

HIGH ISOLATION VOLTAGE 6 PIN DIP SOLID STATE RELAY

PS7360-1A
PS7360L-1A

FEATURES

- **HIGH ISOLATION VOLTAGE**
BV : 3750 Vr.m.s. MIN
- **1 CHANNEL TYPE**
1a output
- **DESIGNED FOR AC/DC SWITCHING LINE CHANGER**
- **SMALL PACKAGE**
6 pin DIP
- **LOW OFFSET VOLTAGE**
- **SURFACE MOUNT TYPE LEAD**
PS7360L-1A

DESCRIPTION

PS7360-1A and PS7360L-1A are solid state relays containing a GaAs LED on the light emitting side (input side) and MOSFETs on the output side. They are suitable for analog signal control because of their low offset and high linearity.

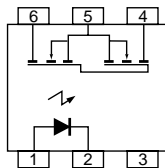
APPLICATIONS

- EXCHANGE EQUIPMENT
- MEASUREMENT EQUIPMENT
- FA/OA EQUIPMENT

ELECTRICAL CHARACTERISTICS (T_A = 25 °C)

PART NUMBER			PS7360-1A, PS7360L-1A			
	SYMBOLS	PARAMETERS	UNITS	MIN	TYP	MAX
Diode	V _F	Forward Voltage, I _F = 10 mA	V		1.1	1.5
	I _R	Reverse Current, V _R = 5 V	μA			5.0
MOS FET	I _{LOFF}	Off-State Leakage Current, V _D = 600 V	μA		0.03	1.0
Coupled	R _{ON}	On-State Resistance, I _F = 5 mA, I _L = 1 mA	Ω			50
	t _{ON}	Turn-on Time I _F = 10 mA, V _L = 5 V, R _L = 500 Ω, P _W ≥ 10 ms	ms			2.0
	t _{OFF}	Turn-off Time I _F = 10 mA, V _L = 5 V, R _L = 500 Ω, P _W ≥ 10 ms	ms			0.2
	R _{I-O}	Isolation Resistance, V _{I-O} = 1.0 kV	Ω	10 ⁹		
	C _{I-O}	Isolation Capacitance, V = 0 V, f = 1 MHz	pF		1.1	

PS7360-1A, PS7360L-1A



PS7360-1A, PS7360L-1A

ABSOLUTE MAXIMUM RATINGS¹ (T_A = 25°C)

SYMBOLS	PARAMETERS	UNITS	RATINGS
Diode			
I _F	Forward Current (DC)	mA	50
V _R	Reverse Voltage	V	5.0
P _D	Power Dissipation	mW	50
I _{FP}	Peak Forward Current ²	A	1
MOSFET			
V _L	Break Down Voltage	V	600
I _L	Continuous Load Current	mA	90
P _D	Power Dissipation	mW	560
BV	Isolation Voltage ³	Vr.m.s.	3750
P _T	Total Power Dissipation	mW	610
T _A	Operating Ambient Temp.	°C	-40 to +85
T _{STG}	Storage Temperature	°C	-40 to +125

Notes:

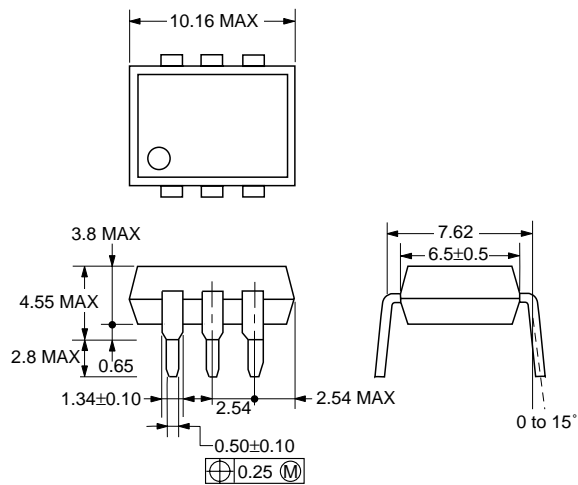
1. Operation in excess of any one of these parameters may result in permanent damage.
2. PW = 100 μs, Duty Cycle = 1 %
3. AC voltage for 1 minute at T_A = 25 °C, RH = 60 % between input and output.

