



	PAA140	Units
Load Voltage	400	V
Load Current	250	mA
Max R _{ON}	8	Ω

Features

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

Applications

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

Description

The PAA140 is a 400V, 250mA, 8Ω, dual 1-Form-A relay. This high performance leader provides a high peak load voltage handling capability combined with a very low resistance for specialized applications.

Approvals

These products comply with the requirements of:

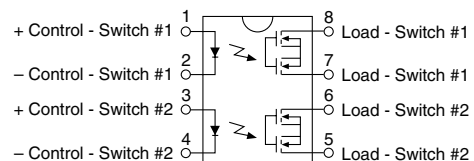
- UL 1577 (UL recognized file #E76270)
- CSA #14 (CSA certified file #LR43639)
- EN 60950
- IEC 950
- AS/NZS 3260

Ordering Information

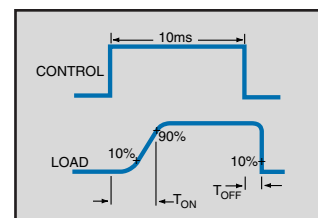
Part #	Description
PAA140	8-Pin DIP (50/tube)
PAA140P	8-Pin Flatpack (50/tube)
PAA140PTR	8-Pin Flatpack (1000/Reel)
PAA140S	8-Pin Surface Mount (50/tube)
PAA140STR	8-Pin Surface Mount (1000/Reel)

Pin Configuration

PAA140 Pinout



Switching Characteristics of Normally Open (Form A) Devices



Absolute Maximum Ratings

Parameter	Ratings	Units
Blocking Voltage	400	V
Reverse Input Voltage	5	V
Input Control Current	50	mA
Peak (10ms)	1	A
Input Power Dissipation ¹	150	mW
Total Power Dissipation ²	800	mW
Isolation Voltage Input to Output	3750	V _{rms}
Operational Temperature	-40 to +85	°C
Storage Temperature	-40 to +125	°C

