

SPECIFICATION SHEET NO.	T0625– M5AL000000S600	
ORIGINAL MFG/PART NO.	 LGE Diodes/M5-L	
NEXTGEN PART CODE	M5AL000000S600	Indicate This Code For RFQ /Order
DATE	Jun. 25, 2026	
REVISION	A4	Updated With Most Recent Data
DESCRIPTION AND MAIN PARAMETRICS	SMD General Purpose Rectifier, Case SMA, M Series, 2 Pads Repetitive Peak Reverse Voltage V_{RRM}: 600V Max. RMS Voltage V_{RMS}: 420V Max. Average Forward Rectified Current $I(AV)$: 1.0A Max. Operating Junction And Storage Temperature Range T_J, T_{STG}: -55°C ~ +150°C Package in Tape/Reel, 5000pcs/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		
Effective Date: Jun. 25, 2026		

CUSTOMER APPROVE
Date:

MAIN FEATURE

- The Plastic Package Carries Underwriters Laboratory Flammability Classification 94V-0
- Low Reverse Leakage
- Low Forward Voltage Drop
- High Current Capability
- Easily cleaned with Alcohol, Isopropanol and Similar Solvents
- 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)



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

APPLICATION

- For Printed Circuit Board



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 M5AL000000S600 For RFQ and Order.

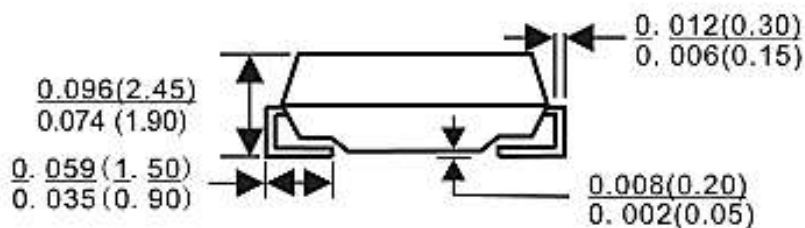
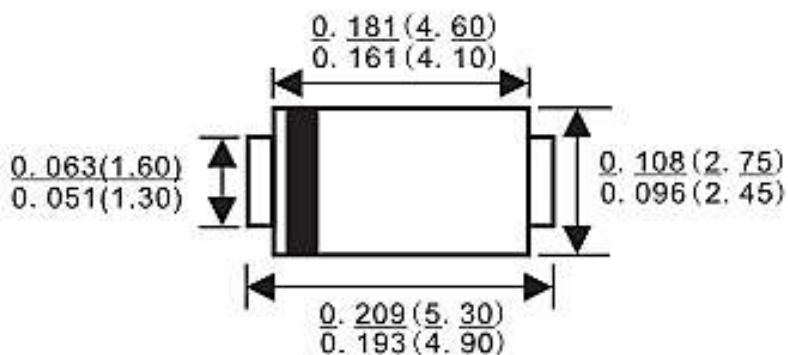
RFQ

[Request For Quotation](#)

PART CODE GUIDE

CODE	NAME	KEY SPECIFICATION OPTION
M	Product Series Code	SMD General Purpose Rectifier, M Series, 2 Pads
5	Max. RMS Voltage Code	1: 35V ; 2: 70V; 3: 140V; 4: 280V; 5: 420V; 6: 560V; 7: 700V
A	Case Code	A: SMA/DO-214AC
L000000S	Internal Control Code	Letter A~Z, a~z or digits (0~9)
600	Max. DC Blocking Voltage	050: 50V ; 100: 100V; 200: 200V; 400: 400V; 600: 600V; 800: 800V; 1000: 1000V
XX	Special/Custom Parameters	Blank: N/A; XX: Letter A~Z, a~z or digits (0~9) for Special/Custom Parameters

DIMENSION - Unit: mm, Case SMA/DO-214AC, Inch/mm



MECHANICAL DATA

CASE	TERMINALS	POLARITY	MOUNTING POSITION	WEIGHT PER PIECE
JEDEC DO-214AC/SMA Molded plastic body	Solder plated, solderable per MIL-STD-202, Method 208	Color band denotes cathode end	Any	0.002 Ounce, 0.064 grams

MAXIMUM RATINGS AND 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
			MIN.	TYPICAL	MAX.	
Maximum average forward rectified Current @T _L =110°C		I _{AV}			1.0	A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load @T _J =125°C		I _{FSM}			30	A
Maximum Instantaneous Forward Voltage at 1.0A		V _F			1.1	V
Maximum Reverse Current At Rated DC Blocking Voltage	T _A =25°C	I _R			5	μA
	T _A =125°C				50	
Typical Junction Capacitance (Note 1)		C _J		15		pF
Typical Thermal Resistance (Note 2)		R _{θJA}		75		°C/W
Operating Junction And Storage Temperature Range		T _J , T _{STG}	-55		+150	°C

Notes

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal resistance from junction to ambient.

ELECTRICAL PARAMETERS – FOR DIFFERENT PART CODE- Ta = 25°C

PART CODE	ORINIGAL PART NO.	MAX. RECURRENT PEAK REVERSE VOLTAGE VRRM	MAX. RMS VOLTAGE VRMS	MAX. DC BLOCKING VOLTAGE VDC	MARKING
		V	V	V	
M1AL000000S050	M1-L	50	35	50	M1
M2AL000000S100	M2-L	100	70	100	M2
M3AL000000S200	M3-L	200	140	200	M3
M4AL000000S400	M4-L	400	280	400	M4
M5AL000000S600	M5-L	600	420	600	M5
M6AL000000S800	M6-L	800	560	800	M6
M7AL000000S1000	M7-L	1000	700	1000	M7

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

Fig.1-Forward Current Derating Curve

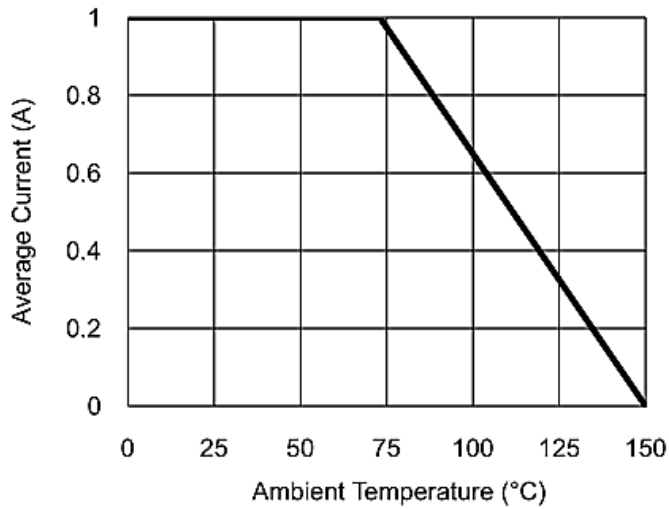
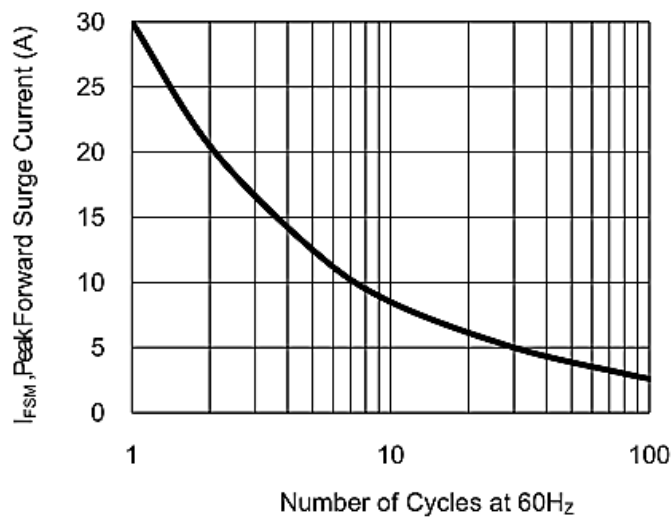


