PVG612A

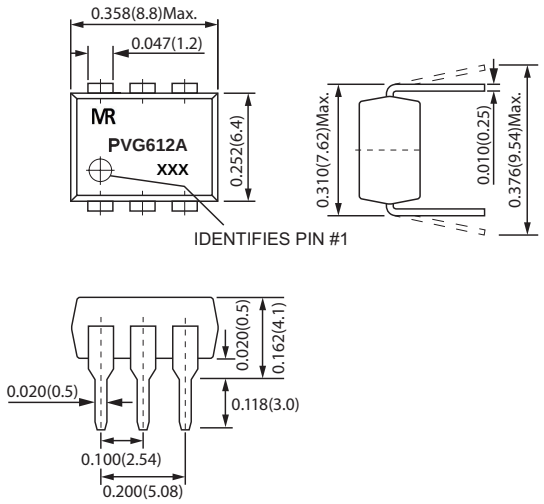
The PVG612A feature high current switching capability to 2.0A with a low on resistance of 0.14Ω Maximum. Designed for ATE, Controls,or Measurement and Instrumentation applications,the MOSRELAY® relay is capable of handling 60V load conditions.

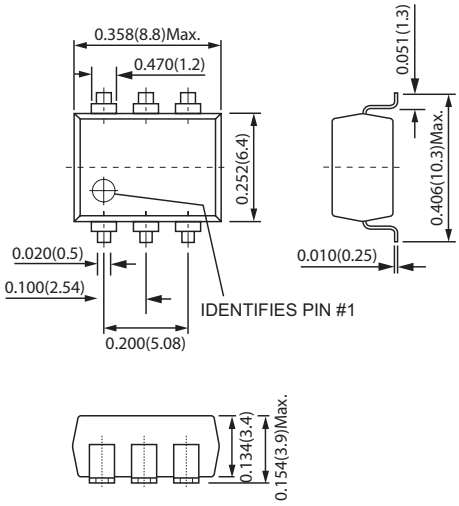
Features

Contact Form: 1-Form-A
Load Voltage: 60V Maximum
Operation LED Current: 5.0mA Maximum
Load Current: 2.0A Maximum
On-Resistance: 0.14ΩMaximum
Low Off-State Leakage Current: 1.0uA Maximum

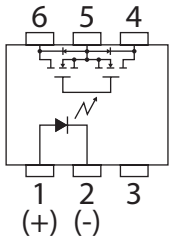
Applications

Telecommunications
Instrumentation
Medical Equipment
Industrial Controls
Security





TERMINAL IDENTIFICATION



1: Anode (LED) 2: Cathode (LED) 3: NC	4,6: Drain (MOS FET) 5: Source (MOS FET)

Part No	Package	Tube	Tape and reel	Units/Box	Contact From
PVG612APBF	DIP6	65pcs		1040pcs	
PVG612AS-TPBF	SMD6		1000pcs	1000pcs	Picked from 1/2/3-pin sid

MAXIMUM RATINGS (Ambient Temperature: 25°C)			
Parameters	**Symbol**	**Units**	**Value**
INPUT SPECIFICATIONS			
Continuous LED Current	I_F	mA	50
Peak LED Current	I_{FP}	mA	500
LED Reverse Voltage	V_R	V	5
Input Power Dissipation	P_{in}	mW	75
OUTPUT SPECIFICATIONS			
Load Voltage	V_L	V (AC peak or DC)	60
Load Current	I_L	A	2.0
Peak Load Current	I_{Peak}	A	3.5
Output Power Dissipation	P_{Out}	mW	500
RELAY SPECIFICATIONS			
Total Power Dissipation	P_T	mW	550
I/O Breakdown Voltage	$V_{I/O}$	Vrms	3750
Operating Temperature	T_{Opr}	°C	-40 ~ +85
Storage Temperature	T_{Stg}	°C	-40 ~ +100