RECOMMENDED OPERATING CONDITIONS (T_A = 25°C)

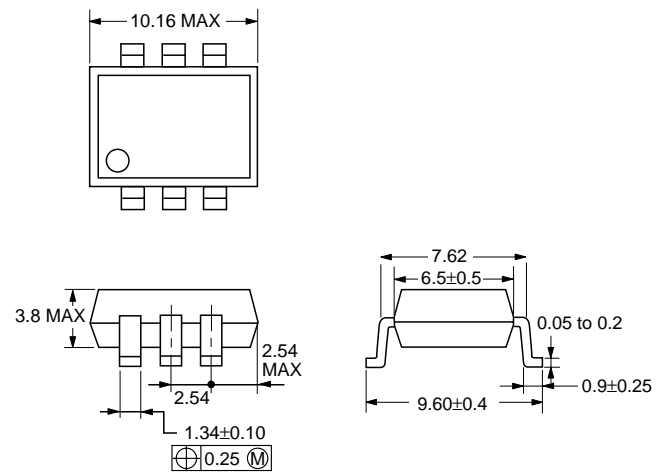
PART NUMBER		PS7360-1A, PS7360L-1A			
SYMBOLS	PARAMETERS	UNITS	MIN	TYP	MAX
I _F	LED Operating Current	mA	2	10	20
V _F	LED Off Voltage	V	0		0.5

OUTLINE DIMENSIONS (Units in mm)

PS7360-1A

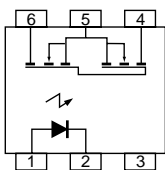


PS7360L-1A



PIN CONNECTION (Top View)

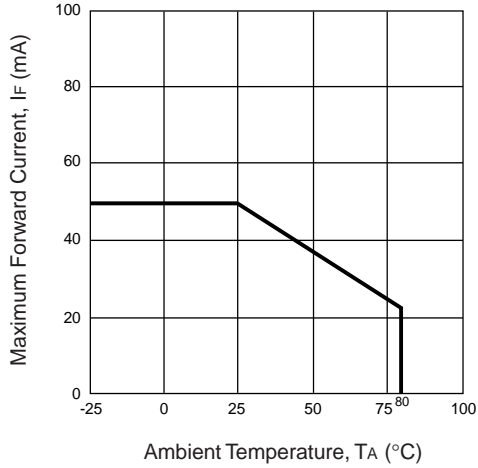
PS7360-1A, PS7360L-1A



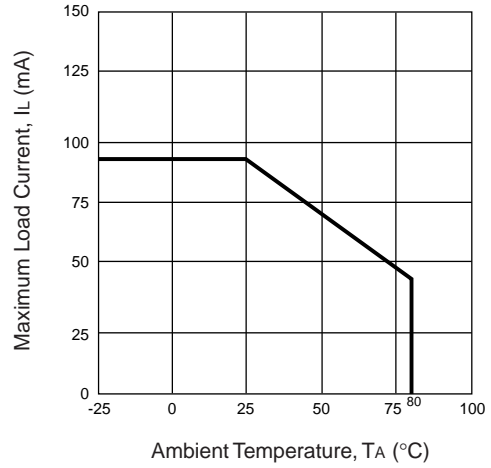
1. LED Anode
2. LED Cathode
3. NC
4. MOSFET Drain
5. MOSFET Source
6. MOSFET Drain

TYPICAL PERFORMANCE CURVES ($T_A = 25\text{ }^\circ\text{C}$)

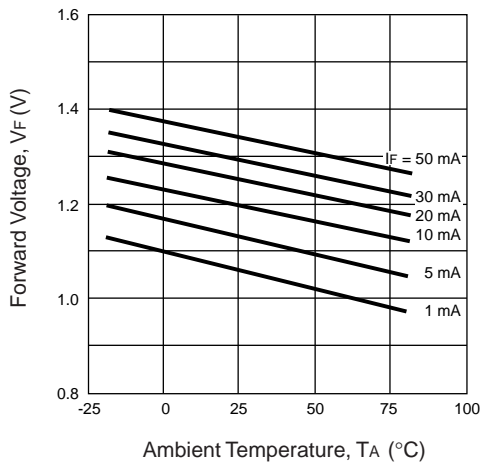
MAXIMUM FORWARD CURRENT vs. AMBIENT TEMPERATURE



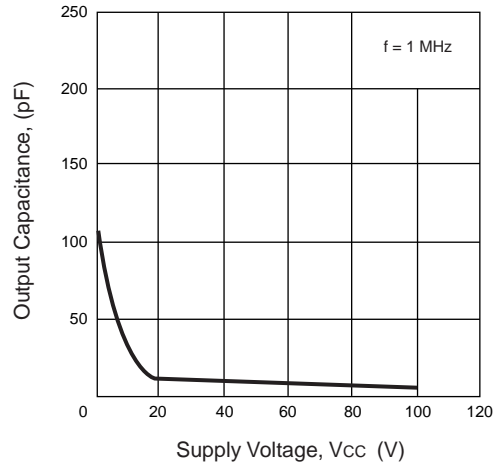
MAXIMUM LOAD CURRENT vs. AMBIENT TEMPERATURE



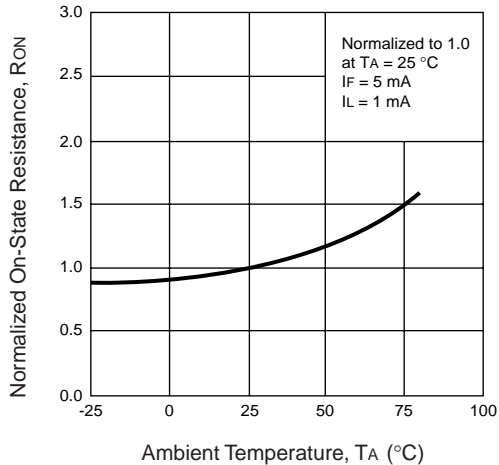
FORWARD VOLTAGE vs. AMBIENT TEMPERATURE



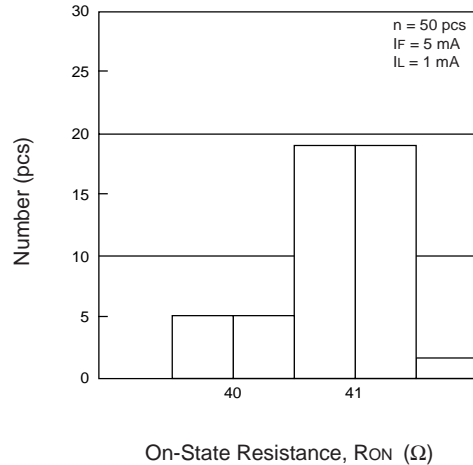
OUTPUT CAPACITANCE vs. SUPPLY VOLTAGE



NORMALIZED ON-STATE RESISTANCE vs. AMBIENT TEMPERATURE

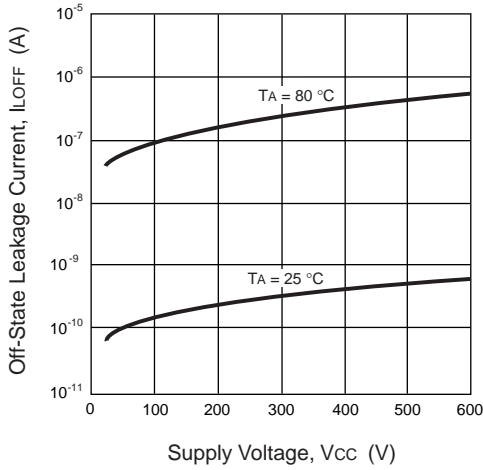


ON-STATE DISTRIBUTION

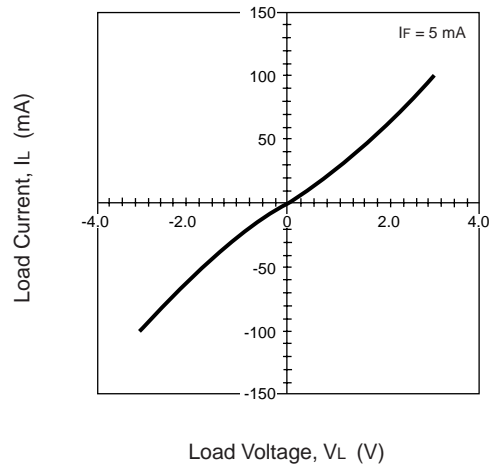


TYPICAL PERFORMANCE CURVES (TA = 25 °C)

