



	LAA127	Units
Load Voltage	250	V
Load Current	170	mA
Max R _{ON}	10	Ω

Description

LAA127 is a 250V, 170mA, 10Ω 2-Form-A relay. It features enhanced load current capability and a very low on-resistance. Current limiting version is available ("L" suffix, see specification for variations in performance).

Features

- Small 8 Pin DIP Package
- Low Drive Power Requirements (TTL/CMOS Compatible)
- No Moving Parts
- High Reliability
- Arc-Free With No Snubbing Circuits
- 3750V_{RMS} Input/Output Isolation
- FCC Compatible
- VDE Compatible
- No EMI/RFI Generation
- Machine Insertable, Wave Solderable
- Surface Mount and Tape & Reel Versions Available

Approvals

- UL Recognized: File Number E76270
- CSA Certified: File Number LR 43639-10
- BSI Certified to:
 - BS EN 60950:1992 (BS7002:1992)
Certificate #: 7344
 - BS EN 41003:1993
Certificate #: 7344

Applications

- Telecommunications
 - Telecom Switching
 - Tip/Ring Circuits
 - Modem Switching (Laptop, Notebook, Pocket Size)
 - Hookswitch
 - Dial Pulsing
 - Ground Start
 - Ringer Injection
- Instrumentation
 - Multiplexers
 - Data Acquisition
 - Electronic Switching
 - I/O Subsystems
 - Meters (Watt-Hour, Water, Gas)
- Medical Equipment-Patient/Equipment Isolation
- Security
- Aerospace
- Industrial Controls

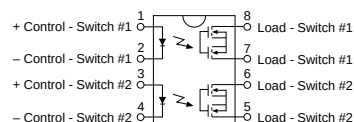
Ordering Information

Part #	Description
LAA127	8 Pin DIP (50/Tube)
LAA127P	8 Pin Flatpack (50/Tube)
LAA127PTR	8 Pin Flatpack (1000/Reel)
LAA127S	8 Pin Surface Mount (50/Tube)
LAA127STR	8 Pin Surface Mount (1000/Reel)

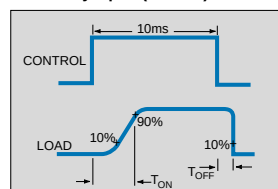
Pin Configuration

LAA127 Pinout

AC/DC Configuration



Switching Characteristics of Normally Open (Form A) Devices



Absolute Maximum Ratings (@ 25° C)

Parameter	Min	Typ	Max	Units
Input Power Dissipation	-	-	150 ¹	mW
Input Control Current	-	-	50	mA
Peak (10ms)	-	-	1	A
Reverse Input Voltage	-	-	5	V
Total Power Dissipation	-	-	800 ²	mW
Isolation Voltage Input to Output	3750	-	-	V _{RMS}
Operational Temperature	-40	-	+85	°C
Storage Temperature	-40	-	+125	°C
Soldering Temperature	-	-	+260	°C
DIP Package	-	-	+220	°C
Flatpack/Surface Mount Pkg (10 Seconds Max.)	-	-	+220	°C