¹ Derate Linearly 1.33 mw/°C

² Derate Linearly 6.67 mw/°C

Electrical absolute maximum ratings are at 25°C

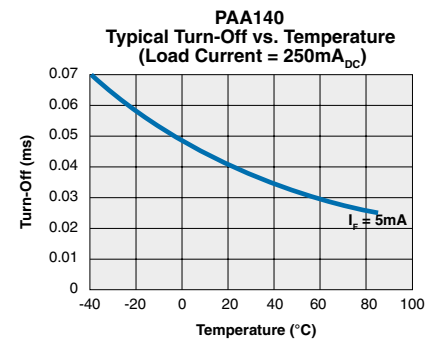
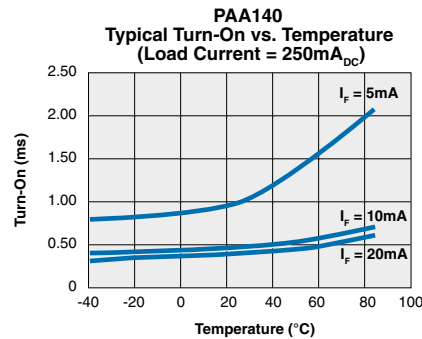
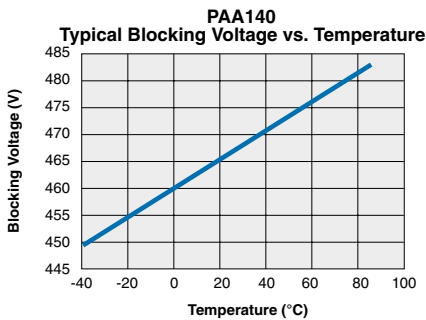
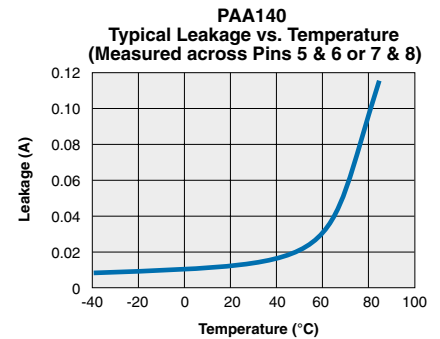
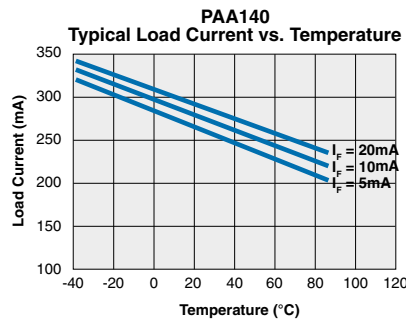
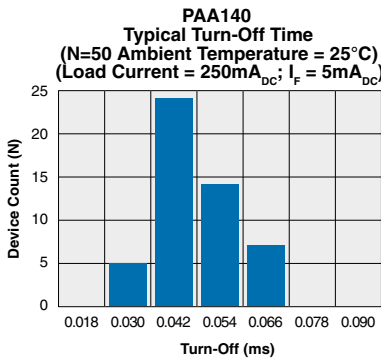
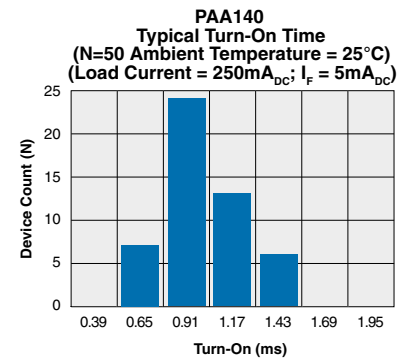
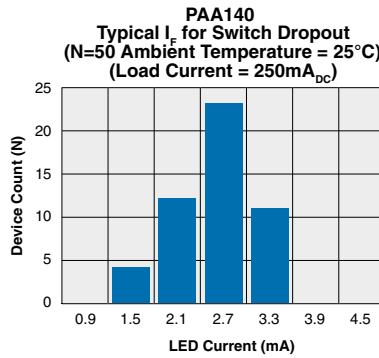
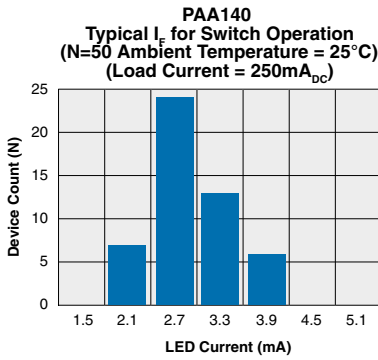
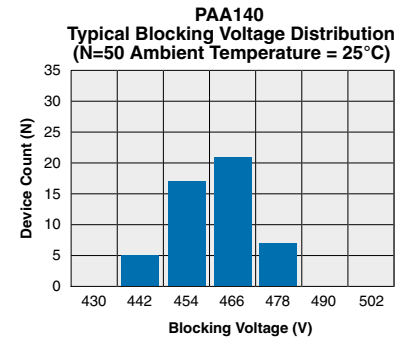
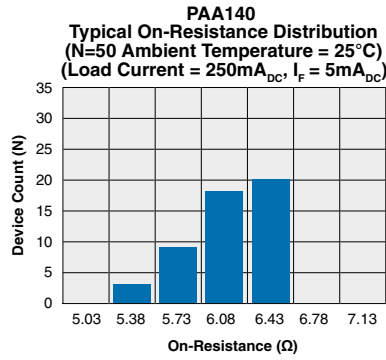
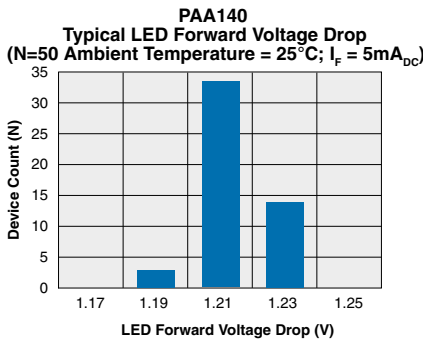
Absolute Maximum Ratings are stress ratings. Stresses in excess of these ratings can cause permanent damage to the device. Functional operation of the device at conditions beyond those indicated in the operational sections of this data sheet is not implied.

