

SFC3005A Flip Chip Schottky Diode



Features

- Schottky diode for high-speed switching
- Case: WLCSP
- Very small dimensions: 1.0mm*0.6mm*0.28mm
- 0.5A forward current
- Low forward voltage drop
- Low capacitance
- Low reverse current (<10uA @30V)

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	-	30	V
Average Rectified Forward Current	$I_{F(AV)}$	50/60Hz, sinus @Tc=25°C	0.5	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3ms, Half Sine pulse	5	A
Power dissipation	P_{tot}		450	mW

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop *	V_F	IF=1mA IF=10mA IF=100mA IF=200mA IF=500mA	0.27 0.34 0.45 0.53 0.73	0.30 0.40 0.52 0.60 0.85	V
Reverse Current*	I_R	$V_R = 5V$ $V_R = 10V$ $V_R = 30V$ @T _J = 25 °C	0.1 0.2 3	1 2 10	uA
Junction Capacitance	C_T	$V_R = 5V$, f _{SIG} = 1MHz @T _C = 25 °C	11	15	pF

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

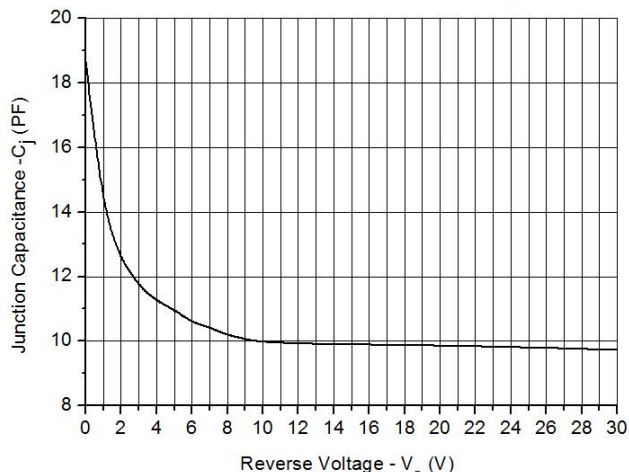
- China - Germany - Korea - Singapore - United States ●
- <http://www.smc-diodes.com> - sales@smc-diodes.com ●

Thermal-Mechanical Specifications:

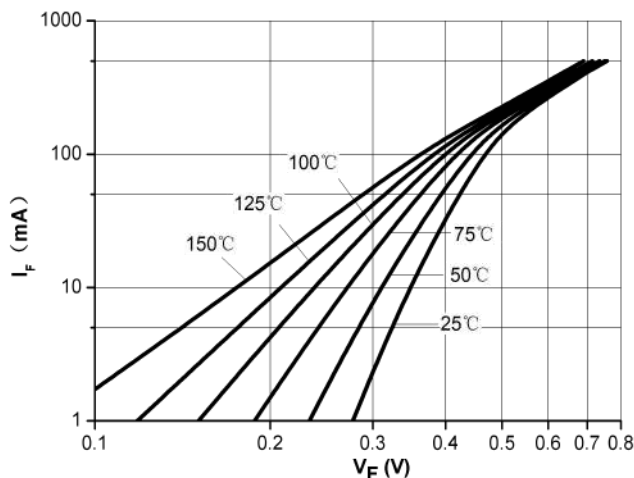
Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-	-65 to +150	$^{\circ}\text{C}$
Operating temperature range	T_{op}	-	-55 to +125	$^{\circ}\text{C}$
Typical Thermal Resistance Junction to Ambient Air	$R_{\theta\text{JA}}$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

