SPECIFICATION SHEET

DUAL SMD SWITCHING DIODES CASE SOT-23 BA L SERIES

SPECIFICATION SHEET NO.	S1016 – BAV99L0000S0A7	
ORIGINAL MFG/PART NO.	LGE Diodes/BAV99-L	
NEXTGEN PART CODE	BAV99L0000S0A7	Indicate This Code For RFQ /Order
DATE	Oct. 16, 2025	
REVISION	A4	Updated With Most Recent Data
DESCRIPTION AND MAIN PARAMETRICS	Dual SMD Fast Switching Diodes, Case SOT-23, BA L Series, 3 Pads Repetitive Peak Reverse Voltage (V_{RRM}): 100V Max. Forward Continuous Current Single Diode Loaded (I_F) 215mA Max. Operating Temperature Range (T_J) -65~+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

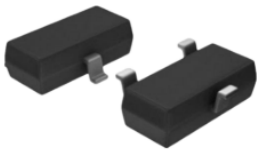


Image shown is a representation only. Exact specifications should be obtained from the product dimension.

- Fast Switching Speed Max: 6ns
- High Conductance
- Connected in series
- Case Type SOT-23
- Surface Mount Package Ideally Suited For Automatic Insertion
- Meet MSL 1 Requirement
- 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 General Purpose Switching Applications
- Small Signal Switching

ELECTRICAL CHARACTERISTICS

- See Page 5 ~ Page 6.
- All Products Parameters are Subject To NextGen Components' Final Confirmation.

HOW TO ORDER

- Please Follow Up Part Code Guide And Indicate NextGen Part Code BAV99L0000S0A7 For RFQ and Order.

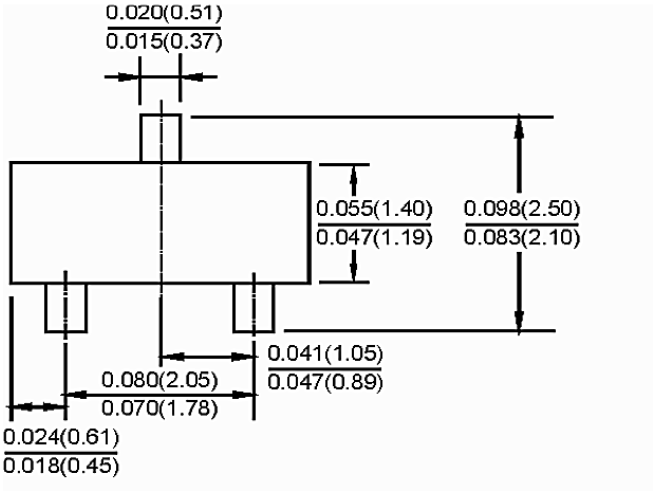
PART CODE GUIDE

RFQ
Request For Quotation

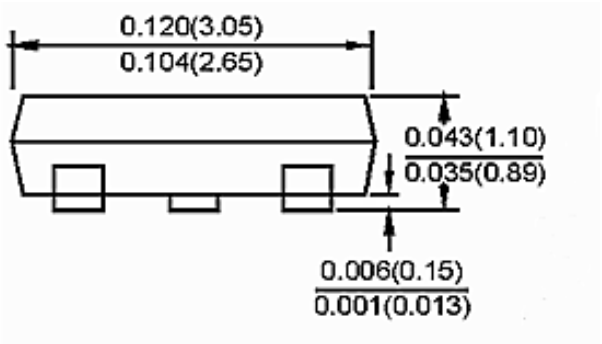
CODE	NAME	KEY SPECIFICATION OPTION
BA	Product Series Code	Dual SMD Fast Switching Diodes, Case SOT-23, BA L Series, 3 Pads
V99	Parameters Code	Letter or Digits (A~Z, a~z or 0~9)
L0000S	Internal Control Code	Letter or Digits (A~Z, a~z or 0~9)
0A7	Marking Code	0A7: For Marking “A7”
XX	Special/Custom Parameters Code	Letter or Digits (A~Z, a~z or 0~9) for Special Parametric; Blank: N/A

