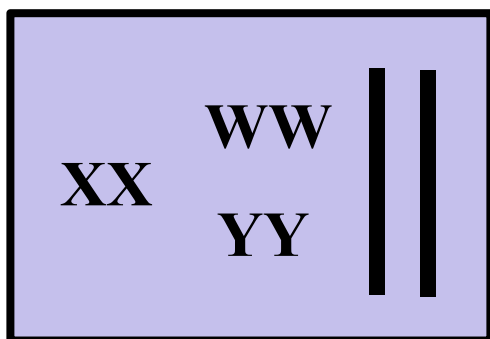


Item	Material	mechanical size(mm)		
		min	typ	max
A	Si	0.240	0.260	0.280
A1	Cu		0.008	
A2	Sn		0.003	
A3	PI	0.003	0.004	0.005
b			0.500	
L2		0.200	0.250	0.300
L3		0.200	0.250	0.300
e			0.650	
D		0.590		0.63
E		0.990		1.03

**Carrier Tape and Reel Specification(in millimeters)**



**Marking Diagram**



|| = cathode  
 WW = week code  
 YY = year code  
 XX = device code

Where  
 56 =SFC5V650  
 62 =SFC6V250  
 68 =SFC6V850  
 10 =SFC1050  
 12 =SFC1250

**DISCLAIMER:**

1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the SMC Diode Solutions sales department for the latest version of the datasheet(s).

2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.

3- In no event shall SMC Diode Solutions be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). SMC Diode Solution assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.

4- In no event shall SMC Diode Solutions be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.

5- No license is granted by the datasheet(s) under any patents or other rights of any third party or SMC Diode Solutions.

6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of SMC Diode Solutions.

7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations..