


SPECIFICATION SHEET NO.	T0304- S3MBL00000S001	
ORIGINAL MFR. PART NO.	 LGE Diodes/S3MB-L	
NEXTGEN ORDER PART NO.	S3MBL00000S001	This number is required on all RFQs and Purchase Orders
RELEASE DATE	March, 04, 2026	
REVISION	Rev. A1	Updated to reflect the most recent data
DESCRIPTION AND KEY SPECIFICATIONS FOR SINGLE PART NUMBER	<p>3A Surface Mount General Purpose Rectifier 2 Pads, S3L Series Package DO-214AA/SMB</p> <p>Average Forward Rectified Current (I(AV)): 3.0A @ TL = 75° C</p> <p>Recurrent Peak Reverse Voltage (VRRM): 1000 V</p> <p>RMS Voltage (VRMS): 700V</p> <p>Operating Junction Temperature: -55° C to +150° C</p> <p>Packaging: Tape &amp; Reel, 3000 pcs/reel</p> <p>RoHS / RoHS III Compliant</p> <p>RoHS Annex III Lead Exemption (EU 2015/863)</p> <p>REACH Compliant and Halogen Free (HF)</p>	
CUSTOMER		
CUSTOMER PART NO.		
NOTE		

### VENDOR APPROVAL

Prepared by | Checked by | Approved by



Date: March, 04, 2026

### CUSTOMER APPROVAL

Signature:

Name:

Title:

Date:

## GENERAL DESCRIPTION

The S3L Series is a surface-mount general purpose rectifier designed for high reliability and efficient power rectification in a wide range of electronic applications.

The device utilizes a glass-passivated junction, providing improved reliability, high surge current capability, and low forward voltage drop.



## MAIN FEATURES

- Surface Mount Package (SMB / DO-214AA)
- Glass Passivated Junction
- Low Forward Voltage Drop
- High Current Capability and High Surge Current Capability
- Suitable for Automated Pick-and-Place Assembly
- UL94V-0 Flame Retardant Plastic Package
- Compatible with Major Industry Standard Parts
- RoHS/RoHS III compliant, RoHS Annex III lead Exemption (Exempt per RoHS EU 2015/863)
- REACH Compliant and Halogen Free (HF)

*The image shown is for reference only. Please refer to the dimensional drawing for exact mechanical specifications.*

## APPLICATIONS

- General rectification for power supplies
- Polarity protection and Freewheeling and clamping circuits
- Consumer electronics and industrial equipment



## ELECTRICAL CHARACTERISTICS

- Refer to Page 3-4 for detailed electrical characteristics.

## IMPORTANT NOTICE

- Specifications are subject to change without prior notice.
- NextGen Components reserves the right to modify product specifications to improve reliability, performance, or manufacturability.
- Customers should verify that they have the latest revision of this datasheet before finalizing product designs.

**MECHANICAL DATA**

Parameter	Description
Package / Case	Molded Plastic, DO-214AA (SMB)
Terminals	Pure Tin Plated, Lead-Free
Polarity	Cathode indicated by band
Mounting Position	Any
Weight	Approx. 0.093 g

**MAX. RATINGS & ELECTRICAL CHARACTERISTICS**

- Ratings at 25 °C ambient temperature unless otherwise specified.
- Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	Symbols	Value	Units
Average Forward Rectified Current @ TL = 75°C	IF(AV)	3.0	A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load (JEDEC Method)	IFSM	80	A
Operating Temperature Range	TJ	-50 to +150	°C
Storage Temperature Range	TSTG	-55 to +150	°C

**ELECTRICAL CHARACTERISTICS**

Parameter	Symbols	Conditions	Value	Units
Instantaneous Forward Voltage	VF	IF = 3A	1.15	V
DC Reverse Current	IR	VR = Rated	10	µA
Reverse Recovery Time (see Note 1)	trr	Typical	1.5	µs
Junction Capacitance (see Note 2)	CJ	Typical	40	pF

**ORDERING INFORMATION AND ELECTRICAL RATINGS**

- Ratings At 25 °C Ambient Temperature Unless Otherwise Specified.
- Single Phase Half-wave 60Hz, resistive Or Inductive Load, For Capacitive Load Current Derate By 20%.

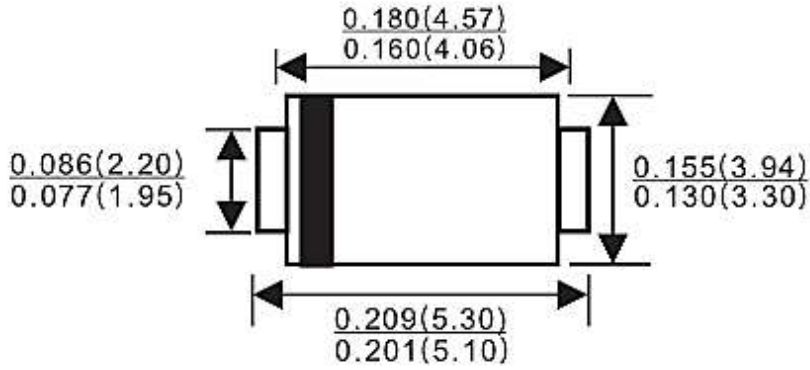
NextGen Order Part Number	Max. Repetitive Peak Reverse Voltage	Max. RMS Voltage	Max. DC Blocking Voltage	Max. Peak Reverse Current At Rated DC Blocking Voltage		Typical Thermal Resistance. (Note 3)	Marking List			
				@ 25 °C	@ 125 °C					
				V <sub>RRM</sub>	V <sub>RMS</sub>			V <sub>DC</sub>	I <sub>R</sub>	R <sub>θJL</sub>
				V	V			V	µA	°C/W
S3ABL00000S001	50	35	50	10	250	10	S3A			
S3BBL00000S001	100	70	100	10	250	10	S3B			
S3DBL00000S001	200	140	200	10	250	10	S3D			
S3GBL00000S001	400	280	400	10	250	10	S3G			
S3JBL00000S001	600	420	600	10	250	10	S3J			
S3KBL00000S001	800	560	800	10	250	10	S3K			
<b>S3MBL00000S001</b>	1000	700	1000	10	250	10	S3M			

**Note:**

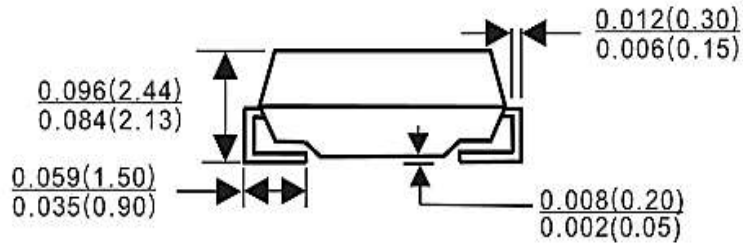
1. Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A
2. Measured at 1 MHz and Applied V<sub>R</sub>=4.0 Volts
3. Measured on P.C. Board with 0.4" x 0.4" (10mm x 10mm) Copper Pad Areas.