Electrical Characteristics

Parameter	Conditions	Symbol	Min	Typ	Max	Units
Output Characteristics @ 25°C						
Load Current*, Continuous	-	I _L	-	-	250	mA
Peak Load Current	10ms	I _{LPK}	-	-	500	mA
On-Resistance	I _L =250mA	R _{ON}	-	6	8	Ω
Off-State Leakage Current	V _L =400V	I _{LEAK}	-	-	1	μA
Switching Speeds						
Turn-On	I _F =5mA, V _L =10V	T _{ON}	-	-	3	ms
Turn-Off	I _F =5mA, V _L =10V	T _{OFF}	-	-	1	ms
Input Characteristics @ 25°C						
Input Control Current	I _L =250mA	I _F	5	-	-	mA
Input Dropout Current	-	I _F	0.4	0.7	-	mA
Input Voltage Drop	I _F =5mA	V _F	0.9	1.2	1.4	V
Reverse Input Current	V _R =5V	I _R	-	-	10	μA
Common Characteristics @ 25°C						
Capacitance Input to Output	-	C _{I/O}	-	3	-	PF

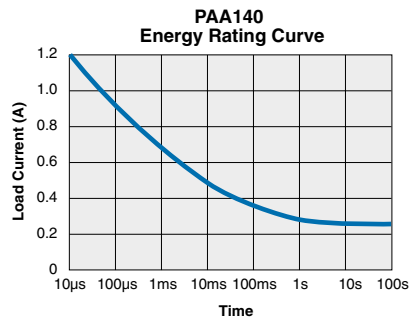
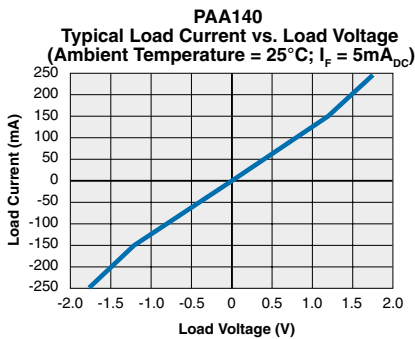
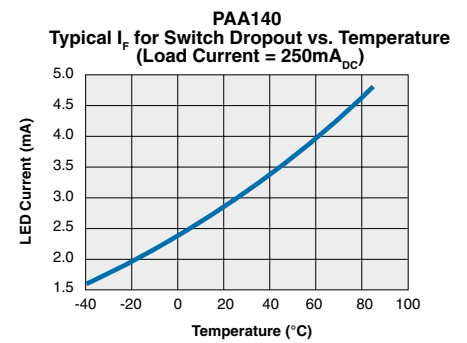
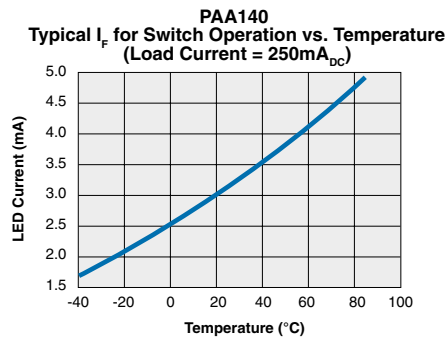
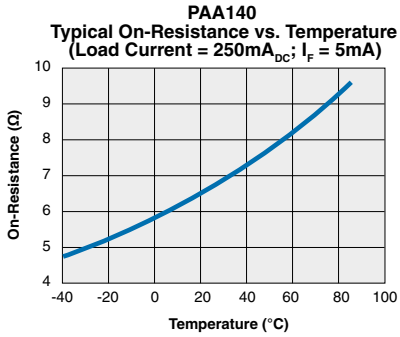
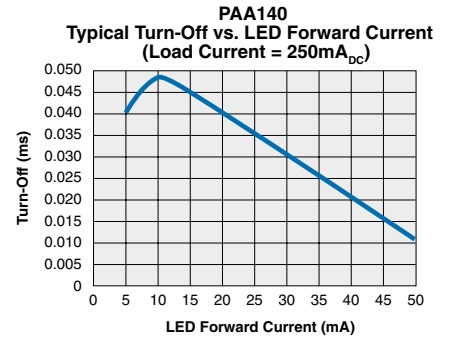
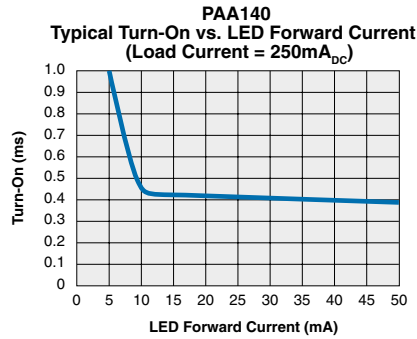
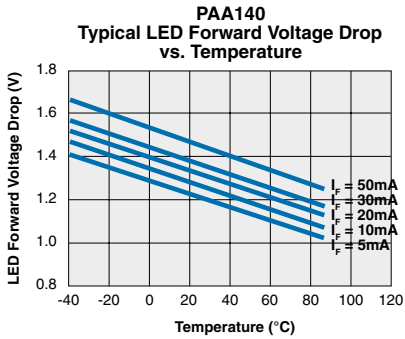
*NOTE: If both poles operate simultaneously load current must be derated so as not to exceed the package power dissipation value.