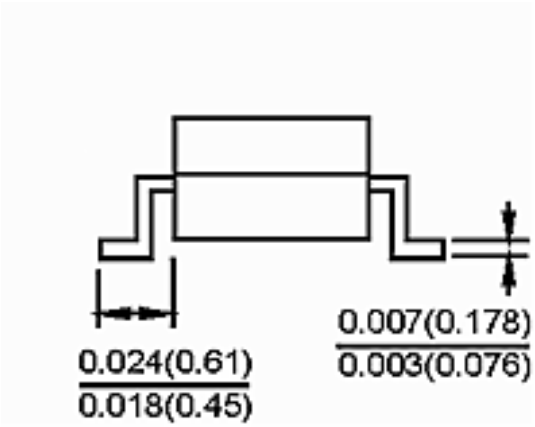
DIMENSION - Unit: mm, Case SOT-23, Inch/mm

Top View

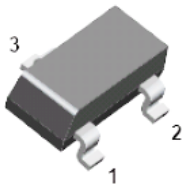


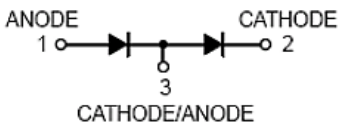
Side View





Equivalent Circuit





1. Gate (G) 2. Source (S) 3. Drain (D)

MECHANICAL CHARACTERISTICS

CASE	FLAMMABILITY RATING	TERMINALS	MARKING
JEDEC SOT-23 molded plastic body	UL 94V-0	Solder plated, solderable per MIL-STD-750,Method 2026	A7

ABSOLUTE MAX. RATING - T_A=25°C unless otherwise specified, For Reference Only

PARAMETER		SYMBOLS	VALUE	UNITS
Repetitive Peak Reverse Voltage		V_{RRM}	100	V
Continuous Reverse Voltage		V_R	75	V
Peak Forward Surge Current	@t=1.0μs	I_{FSM}	4	A
	@t=1.0ms		1	A
	@t=1.0s		0.5	A
Forward Continuous Current	Single Diode Loaded	I_F	215	mA
	Double Diodes Loaded		125	mA
Non-Repetitive Peak Forward Current		I_{FRM}	450	mA
Power Dissipation		P_d	250	mW
Thermal Resistance From Junction To Ambient Air		$R_{\Theta JA}$	500	°C/W
Operating And Storage Temperature Range		T_j, T_{STG}	-65 ~+ 150	°C

ELECTRICAL CHARACTERISTICS- T_A=25°C unless otherwise specified, For Reference Only

PARAMETER	SYMBOLS	VALUE			UNIT	TEST CONDITIONS
		Min.	Typ.	Max.		
Reverse Breakdown Voltage	V_{BR}	75			V	@ I_R= 2.5µA
Reverse Voltage Leakage Current	I_R			35	nA	@ V_R=25V
				1	µA	@ V_R=75V
				30	µA	@ V_R=25V T_j=150°C
				50	µA	@ V_R=75V T_j=150°C
Forward Voltage	V_F			715		@ I_F=1mA
				855		@ I_F=10mA
				1000		@ I_F=50mA
				1250		@ I_F=150mA
Diode Capacitance	C_D			1.5	pF	V_R = 0V, f=1MHz
Reverse Recovery Time	t_{rr}			6	ns	I_F =I_R=10mA, Irr=0.1*I_R, R_L =100Ω

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

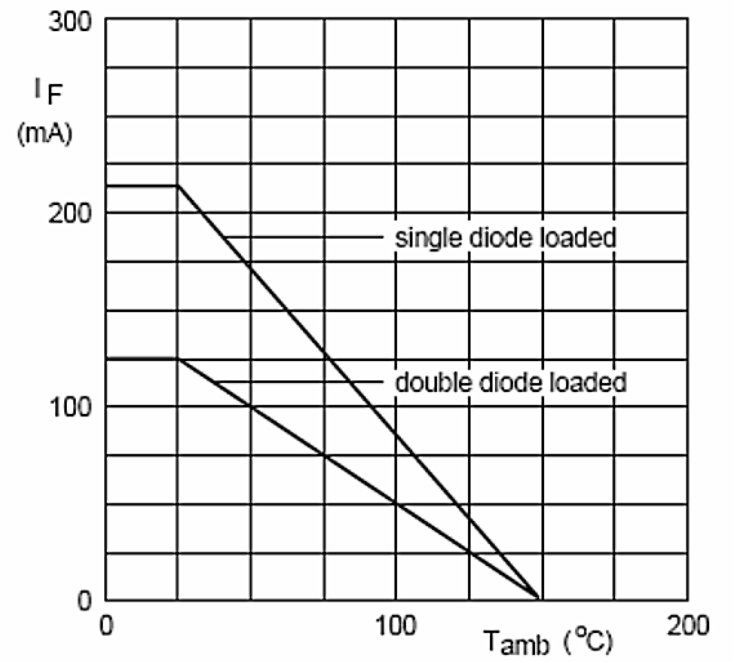
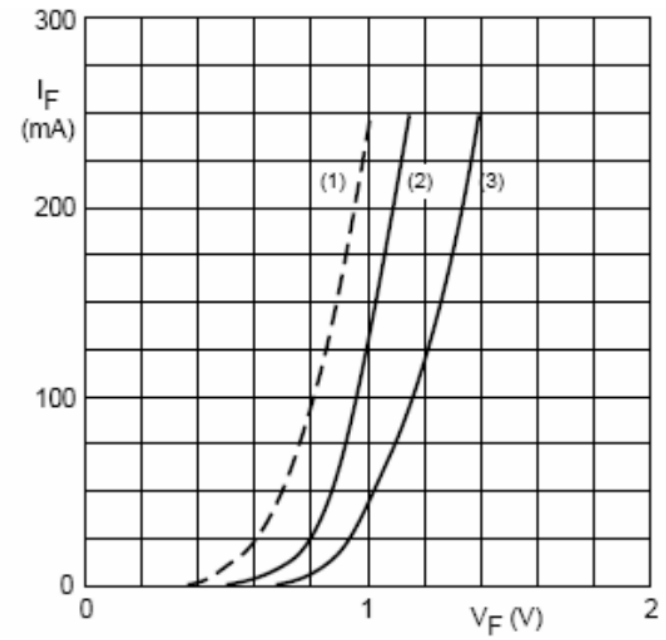


