

**Surface Mount Glass Passivated Standard Rectifier**

**Reverse Voltage - 600 V**

**Forward Current - 100mA**

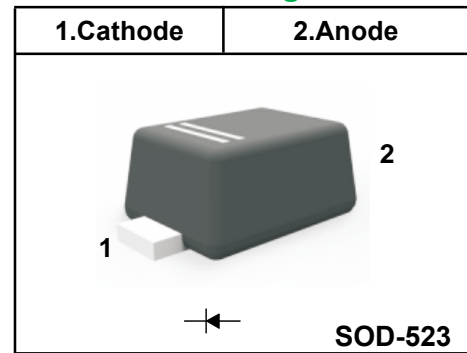
**FEATURES**

- ◆ For surface mounted applications
- ◆ Low profile package
- ◆ Easy to pick and place
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives
- ◆ Applied in LED lighting

**MECHANICAL DATA**

- ◆ Case: SOD-523
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026

**Pinning**



**Marking Code**

<b>SGP5A</b>	<b>G5</b>
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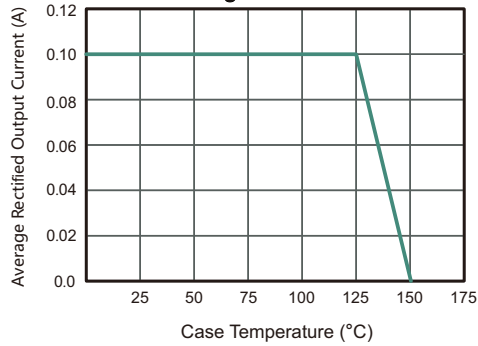
**Maximum Ratings(Ta =25°C unless otherwise noted)**

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	<b>V<sub>RRM</sub></b>	600	<b>V</b>
RMS Reverse Voltage	<b>V<sub>R(RMS)</sub></b>	420	<b>V</b>
Maximum DC Blocking Voltage	<b>V<sub>DC</sub></b>	600	<b>V</b>
Verage Rectified Output Current	<b>I<sub>F</sub></b>	100	<b>mA</b>
Non-Reptitive Peak Forward Surge Current at t=8.3ms	<b>I<sub>FSM</sub></b>	3.5	<b>A</b>
Operating Temperature Range	<b>T<sub>J</sub></b>	-55 to 150	<b>°C</b>
Storage Temperature Range	<b>T<sub>STG</sub></b>	-55 to 150	<b>°C</b>

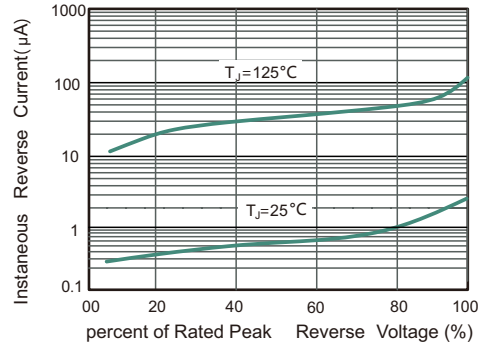
**Electricalcharacteristics( T<sub>A</sub>=25°C unless otherwise noted )**

Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Forward Voltage	I <sub>F</sub> =50mA	<b>V<sub>F</sub></b>			1.1	<b>V</b>
Reverse LeakageCurrent	V <sub>R</sub> =600V, T <sub>a</sub> =25°C	<b>I<sub>R</sub></b>			5	<b>μA</b>
Reverse LeakageCurrent	V <sub>R</sub> =600V, T <sub>a</sub> =125°C	<b>I<sub>R</sub></b>			100	<b>μA</b>
Junction Capacitance	V <sub>R</sub> =4V , f=1MHz	<b>C<sub>J</sub></b>			5	<b>pF</b>

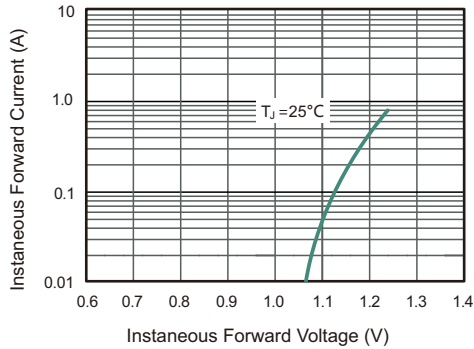
**Fig.1 Average Rectified Output Current Derating Curve**



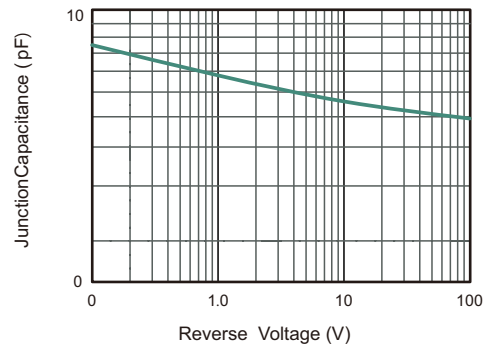
**Fig.2 Typical Reverse Characteristics**



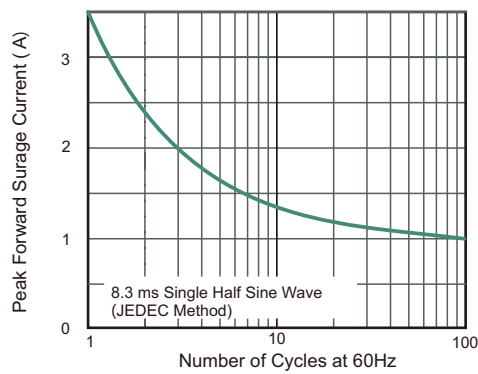
**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



**Ordering information**

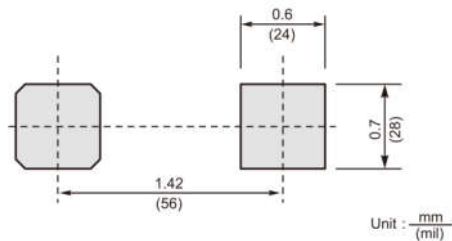
Package	Packing Description	Packing Quantity
SOD-523	Tape/Reel, 7" reel	3000PCS/Reel 120000PCS/Carton

**Package Dimensions**

**SOD-523**

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	0.51	0.77	20	30
e	0.25	0.35	10	14
C	0.08	0.15	3	6
D	1.10	1.30	43	51
E	0.75	0.99	30	39
HE	1.50	1.70	59	67
N	0.35ref		14ref	
L	0.2ref		8ref	
P	R0.1 ALL ROUND		R4.0 ALL ROUND	
∠	10°			

**The recommended mounting pad size**



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