PACKAGE DIMENSIONS - Unit: Inch (mm), Case DO-214AA/SMB Outline

Top View



Side View



RATINGS & CHARACTERISTIC CURVES - For Reference Only

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

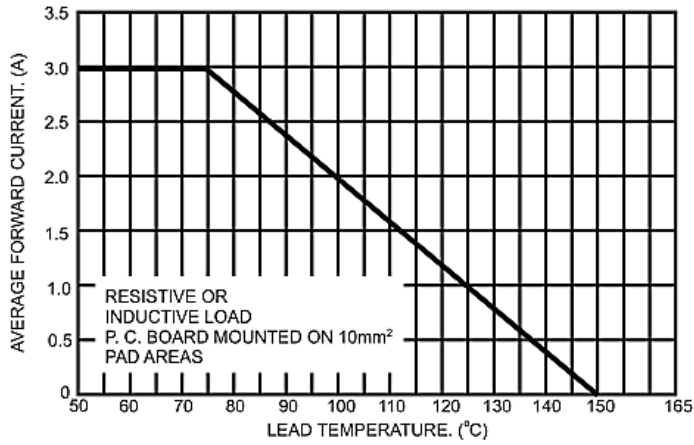
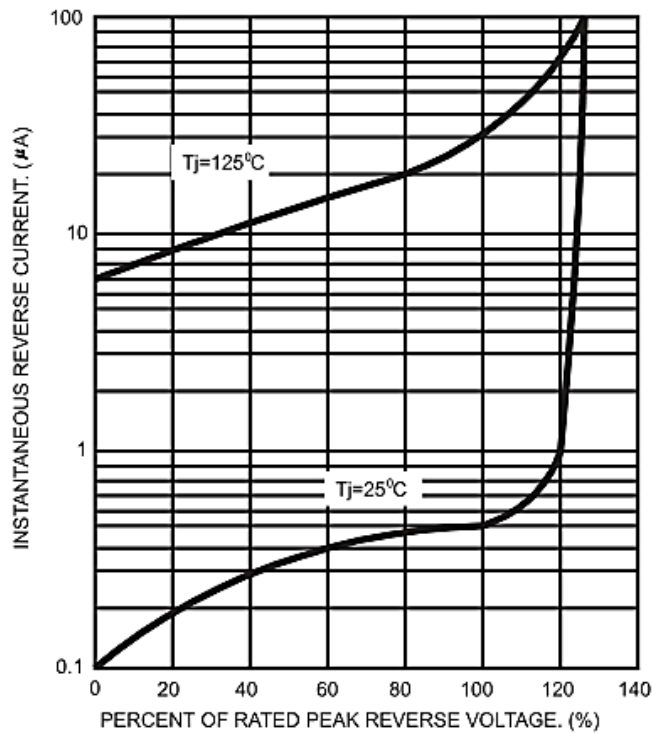


FIG.2- TYPICAL REVERSE CHARACTERISTICS



RATINGS & CHARACTERISTIC CURVES - For Reference Only

FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

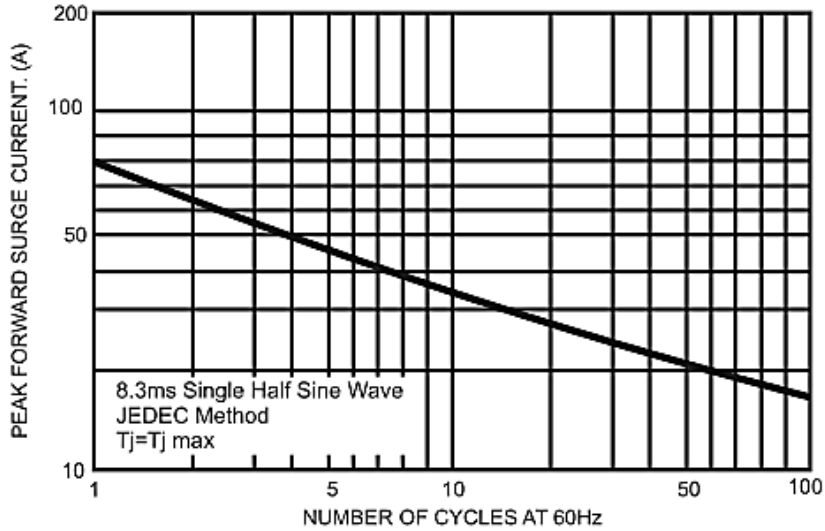
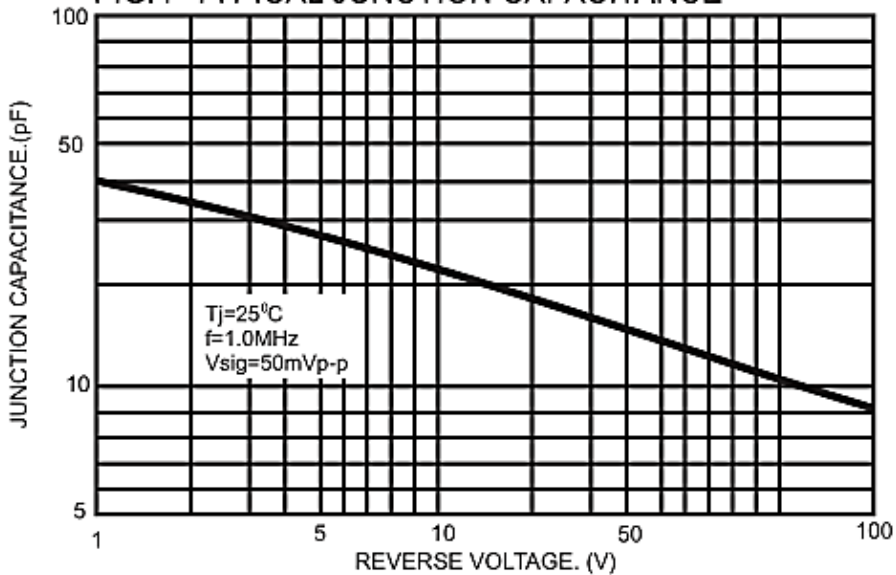