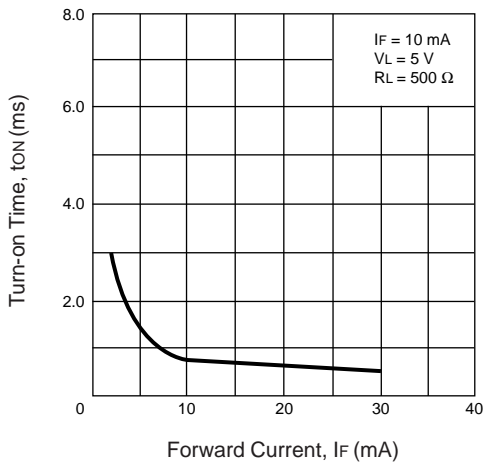
OFF-STATE LEAKAGE CURRENT vs. SUPPLY VOLTAGE



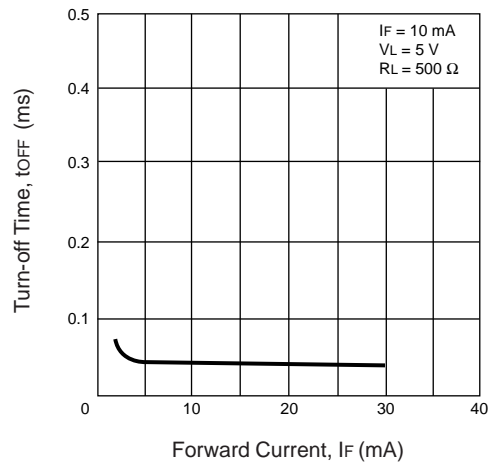
LOAD CURRENT vs. LOAD VOLTAGE



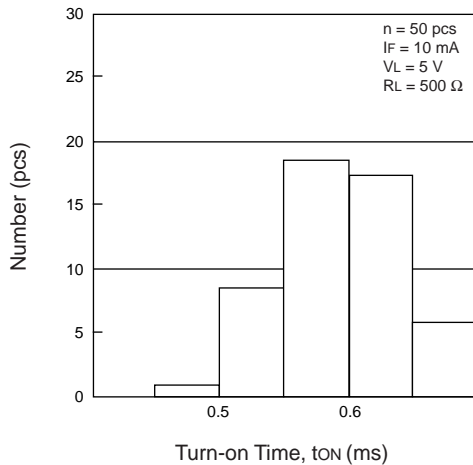
TURN-ON TIME vs. FORWARD CURRENT



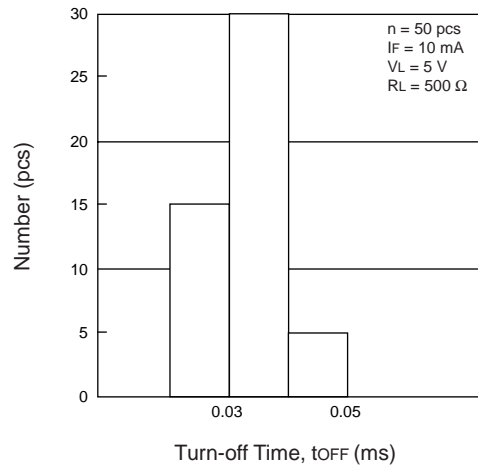
TURN-OFF TIME vs. FORWARD CURRENT



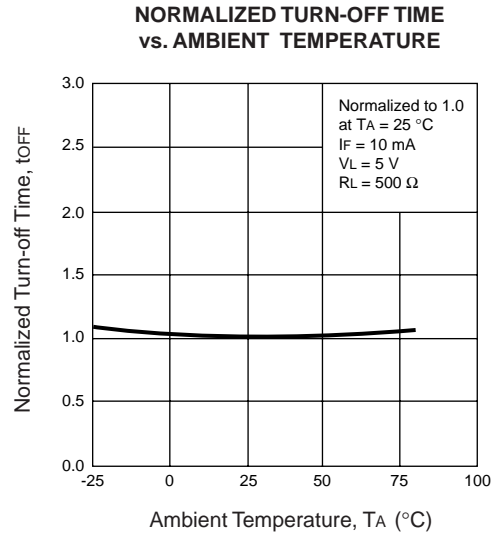
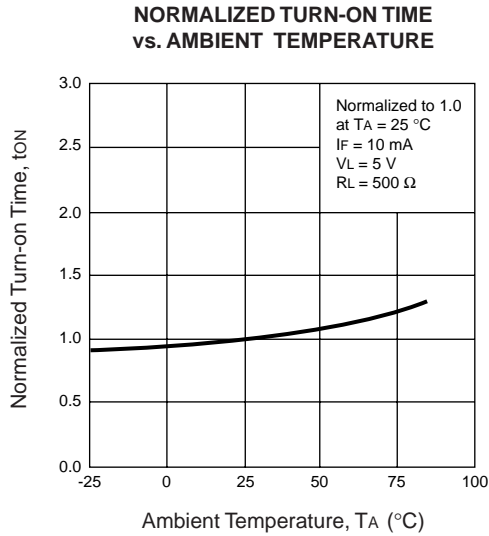
TURN-ON TIME DISTRIBUTION