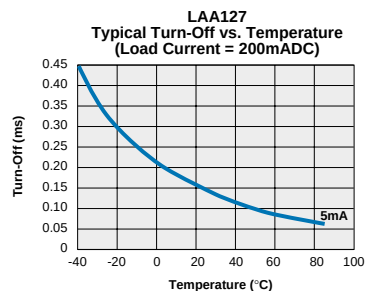
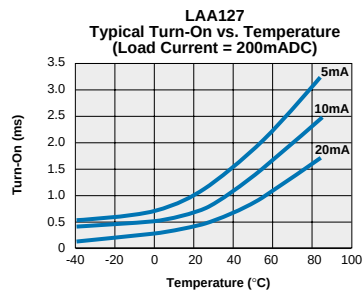
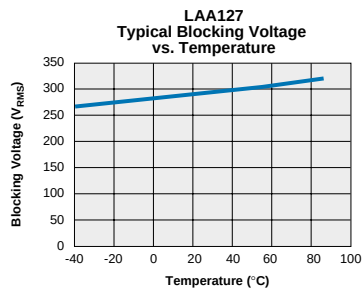
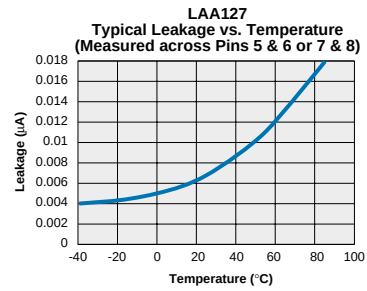
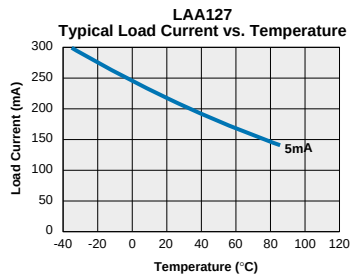
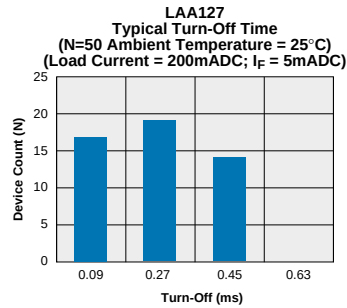
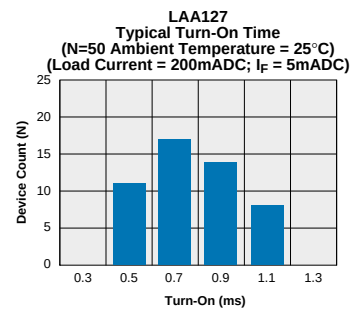
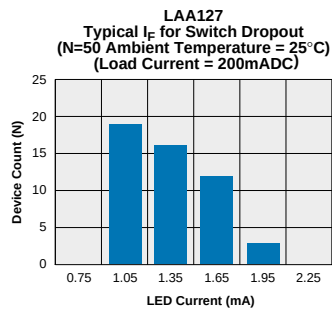
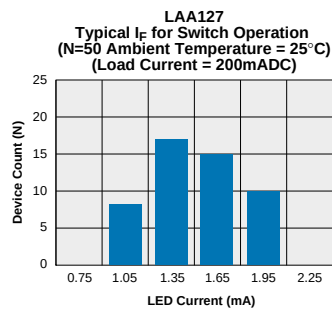
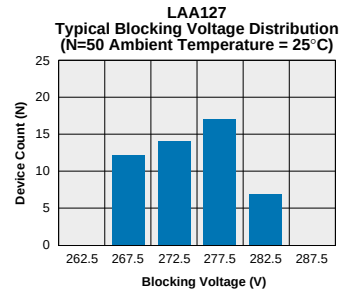
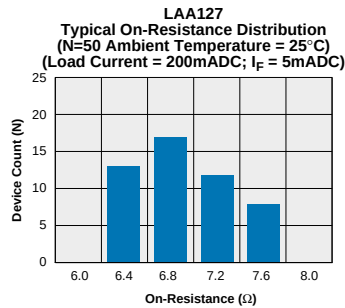
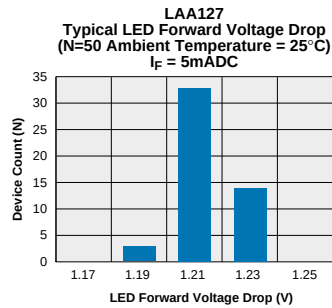
¹ Derate Linearly 1.33 mW/°C² Derate Linearly 6.67 mW/°C

Absolute Maximum Ratings are stress ratings. Stresses in excess of these ratings can cause permanent damage to the device. Functional operation of the device at these or any other conditions beyond those indicated in the operational sections of this data sheet is not implied. Exposure of the device to the absolute maximum ratings for an extended period may degrade the device and effect its reliability.

