

SFC5000A Flip Chip Schottky Diode



Features

- Schottky diode for high-speed switching
- Case: WLCSP
- Very small dimensions: 1.0mm*0.6mm*0.28mm
- 1mA forward current
- Low forward voltage drop
- Low capacitance
- Low reverse current (<300nA @50V)

Circuit Diagram



Applications

- high efficiency DC/DC conversion
- fast switching
- protecting and clamping

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	50	V
Average Rectified Forward Current	$I_{F(AV)}$	50/60Hz, sinus @ $T_c=25^\circ\text{C}$	1	mA

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop *	V_F	$I_F=1\text{mA}$ $I_F=15\text{mA}$	0.34 0.6	0.41 0.65	V
Reverse Current*	I_R	$V_R = 50\text{V}$ @ $T_J = 25^\circ\text{C}$		300	nA
Junction Capacitance	C_T	$V_R = 0\text{V}$, $f_{SIG} = 1\text{MHz}$ @ $T_C = 25^\circ\text{C}$		7.5	pF

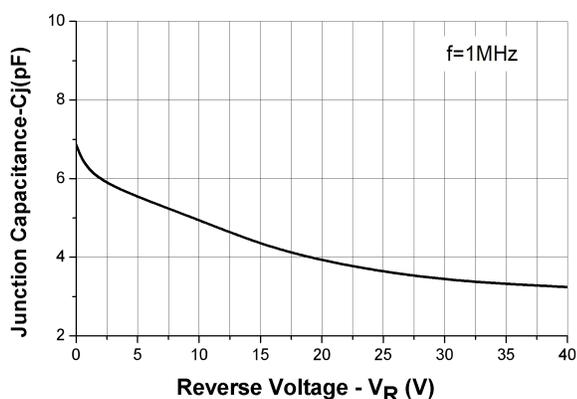
* Pulse width < 300 μs , duty cycle < 2%

Thermal-Mechanical Specifications:

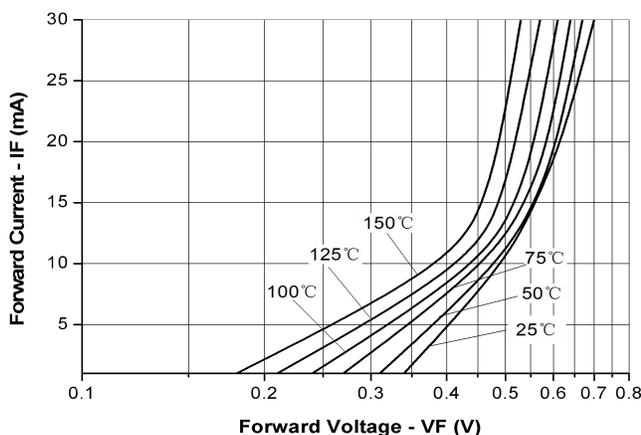
Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-	-65 to +150	$^{\circ}\text{C}$
Operating temperature range	T_{op}	-	-55 to +125	$^{\circ}\text{C}$
Typical Thermal Resistance Junction to Case	$R_{\theta\text{JC}}$	DC operation	280	K/W

