SPECIFICATION SHEET

SMD RECTIFIER CASE SOD-123FL ES1 L SERIES

SPECIFICATION SHEET NO.	S1016- ES1JFLL000S600	
ORIGINAL MFG/PART NO.	LGE Diodes/ES1JFL-L	
NEXTGEN PART CODE	ES1JFLL000S600	Indicate This Code For RFQ /Order
DATE	Oct. 16, 2025	
REVISION	A4	Updated With Most Recent Data
DESCRIPTION AND MAIN PARAMETRICS	SMD Rectifier, 2 Pads, Case SOD-123FL, ES1 L Series Recurrent Peak Reverse Voltage 600V Max. Average Forward Rectified Current 1.0A Max. Operating Temp. Range -55°C ~+150°C Package in Tape/Reel, 3000pcs/Reel RoHS/RoHS III compliant, RoHS Annex III lead Exemption (Exempt per RoHS EU 2015/863) and Halogen Free (HF)	
CUSTOMER		
CUSTOMER PART NUMBER		
CROSS REF. PART NUMBER		
MEMO		

VENDOR APPROVE
Issued/Checked/Approved Mandy Xu Ruby Zhang Jack Zhang
Effective Date: Oct. 16, 2025

CUSTOMER APPROVE
Date:

MAIN FEATURE

Image shown is a representation only. Exact specifications should be obtained from the product dimension.

- Glass Passivated Device
- Ideal For Surface Mounted Applications
- Low Leakage Current
- Metallurgically Bonded Construction
- High Temperature Soldering: 250℃/10 Seconds at Terminals
- Short Lead Time
- Cross Competitors Parts and More.
- RoHS/RoHS III compliant, RoHS Annex III lead Exemption (Exempt per RoHS EU 2015/863) and Halogen Free (HF)

APPLICATION

- For SMD Application

ELECTRICAL CHARACTERISTICS

- See Page 5 ~Page 6 For Different Part Code
- All Parameters are Subject To NextGen Components' Final Confirmation

HOW TO ORDER

- Please Follow Up Part Code Guide And Indicate NextGen Part Code ES1JFLL000S600 For RFQ and Order.

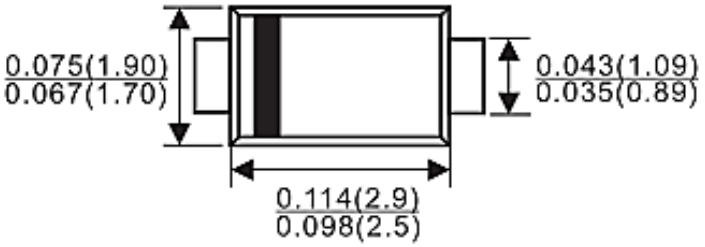
PART CODE GUIDE

RFQ
Request For Quotation

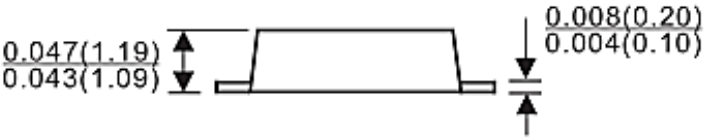
CODE	NAME	KEY SPECIFICATION OPTION
ES1	Product Series Code	SMD Rectifier, Case SOD-123FL, 2 Pads ES1 L Series Average Forward Rectified Current 1.0A
J	Recurrent Peak Reverse Voltage Code	A: 50V Max. ; B: 100V Max. ; C: 150V Max.; D: 200V Max.; E: 300V Max.; G: 400V Max.; H: 500V Max.; J: 600V Max
FLL000S	Internal Control Code	Letter or Digits (A~Z, a~z or 0~9)
600	Recurrent Peak Reverse Voltage Code	050: 50V Max.; 100: 100V Max.; 150: 150V Max.; 200: 200V Max. 300: 300V Max.; 400: 400V Max.; 500: 500V Max.; 600: 600V Max.
XX	Special/Custom Parameters Code	Letter or Digits (A~Z, a~z or 0~9) for Special Parametric; Blank: N/A