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*



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Manufacturing Information

Soldering temperature for DIP Package

Recommended soldering processes are limited to 260°C component body temperature for 10 seconds.

Soldering temperature for Flatpack and Surface Mount Packages

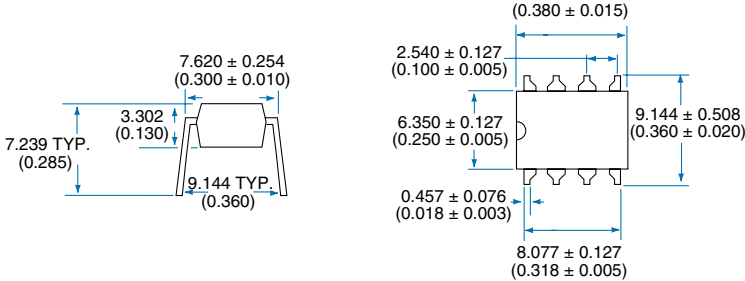
Recommended soldering processes are limited to 220°C component body temperature for 10 seconds.

Washing

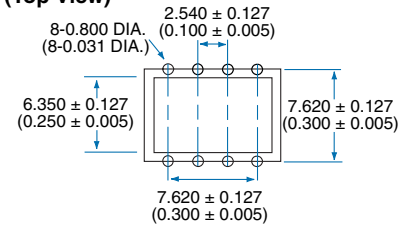
Clare does not recommend ultrasonic cleaning or the use of chlorinated solvents.

MECHANICAL DIMENSIONS

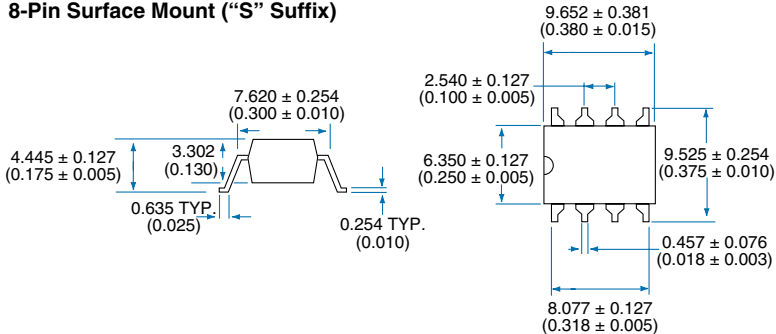
8-Pin DIP Through Hole (Standard)



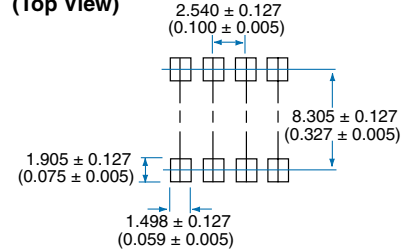
PC Board Pattern (Top View)



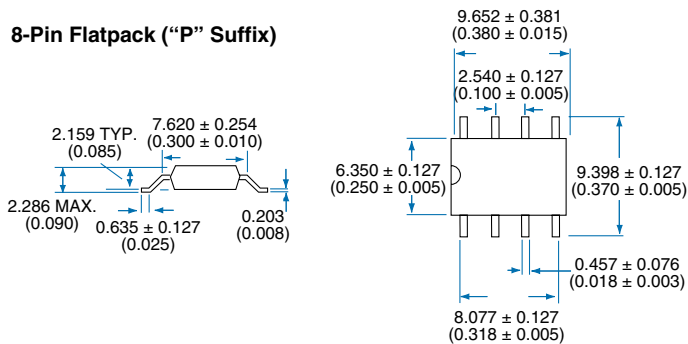
8-Pin Surface Mount ("S" Suffix)