Ratings and Characteristics Curves

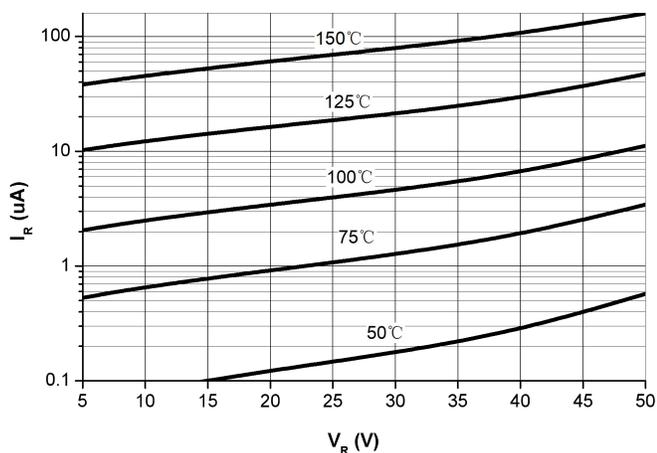
Capacitance vs. Reverse Voltage



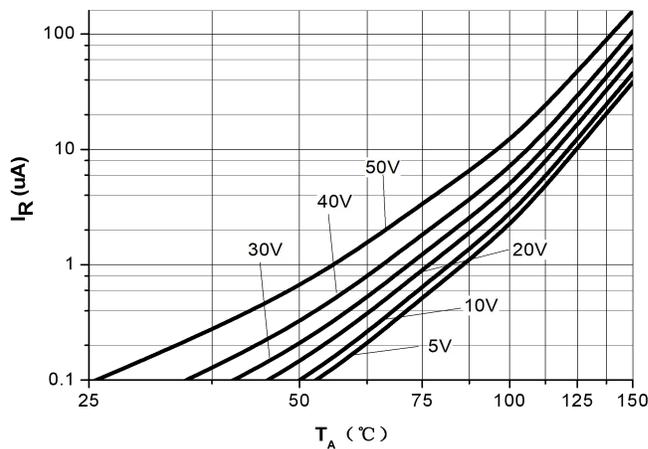
Forward Voltage vs. Forward Current



Reverse Leakage Current vs. Reverse Voltage



Reverse Leakage Current vs. Temperature

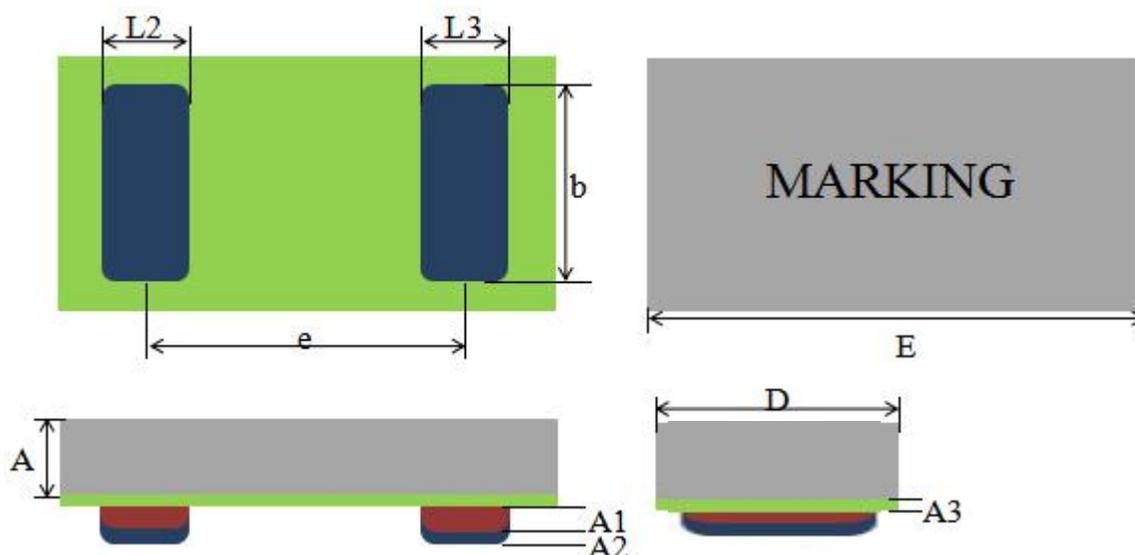


Ordering Information:

Device	Package	Plating	Shipping
SFC5000A	WLCSP	Cu+Sn	6000pcs/reel

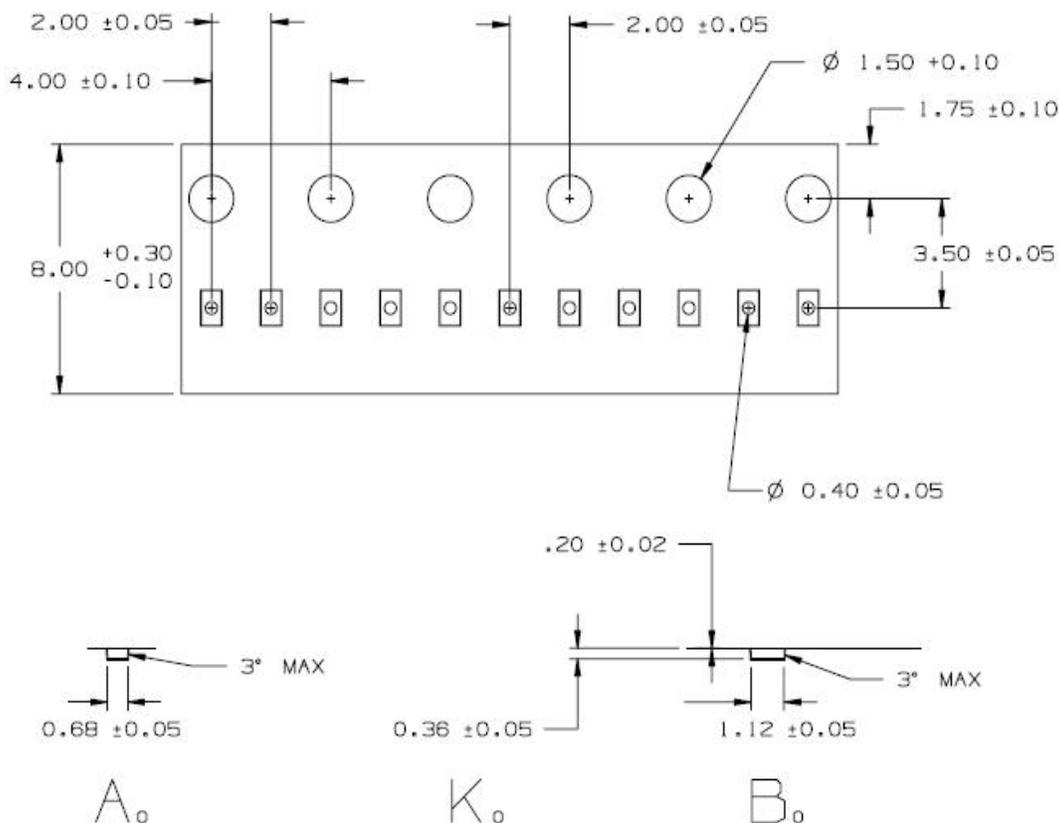
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Mechanical Dimensions (in millimeters:WLCSP)

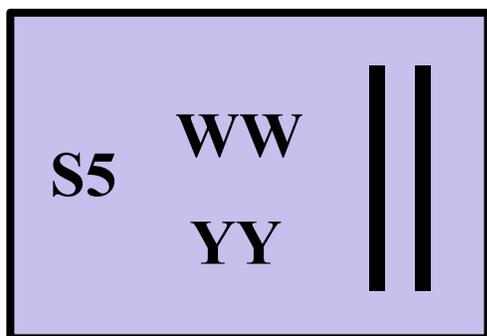


Item	Material	mechanical size(mm)		
		min	typ	max
A	Si	0.240	0.260	0.280
A1	Cu		0.008	
A2	Sn		0.003	
A3	PI	0.003	0.004	0.005
b			0.500	
L2		0.200	0.250	0.300
L3		0.200	0.250	0.300
e			0.650	
D		0.590		0.63
E		0.990		1.03

Carrier Tape and Reel Specification(in millimeters)



Marking Diagram



|| = cathode
 WW = week code
 YY = year code
 S5 = device code

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