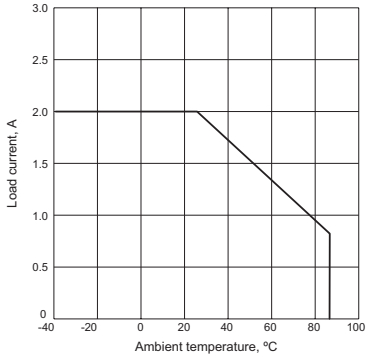
ELECTRICAL SPECIFICATIONS (Ambient Temperature: 25°C)						
Parameters	**Symbol**	**Test Conditions**	**Units**	**Min**	**Typ**	**Max**
INPUT						
LED Forward Voltage	V_F	I=10mA	V	1.0		1.5
Operation LED Current	$I_{F\ On}$		mA		1.5	5.0
Recovery LED Voltage	$V_{F\ Off}$		V	0.5		
OUTPUT						
On-Resistance Drain to Drain	R_{On}	I_F=10mA, I_L=Rating Time to flow is within 1 sec.	Ω		0.09	0.14
Off-State Leakage Current	I_{Leak}	I_F=0mA, V_L=60V	μA			1.0
Output Capacitance	C_{Out}	V_L=0V, f=1MHz	pF		470	
TRANSMISSION						
Turn-On Time	T_{On}	I_F=10mA, I_L=Rating	ms		0.6	5.0
Turn-Off Time	T_{Off}		ms		0.04	2.0
COUPLED						
I/O Insulation Resistance	$R_{I/O}$		Ω	$5*10^9$		
I/O Capacitance	$C_{I/O}$	f=1MHz	pF		1.0	

Environmental Ratings:

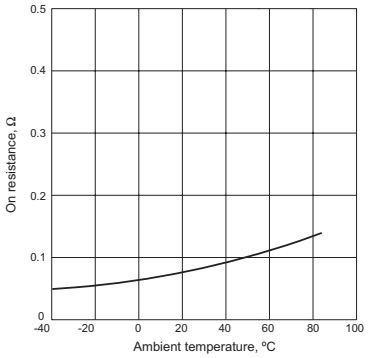
Operating Temp: -40°C to +85° C; Storage Temp: – 40 to +100 C.

All electrical parameters measured at 25° C unless otherwise specified.