Electrical Characteristics

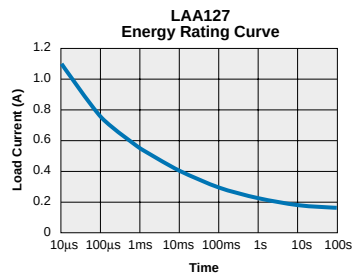
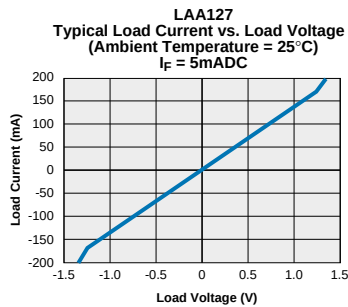
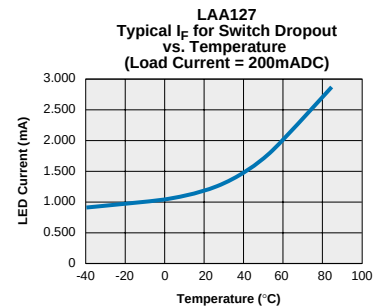
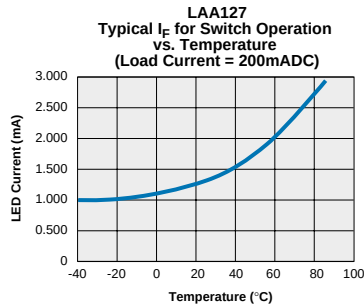
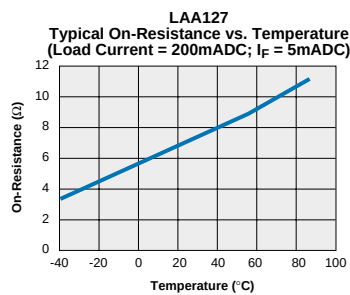
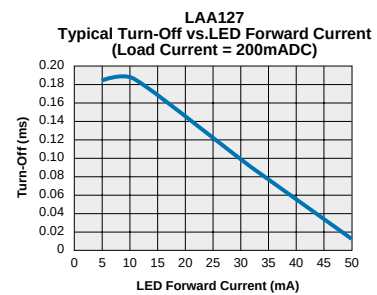
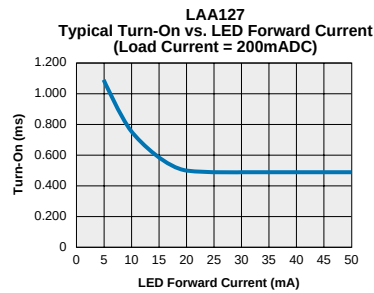
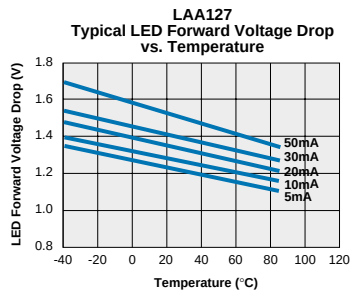
Parameter	Conditions	Symbol	Min	Typ	Max	Units
Output Characteristics @ 25°C						
Load Voltage (Peak)	-	V _L	-	-	250	V
Load Current (Continuous)	-	I _L	-	-	200	mA
AC/DC Configuration	-	I _L	-	-	200	mA
Peak Load Current	10ms max	I _{LPK}	-	-	400	mA
On-Resistance	I _L =Load Current	R _{ON}	-	8	10	Ω
AC/DC Configuration	V _L =250V	I _{LEAK}	-	-	1	μA
Off-State Leakage Current	I _F =5mA, V _L =10V	T _{ON}	-	-	5	ms
Switching Speeds	I _F =5mA, V _L =10V	T _{OFF}	-	-	5	ms
Turn-On	50V; f=1MHz	C _{OUT}	-	110	-	pF
Turn-Off						
Output Capacitance						
Input Characteristics @ 25°C						
Input Control Current	I _L =Load Current	I _F	5	-	50	mA
Input Dropout Current	-	-	0.4	0.7	-	mA
Input Voltage Drop	I _F =5mA	V _F	0.9	1.2	1.4	V
Reverse Input Voltage	-	V _R	-	-	5	V
Reverse Input Current	V _R =5V	I _R	-	-	10	μA
Input to Output Capacitance	-	C _{I/O}	-	3	-	pF
Input to Output Isolation	-	V _{I/O}	3750	-	-	V _{RMS}

PERFORMANCE DATA*



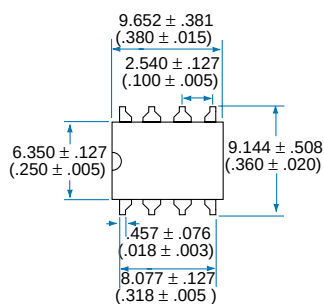
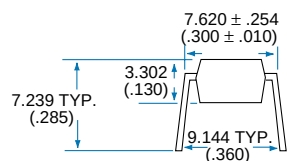
The Performance data shown in the graphs above is typical of device performance. For guaranteed parameters not indicated in the written specifications, please contact our application department.

PERFORMANCE DATA*



*The Performance data shown in the graphs above is typical of device performance. For guaranteed parameters not indicated in the written specifications, please contact our application department.

8 Pin DIP Through Hole (Standard)

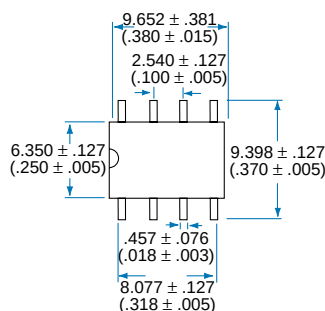


Top view of the part showing dimensions for the rectangular feature:

- Overall width: 8.801 DIA. (8.801 DIA.)
- Overall height: $6.350 \pm .127$ ($.250 \pm .005$)
- Inner width: $7.620 \pm .127$ ($.300 \pm .005$)
- Inner height: $7.620 \pm .127$ ($.300 \pm .005$)
- Distance from top edge to top of inner rectangle: $2.540 \pm .127$ ($.100 \pm .005$)
- Distance from bottom edge to bottom of inner rectangle: $2.540 \pm .127$ ($.100 \pm .005$)