DIMENSION- Unit: Inch [mm], Case SOD-123FL Outline

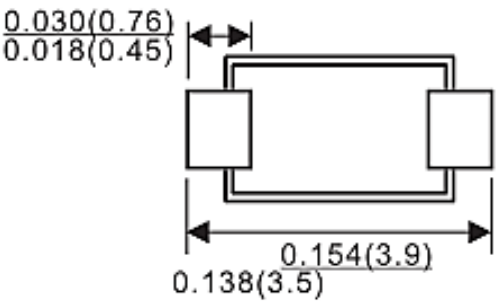
Top View



Side View



Bottom View



MECHANICAL DATA

CASE	TERMINALS	POLARITY	WEIGHT	MOUNTING POSITION	MARKING
JEDEC SOD-123FL Molded Plastic Over Passivated Chip	Solder plated, Solderable per MIL-STD-750,Method 2026	Color Band Denotes Cathode End	0.003 ounces, 0.01 gram	Any	See Marking Code List

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, derate current by 20%.

PARAMETER		SYMBOLS	VALUE	UNITS
Maximum Average Forward Rectified Current @T_A=65°C		$I_{(AV)}$	1.0	A
Peak Forward Surge Current 8.3ms Single Half-Sine-wave Superimposed On Rated Load (JEDEC Method) @T_L=25°C		I_{FSM}	30	A
Maximum DC Reverse Current At Rated DC Blocking Voltage	T_A=25℃	I_R	5.0	μA
	T_A=125℃		150	
Maximum Reverse Recovery Time (NOTE 2)		T rr	35	ns
Operating Temperature Range		T_J	-55 to +150	°C
Storage Temperature Range		T_{STG}	-55 to +150	°C

Note:

1. Pulse test:300ms pulse width,1% duty cycle.
2. Measured with I_F=0.5A, I_R=1A, Irr=0.25A.

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, derate current by 20%.

PART CODE	Max. Recurrent Peak Reverse Voltage	Max. RMS Voltage	Max. DC Blocking Voltage	Max. Instantaneous Forward Voltage @1A (NOTE 1)	Marking List
	V_{RRM}	V_{RMS}	V_{DC}	V_F	
	V				
ES1AFLL000S050	50	35	50	0.95	E1A
ES1BFLL000S100	100	70	100	0.95	E1B
ES1CFLL000S150	150	105	150	0.95	E1C
ES1DFLL000S200	200	140	200	0.95	E1D
ES1EFLL000S300	300	210	300	1.25	E1E
ES1GFLL000S400	400	280	400	1.25	E1G
ES1HFLL000S500	500	350	500	1.7	E1H
ES1JFLL000S600	600	420	600	1.7	E1J

Note:

1. Pulse test:300ms pulse width,1% duty cycle.
2. Measured with I_F=0.5A, I_R=1A, Irr=0.25A.

RATINGS AND CHARACTERISTICS CURVES- For Reference Only, Ta=25℃ Unless Otherwise Specified.

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

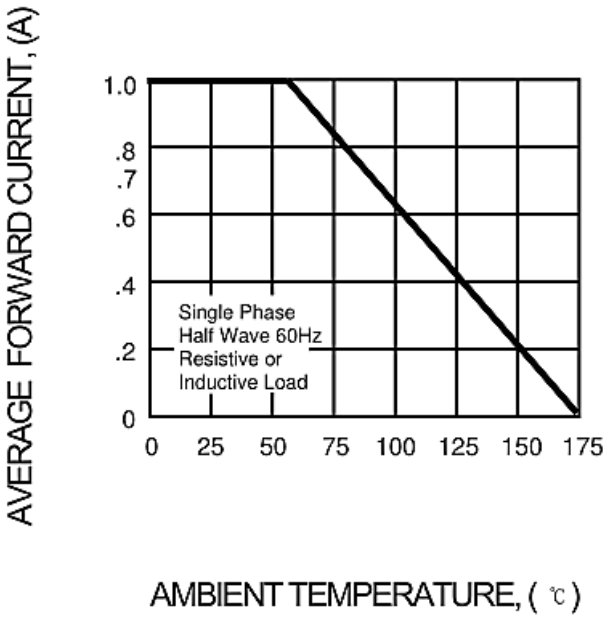
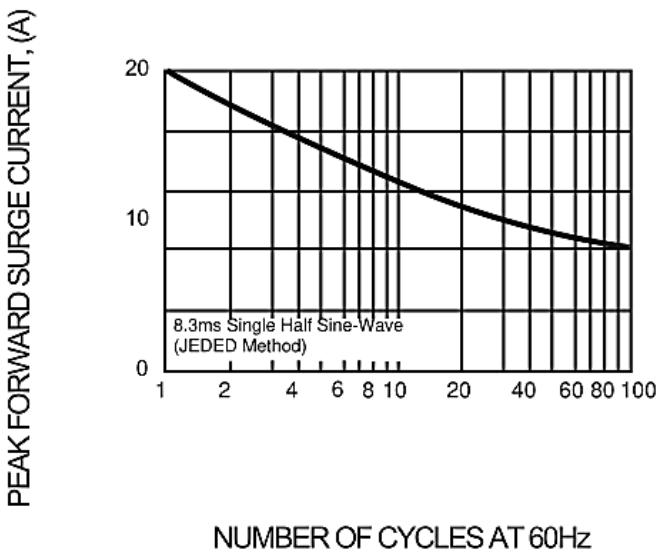