FIG.4- TYPICAL JUNCTION CAPACITANCE



RATINGS & CHARACTERISTIC CURVES - For Reference Only

FIG.5- TYPICAL FORWARD CHARACTERISTICS

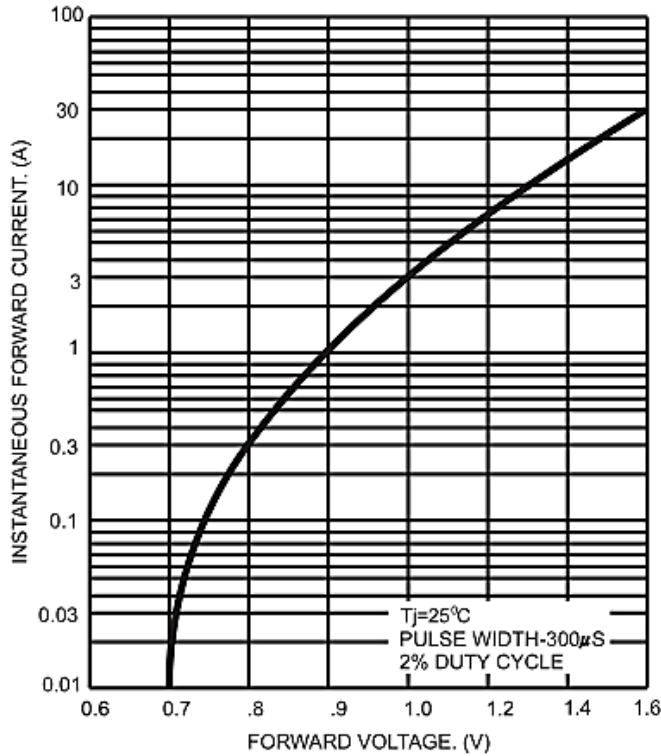
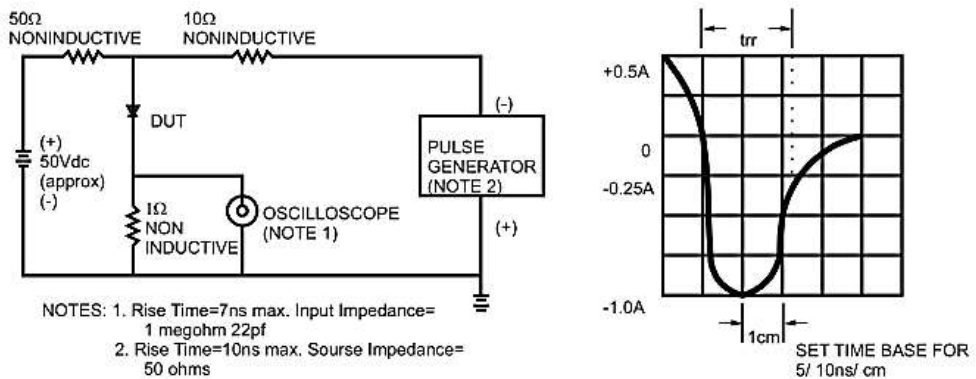
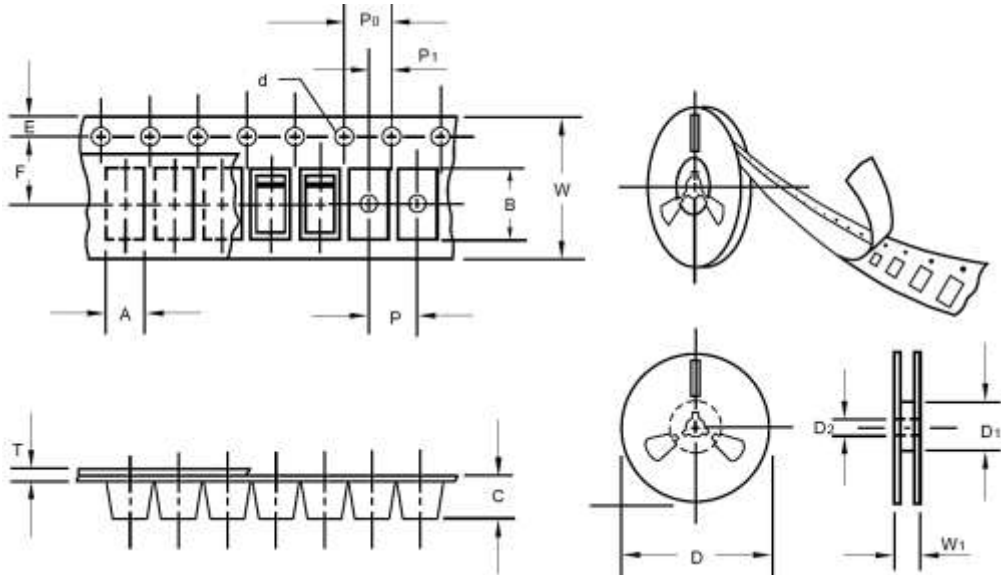