Fig.1 Maximum permissible continuous forward current as a function of ambient temperature



(1) Tj=150°C; typical values
(2) Tj=25°C; typical values.
(3) Tj=25°C; maximum values

Fig.2 Forward current as a function of forward voltage

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

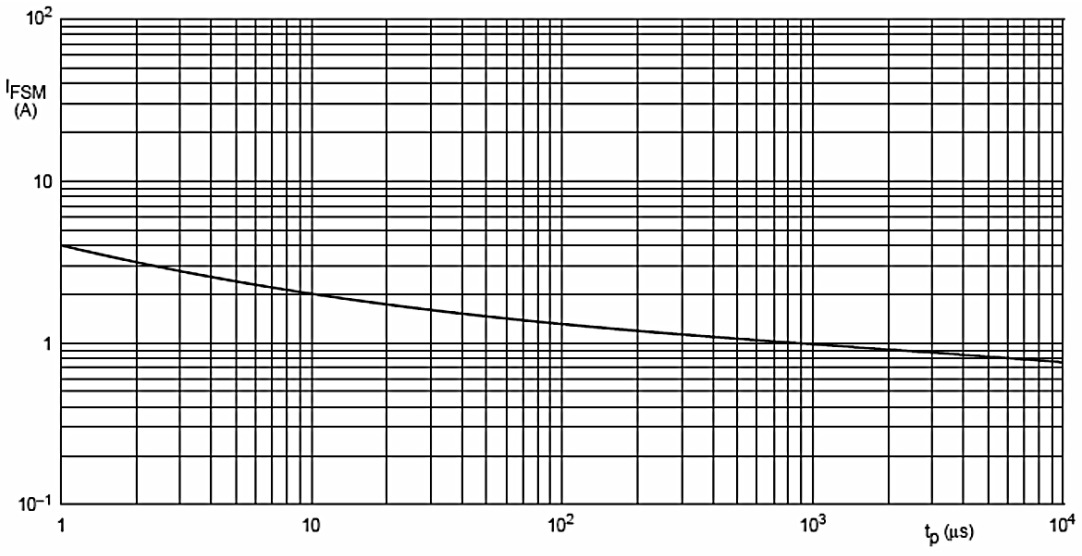


Fig.3 Maximum permissible non-repetitive peak forward current as a function of pulse duration