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



RATINGS AND CHARACTERISTICS CURVES- For Reference Only, Ta=25℃ Unless Otherwise Specified.

FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

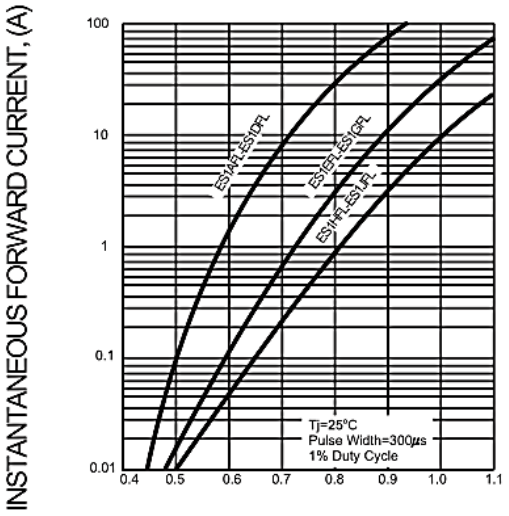
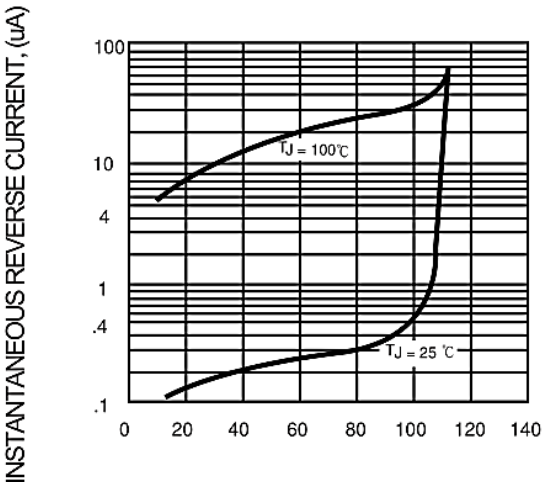
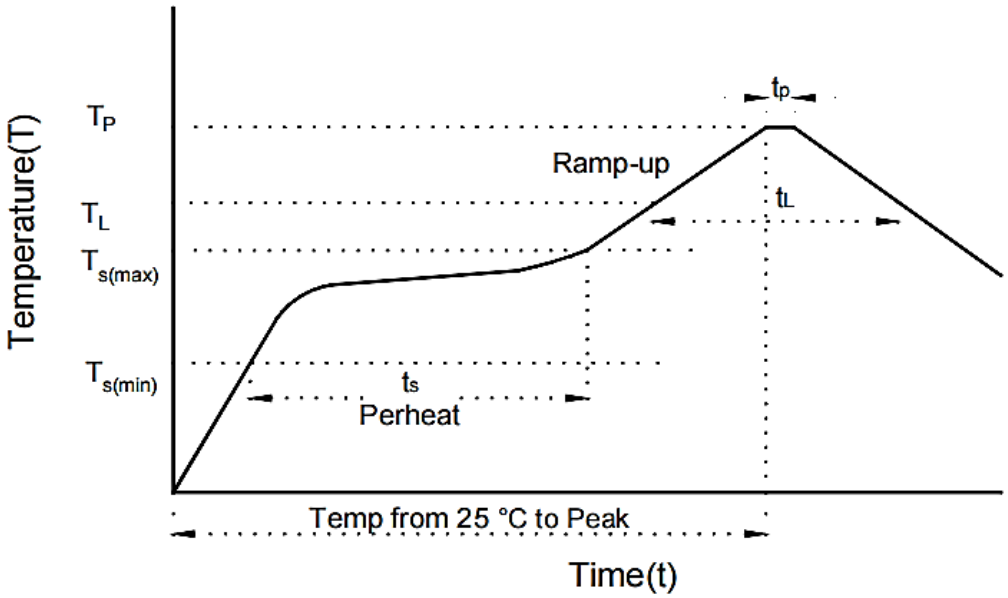