TURN-OFF TIME DISTRIBUTION

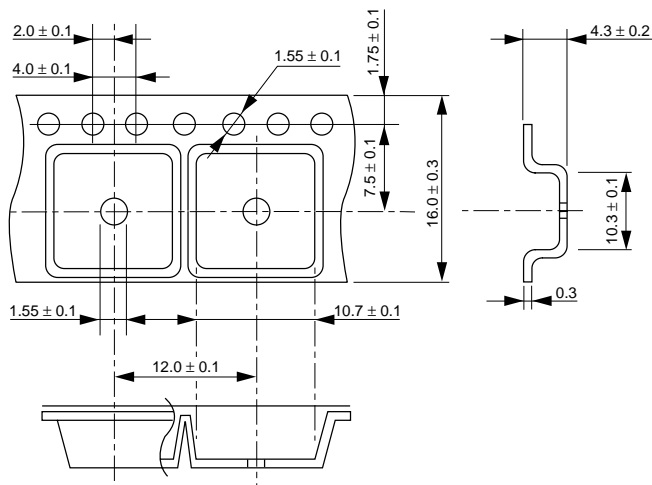


TYPICAL PERFORMANCE CURVES ($T_A = 25\text{ }^\circ\text{C}$)

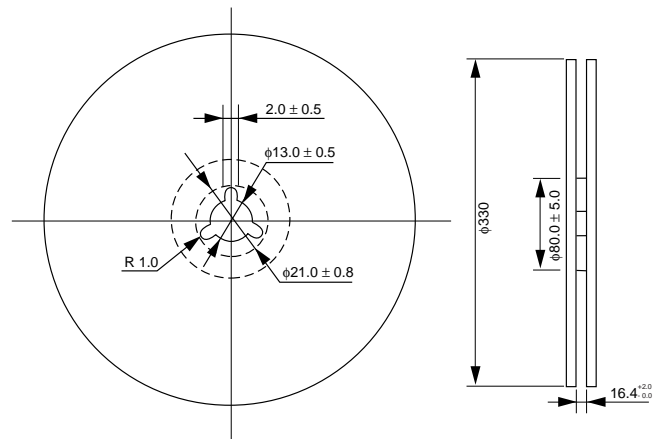


TAPING SPECIFICATIONS (Units in mm)

OUTLINE AND DIMENSIONS (TAPE)



OUTLINE AND DIMENSIONS (REEL)

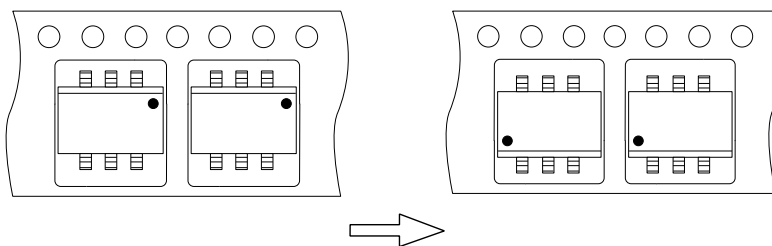


Notes:
 1. Packaging : 1000 pcs/reel

TAPING DIRECTION

PS7360L-1A-E3

PS7360L-1A-E4



EXCLUSIVE NORTH AMERICAN AGENT FOR **NEC** RF, MICROWAVE & OPTOELECTRONIC SEMICONDUCTORS

CEL CALIFORNIA EASTERN LABORATORIES • Headquarters • 4590 Patrick Henry Drive • Santa Clara, CA 95054-1817 • (408) 988-3500 • Telex 34-6393 • FAX (408) 988-0279
 24-Hour Fax-On-Demand: 800-390-3232 (U.S. and Canada only) • Internet: <http://WWW.CEL.COM>

DATA SUBJECT TO CHANGE WITHOUT NOTICE

PRINTED IN USA ON RECYCLED PAPER -4/99