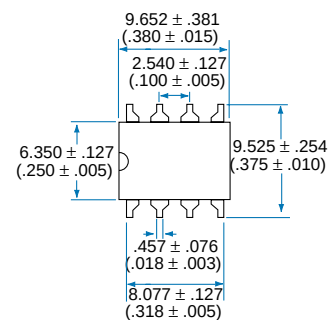
Technical drawing of a 1/2-18 UNF-2A hex bolt. The drawing shows the bolt with its hexagonal head and threaded shank. Dimensions are provided in inches and millimeters:

- Head height: 2.159 TYP. (.085)
- Head width: 7.620 ± .254 (.300 ± .010)
- Head to start of thread: 2.286 MAX. (.090)
- Thread length: .635 ± .127 (.025)
- Thread end to end of bolt: .203 (.008)



Technical drawing of a mechanical part with dimensions:

- Top horizontal dimension: $7.620 \pm .254$ ($.300 \pm .010$)
- Left vertical dimension: $4.445 \pm .127$ ($.175 \pm .005$)
- Internal vertical dimension: 3.302 ($.130$)
- Bottom left vertical dimension: $.635$ TYP ($.025$)
- Bottom right vertical dimension: $.254$ TYP ($.010$)



(Top View)

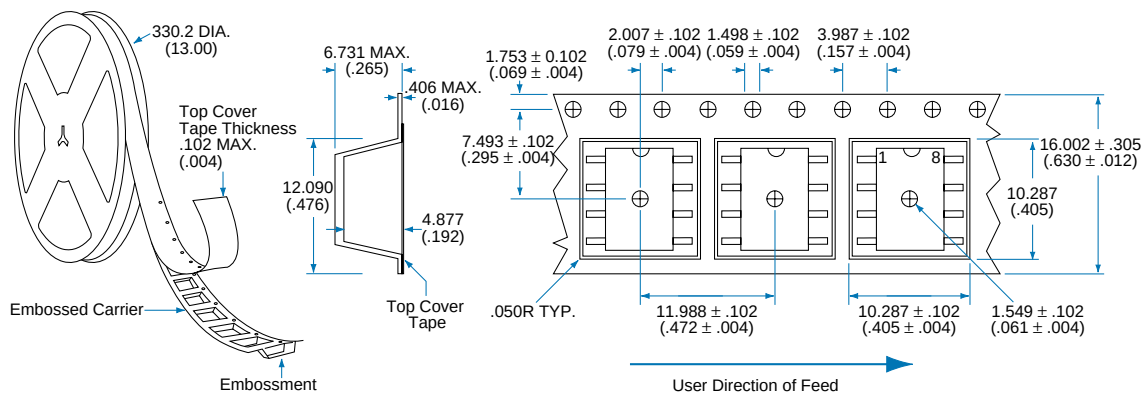
Diagram illustrating the top view of a 2x4 grid of squares. The dimensions are labeled as follows:

- Horizontal dimensions (top): $2.540 \pm .127$ (total width), $(.100 \pm .005)$ (individual square width).
- Vertical dimensions (left): $1.905 \pm .127$ (total height), $(.075 \pm .005)$ (individual square height).
- Horizontal dimensions (bottom): $1.498 \pm .127$ (total width), $(.059 \pm .005)$ (individual square width).
- Vertical dimensions (right): $8.305 \pm .127$ (total height), $(.327 \pm .005)$ (individual square height).

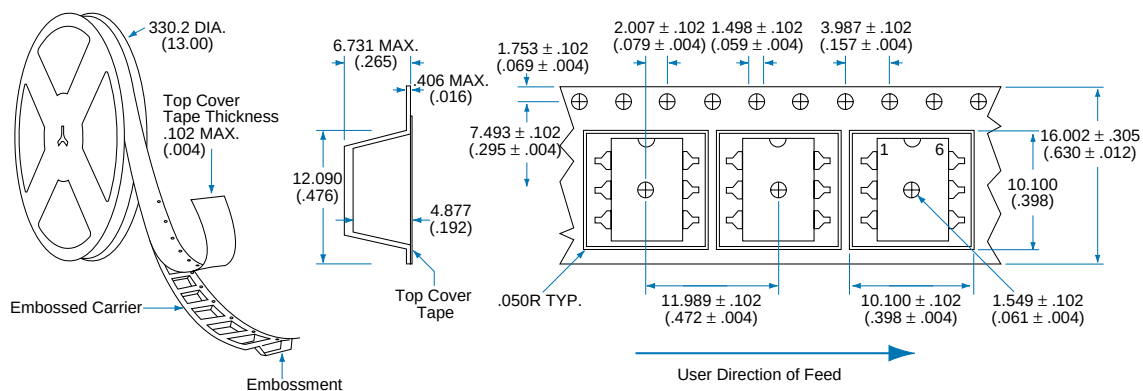
Rev. 7

Mechanical Dimensions

Tape and Reel Packaging for 8 Pin Flatpack Package



Tape and Reel Packaging for 6 Pin Surface Mount Package



Dimensions
mm
(inches)

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