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

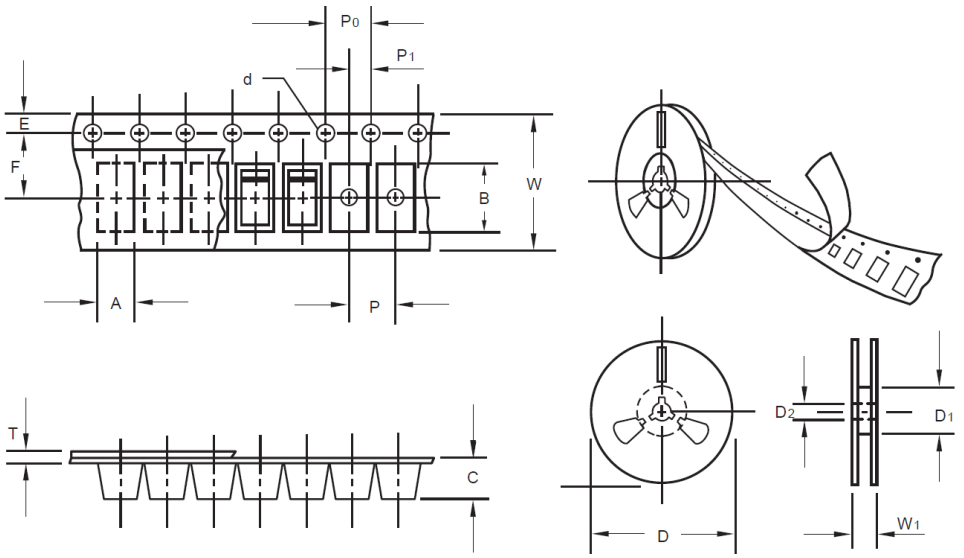


RECOMMENDED SOLDERING PARAMETERS – FOR REFERENCE ONLY



PROFILE FEATURE		PB-FREE ASSEMBLY
Average Ramp-up Rate (T_L Max to T_p)		3°C/second Max
Preheat	Temperature Min (T_s Min.)	150°C
	Temperature Max (T_s Max.)	200°C
	Time (t_s Min. to t_s Max.)	60 ~ 180 seconds
Time maintained above	Temperature (T_L)	217°C
	Time (t_L)	60 ~ 150 seconds
Peak/Classification Temperature (T_p)		260 °C
Time within 5°C of actual Peak Temperature (t_p)		20 ~ 40 seconds
Ramp-down Rate		6 °C /Second Max.
Time 25 °C to Peak Temperature		8 Minutes Max.
Suggest reflow times		3 Times Max.

TAPE/REEL - Unit: mm, All Devices are packed in accordance with EIA standard RS-481-A and specifications



ITEM	SYMBOL	TOLERANCE	SOD-123FL
Carrier width	A	0.1	2.1
Carrier Length	B	0.1	4.0
Carrier Depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7”Reel outside diameter	D	2	178
7”Reel inner diameter	D1	Min.	50.0
Feed hole diameter	D2	0.5	13
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.5
Punch hole pitch	P	0.1	4
Sprocket hole pitch	P0	0.1	4
Embossment center	P1	0.1	2
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	8.15
Reel width	W1	1	10.5
Qty. Per Reel (pcs)	3000		

IMPORTANT NOTES AND DISCLAIMER

1. ROHS COMPLIANCE: The levels of RoHS restricted materials in this product are below the maximum concentration values (also referred to as the threshold limits) permitted for such substances, or are used in an exempted application, in accordance with EU RoHS Directive (EU) 2015/863 EC (RoHS3). RoHS Test Report for this product can be obtained can be obtained at Download Center.
2. REACH COMPLIANCE: REACH substances of high concern (SVHCs) information is available for this product. Since the European Chemical Agency (ECHA) has published notice of their intent to frequently revise the SVHC listing for the foreseeable future, REACH Test Report for this product can be obtained can be obtained at Download Center.
3. All Product parametric performance is indicated in the Electrical Characteristics for the listed herein test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.
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