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



**TAPE AND REEL (Unit: mm)**

- All Devices are packed in accordance with EIA standard RS-481-A and specifications.



Item	Symbol	Tolerance	SMB/DO-214AA
Carrier width	A	0.1	3.81
Carrier Length	B	0.1	5.41
Carrier Depth	C	0.1	2.42
Sprocket hole	d	0.05	1.50
13" Reel outside diameter	D	2.0	330.00
13" Reel inner diameter	D1	Min.	50.00
Feed hole diameter	D2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	5.55
Punch hole pitch	P	0.1	8.00
Sprocket hole pitch	P0	0.1	4.00
Embossment center	P1	0.1	2.00
Overall tape thickness	T	0.1	0.30
Tape width	W	0.3	12.00
Reel width	W1	1.0	12.30
Standard Packing Quantity	3000 pcs/Reel		

**PART NUMBERING SYSTEM**

- Please refer to the part numbering structure and specify the NextGen order part number S3MBL00000S001 on all RFQs and Purchase Orders.

**RFQ**  
[Request For Quotation](#)

**PART NUMBERING STRUCTURE**

Code	Description	Key Specification
S3	Product Series (3A Rectifier)	SMD General Purpose Rectifier, Forward Current 3.0A
M	Voltage Rating Code	A: 50V Max. ; B: 100V Max.; D: 200V Max.; G: 400V Max.; J: 600V Max.; K: 800V Max.; M: 1000V Max.
B	Package/Case Code	B: Case DO-214AA/SMB
L00000S001	Internal Control Code	Letter A~Z, a~z or digits (0~9)
XX	Special/Custom Parameters Code	Blank: N/A XX: Letter A – Z, a – z or digits (0 – 9) for Special/Custom Parameters

## IMPORTANT NOTES AND DISCLAIMER

### *RoHS Compliance*

This product complies with EU RoHS Directive 2011/65/EU and its amendment (EU) 2015/863 (RoHS 3). Restricted substances are below applicable threshold limits or permitted under exemptions. RoHS documentation is available upon request.

### *REACH Compliance*

Information regarding Substances of Very High Concern (SVHCs) under REACH is available. As the European Chemicals Agency (ECHA) periodically updates the SVHC list, customers should obtain the latest information prior to use.

### *Product Performance*

All parametric performance data is specified under the electrical characteristics and corresponding test conditions provided herein, unless otherwise noted. Performance may vary if operated outside specified conditions.

### *Specifications and Changes*

NextGen Components, Inc. ("NextGen") reserves the right to modify this document and the products described herein at any time without prior notice. Customers are responsible for verifying the most current product information prior to final design, purchase, or use.

### *Warranty and Limitation of Liability*

*NextGen* makes no representation or warranty, express or implied, regarding suitability for any particular purpose. *NextGen* shall not be liable for any indirect, incidental, consequential, or special damages arising from product use. No license is granted under any intellectual property rights of *NextGen*.

### *Restricted Applications*

*NextGen* products are not authorized for use as critical components in life-support devices, medical systems, or other safety-critical applications without prior written approval.

### *Returns Policy*

Customers must obtain a Returned Merchandise Authorization (RMA) number before returning products. Returns must be requested within 30 days of invoice date and products must be unused and in original packaging. Products designated as Non-Cancelable / Non-Returnable (NCNR) are not eligible for return.