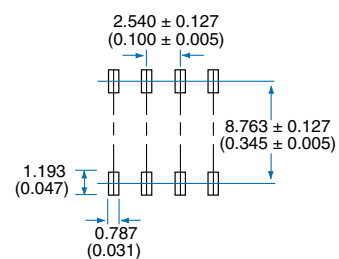
PC Board Pattern (Top View)



8-Pin Flatpack ("P" Suffix)



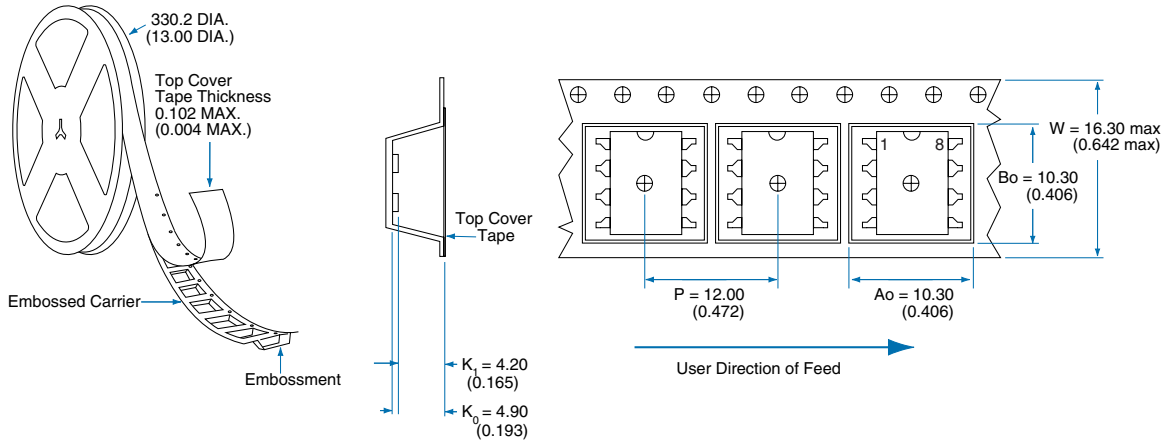
PC Board Pattern (Top View)



Dimensions:
mm
(inches)

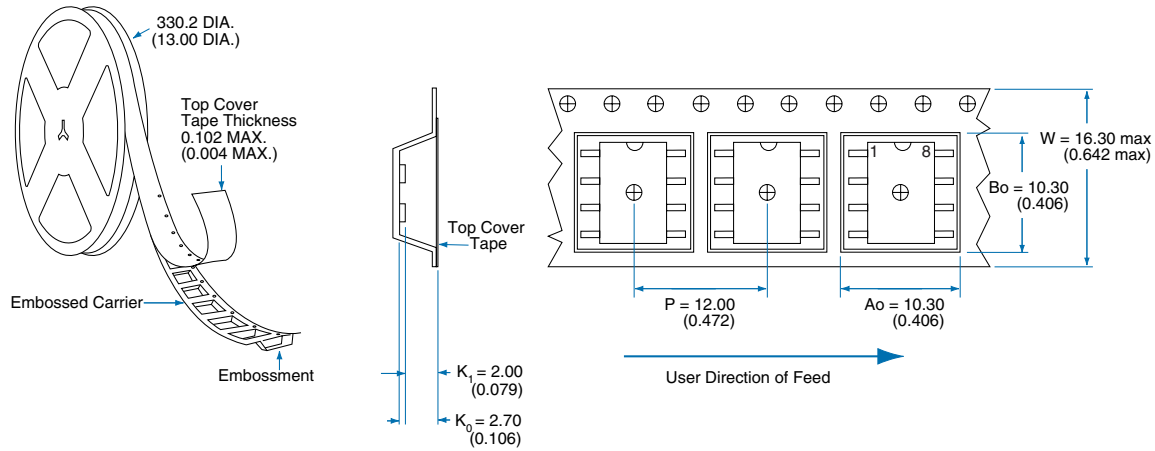
MECHANICAL DIMENSIONS

Tape and Reel Packaging for 8-Pin Surface Mount Package



NOTE: Tape dimensions not shown, comply with JEDEC Standard EIA-481-2

Tape and Reel Packaging for 8-Pin Flatpack Package



NOTE: Tape dimensions not shown, comply with JEDEC Standard EIA-481-2

Dimensions:
mm
(inches)

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