Fig.2- Surge Current Derating Curve



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

Fig.3- Typical Forward Voltage Characteristic

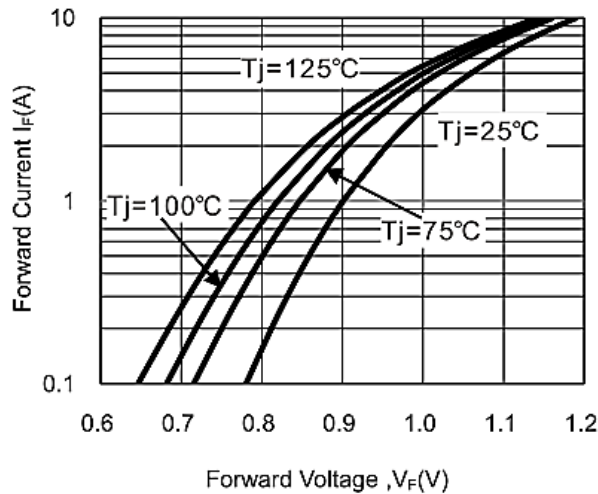
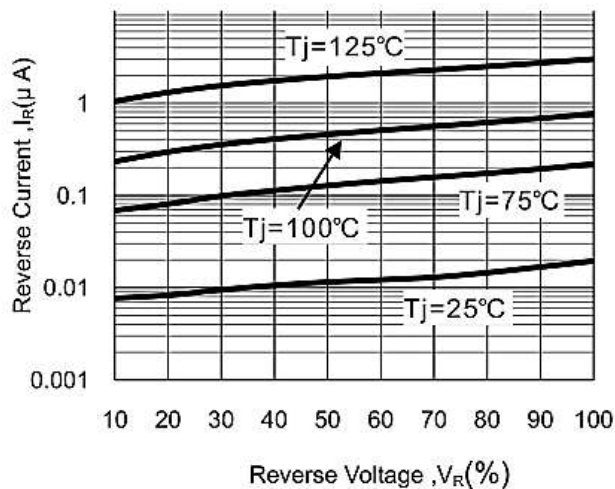


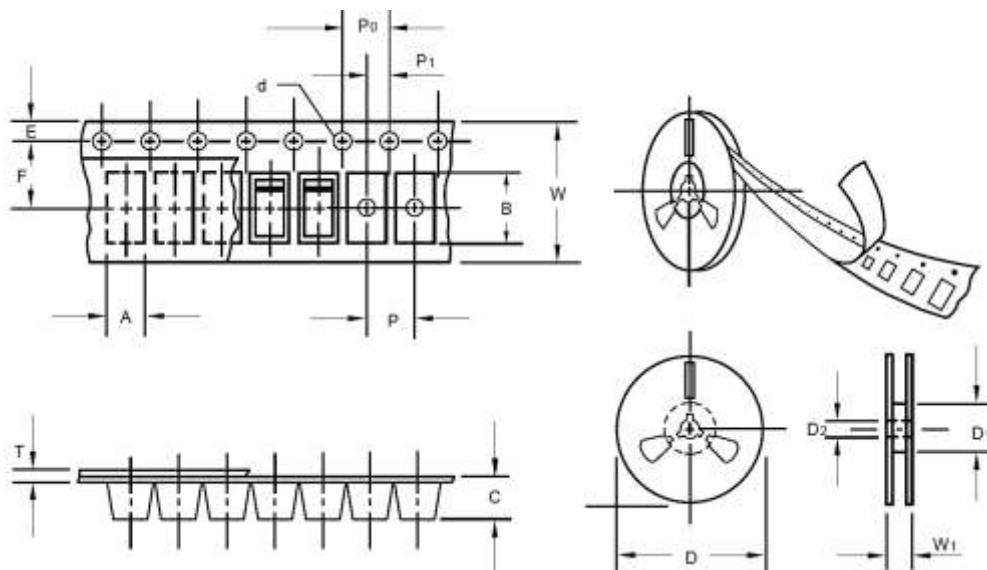
Fig.4- Typical Reverse Characteristic



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



Item	Symbol	Tolerance	SMA/DO-214AC
Carrier width	A	0.1	2.8
Carrier Length	B	0.1	5.33
Carrier Depth	C	0.1	2.36
Sprocket hole	d	0.05	1.50
13"Reel outside diameter	D	2.0	330.0
13"Reel inner diameter	D1	-	50.0 Min.
Feed hole diameter	D2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	5.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P0	0.1	4.00
Embossment center	P1	0.1	2.0
Overall tape thickness	T	0.1	0.28
Tape width	W	0.3	12.00
Reel width	W1	1.0	18.0
Qty. Per Reel (pcs)	5000		

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 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 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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