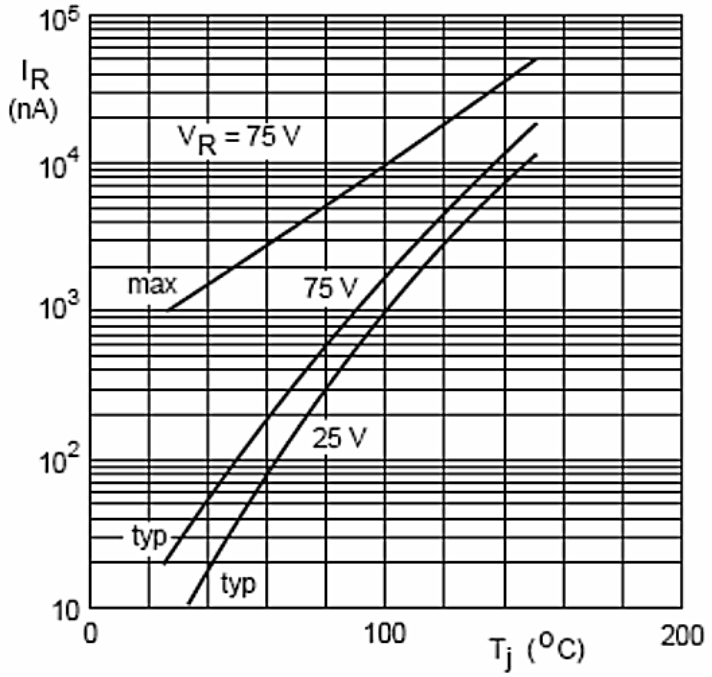


Fig.4 Reverse current as a function of junction temperature.

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

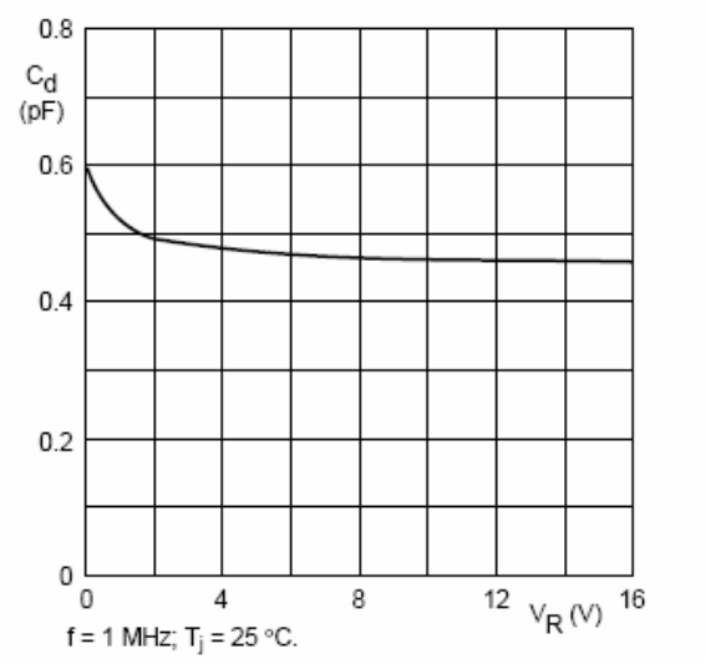
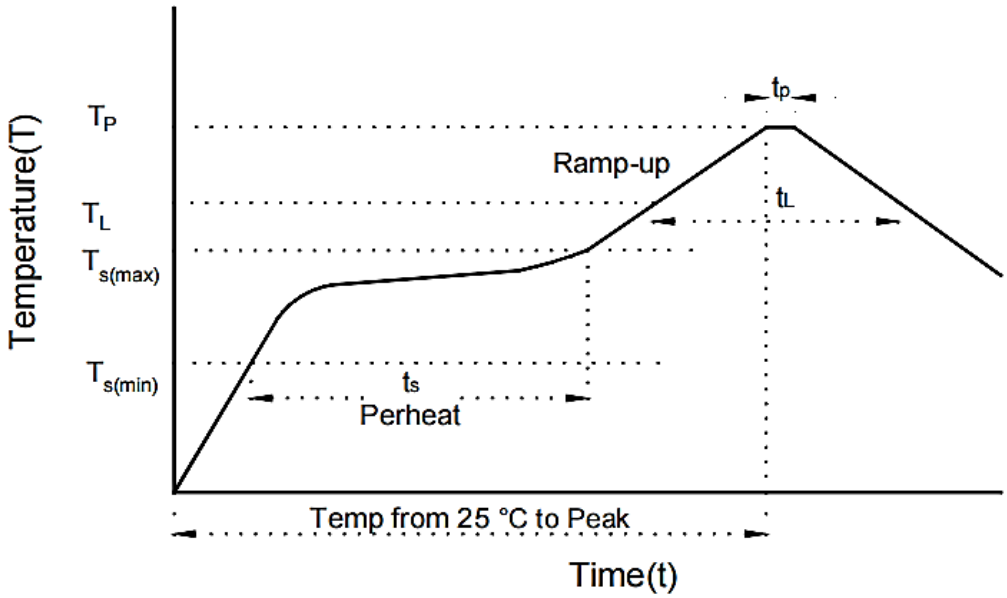