Ratings and Characteristics Curves

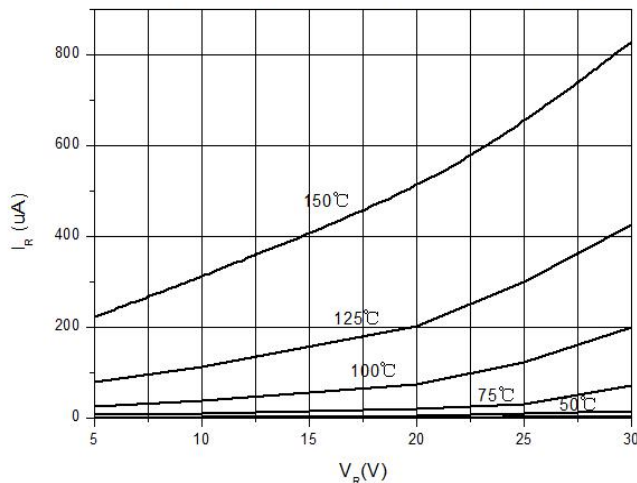
Capacitance vs. Reverse Voltage



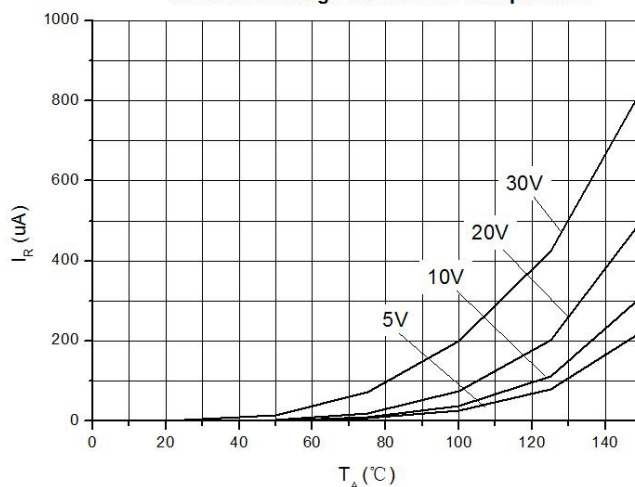
Forward Current vs. Forward Voltage



Reverse Leakage Current vs. Reverse Voltage



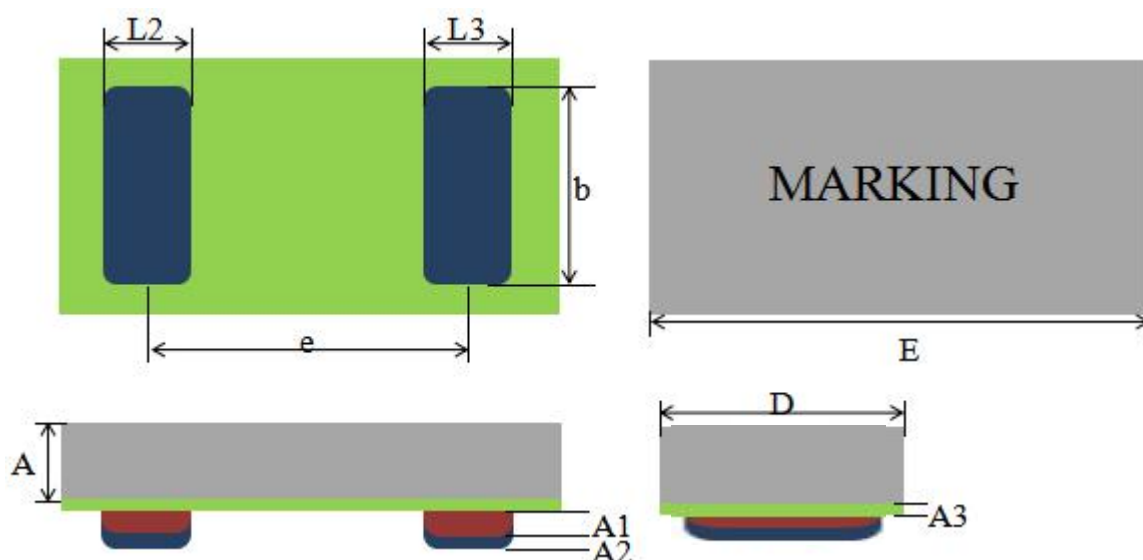
Reverse Leakage Current vs. Temperature



Ordering Information:

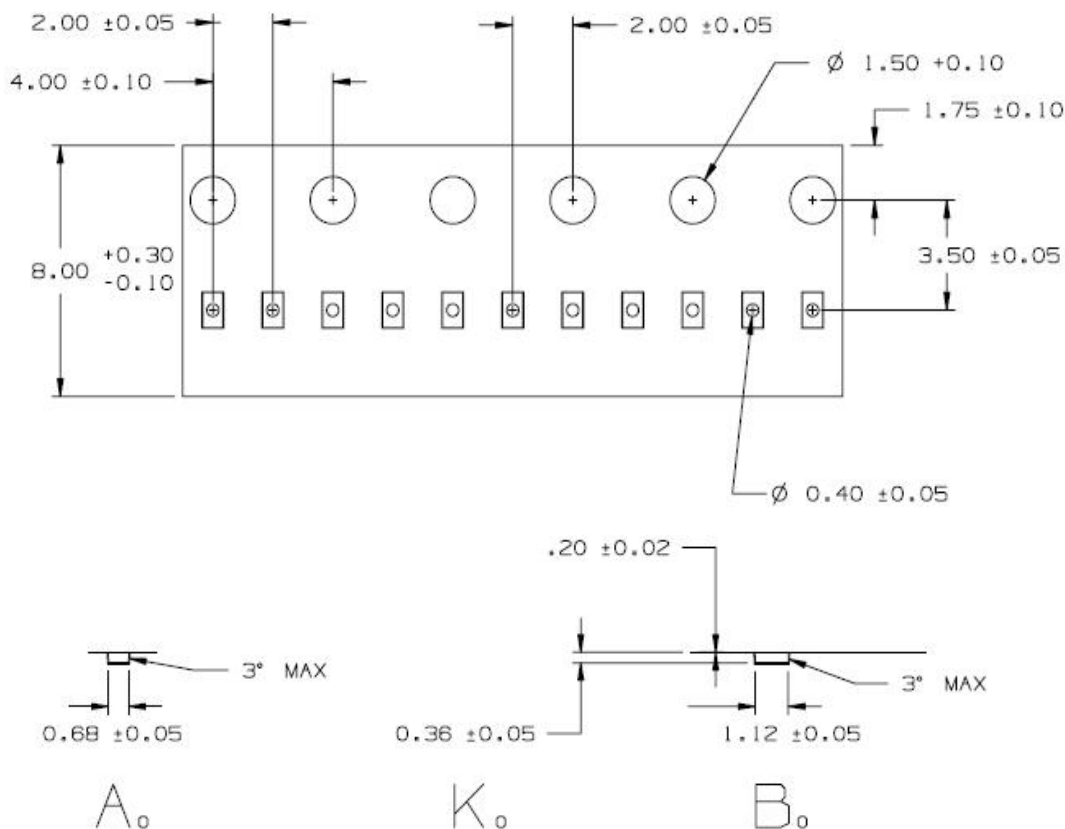
Device	Package	Plating	Shipping
SFC3005A	WLCSP	Cu+Sn	6000pcs/reel

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

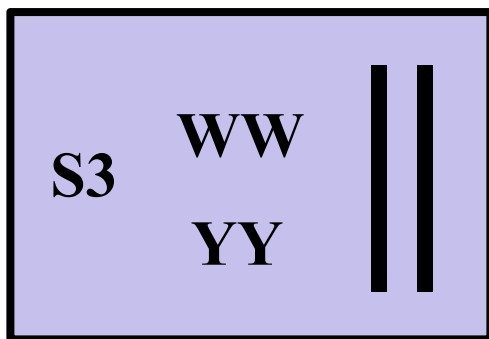
Mechanical Dimensions (in millimeters:WLCSP)


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
 S3 = device code

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