



DESCRIPTION

PLA143 is a 600V, 100mA, 50Ω 1-Form-A relay. This performance leader features 4000V isolation.

FEATURES

- Small 6 Pin DIP Package
- Low Drive Power Requirements (TTL/CMOS Compatible)
- No Moving Parts
- High Reliability
- Arc-Free With No Snubbing Circuits
- 4000V_{RMS} Input/Output Isolation
- FCC Compatible
- VDE Compatible
- No EMI/RFI Generation
- Machine Insertable, Wave Solderable
- Surface Mount and Tape & Reel Versions Available
- 600 volt blocking

APPLICATIONS

- Instrumentation
 - Multiplexers
 - Data Acquisition
 - Electronic Switching
 - I/O Subsystems
 - Meters (Watt-Hour, Water, Gas)
- Medical Equipment—Patient/Equipment Isolation
- Security
- Aerospace
- Industrial Controls

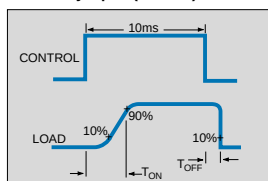
APPROVALS

- UL Recognized: File Number E76270
- CSA Certified: File Number LR 43639-10
- BSI Certified to:
 - BS EN 60950:1992 (BS7002:1992)
Certificate #: 7344 (to 3750 volts)
 - BS EN 41003:1993
Certificate #: 7344

OPTIONS / SUFFIXES

- S: Surface Mount Package
- TR: Tape & Reel

Switching Characteristics of
Normally Open (Form A) Devices



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
Capacitance				
Input to Output	-	3	-	pF
Isolation Voltage				
Input to Output	3750	-	-	V _{RMS}
Operational Temperature	-40	-	+85	°C
Storage Temperature	-40	-	+125	°C
Soldering Temperature				
DIP Package	-	-	+260	°C
Surface Mount Package (10 Seconds Max.)	-	-	+220	°C

¹ Derate Linearly 1.33 mW/°C

² Derate Linearly 6.67 mW/°C

SINGLE POLE OptoMOS® RELAYS

PLA143

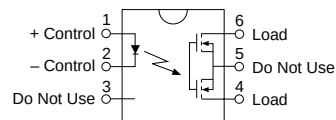
SPECIFICATIONS

PARAMETER	CONDITIONS	SYMBOL	MIN	TYP	MAX	UNITS
Output Characteristics @ 25°C						
Load Voltage (Peak)	-	V_L	-	-	600	V
Load Current (Continuous)	-	I_L	-	-	100	mA
AC/DC Configuration	-	I_L	-	-	170	mA
DC Configuration	-	I_L	-	-	170	mA
Peak Load Current	10ms	I_{LPK}	-	-	350	mA
On-Resistance	I_L =Load Current	R_{ON}	-	-	50	Ω
AC/DC Configuration	I_L =Load Current	R_{ON}	-	-	14	Ω
DC Configuration	I_L =Load Current	R_{ON}	-	-	14	Ω
Off-State Leakage Current	V_L =600V	I_{LEAK}	-	-	1	μA
Switching Speeds	I_F =5mA, V_L =10V	T_{ON}	-	-	5	ms
Turn-On	I_F =5mA, V_L =10V	T_{OFF}	-	-	5	ms
Turn-Off	I_F =5mA, V_L =10V	T_{OFF}	-	-	5	ms
Output Capacitance	50V; f=1MHz	C_{OUT}	-	50	-	pF
Input Characteristics @ 25°C						
Input Control Current	I_L =Load Current	I_F	5	-	50	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 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*	(60 seconds)	$V_{I/O}$	4000	-	-	V_{RM}

* 4000 volt isolation is guaranteed by 100% screening with a low leakage, 5000 volt test for a two second duration.

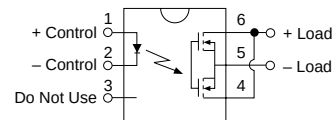
PLA143 Pinout

AC/DC Configuration



PLA143 Pinout

DC Only Configuration



Note: For Mechanical Dimensions See Pages 408-415