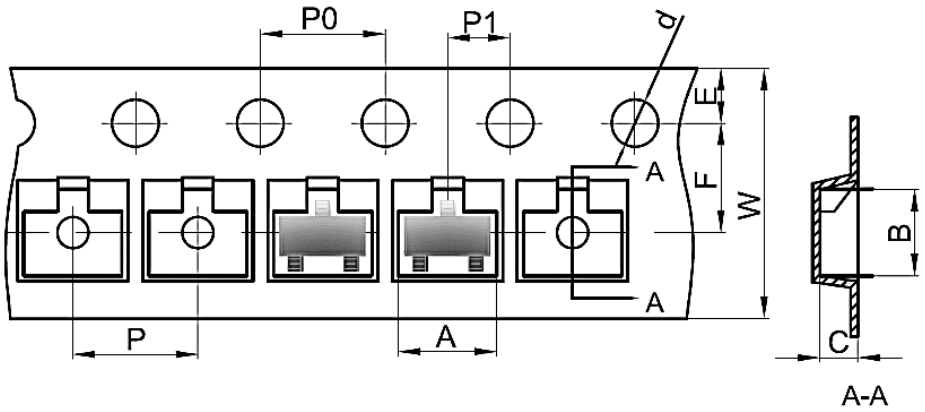
Fig.5 Diode capacitance as a function of reverse voltage; typical values

SUGGESTED REFLOW PROFILE - For Reference Only

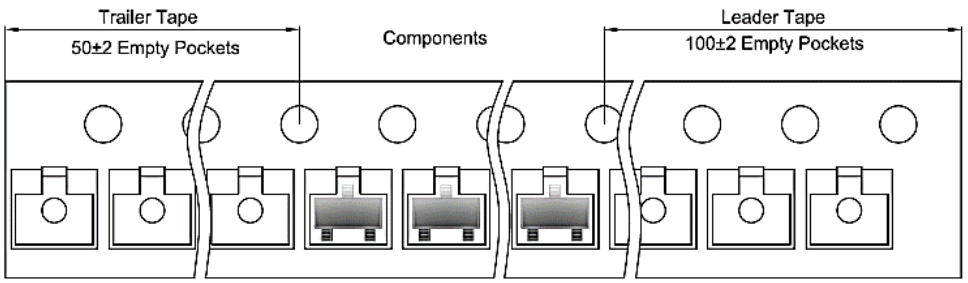


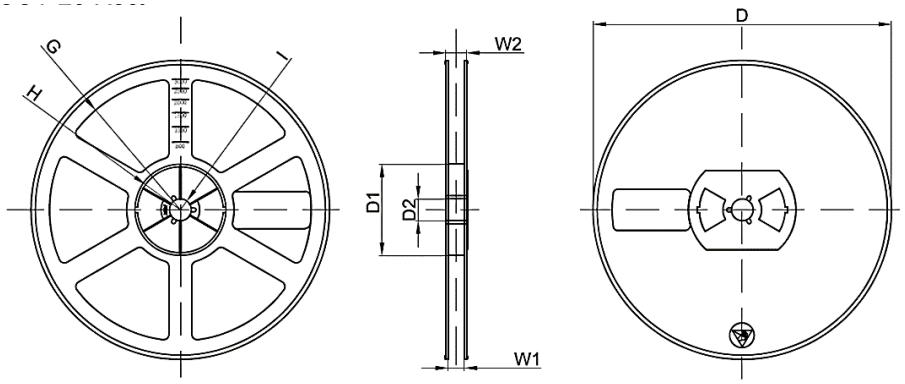
PROFILE FEATURE		PB-FREE ASSEMBLY
Average Ramp-up Rate (T_L Max to T_p)		3°C/second Max
Preheat	Temperature Min (T_s Min.)	150°C
	Temperature Max (T_s Max.)	200°C
	Time (t_s Min. to t_s Max.)	60 ~ 180 seconds
Time maintained above	Temperature (T_L)	217°C
	Time (t_L)	60 ~ 150 seconds
Peak/Classification Temperature (T_p)		260 °C
Time within 5°C of actual Peak Temperature (t_p)		10 seconds Max.
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



Case	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.5	1.75	3.5	4.0	4.0	2.0	8.0





Reel Size	D	D1	D2	G	H	I	W1	W2	Qty. (pcs)
7”	Ø178	54.4	13.0	R78.0	R25.6	R6.5	9.5	12.3	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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