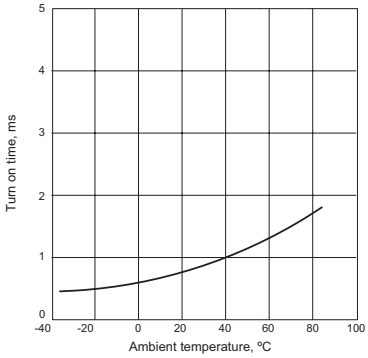
Load current Vs.
Ambient temperature



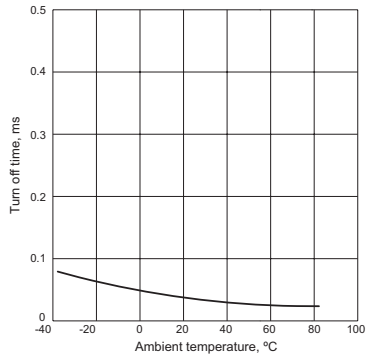
On resistance Vs.
Ambient temperature



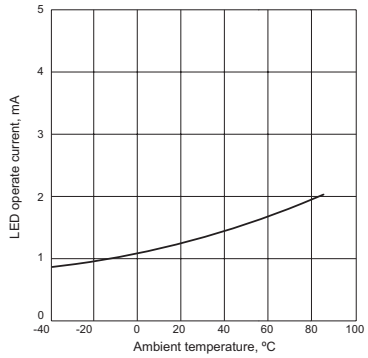
Turn on time Vs.
Ambient temperature



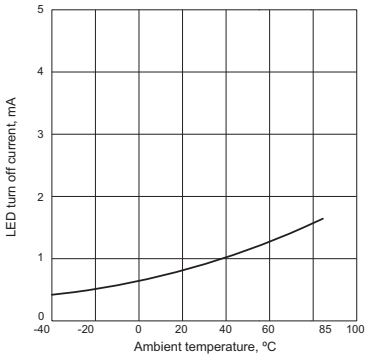
Turn off time Vs.
Ambient temperature



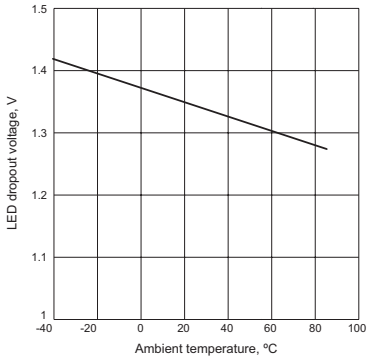
LED operate current Vs.
Ambient temperature



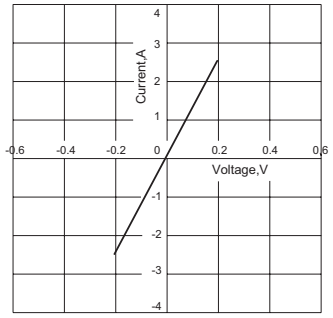
LED Turn off current Vs.
Ambient temperature



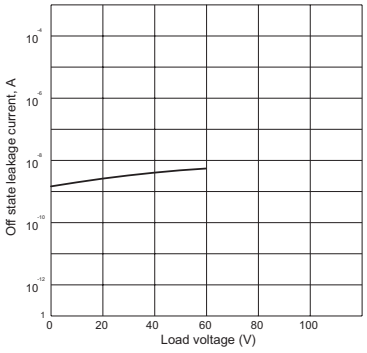
LED forward voltage Vs.
Ambient temperature



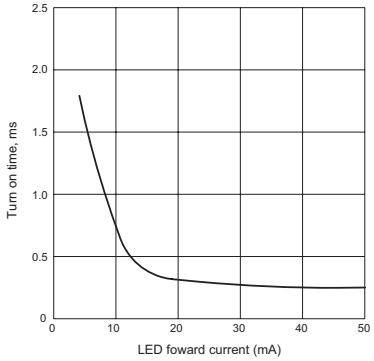
Voltage Vs. current characteristics
of output at MOS portion



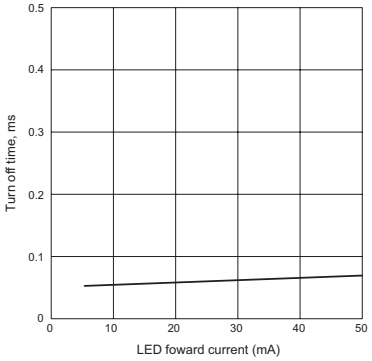
Off state leakage current Vs.
Load voltage characteristics



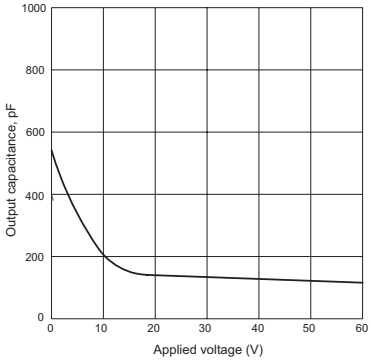
LED foward current Vs.
turn on time characteristics



LED foward current Vs.
turn off time characteristics



Applied voltage Vs.
output capacitance characteristics



Manufacturing Information

Moisture Sensitivity

All plastic encapsulated semiconductor packages are susceptible to moisture ingression. MosRelay ntegrated Circuits Division classifies its plastic encapsulated devices for moisture sensitivity accordiing to the latest version of the joint industry standard, **IPC/JEDEC J-STD-020**, in force at the time of product evaluation. We test all of our products to the maximum conditions set forth in the standard, and guarantee proper operation our devices when handled according to the limitations and information in that standard as well as to any limitations forth in the information or standards referenced below.

Failure to adhere to the warnings or limitations as established by the listed specifications could result in reduced product performance, reduction of operable life, and/or reduction of overall reliability.

This product carries a Moisture Sensitivity Level (MSL) classification as shown below, and should be handled according to the requirements of the latest version of the joint industry standard **IPC/JEDEC J-STD-033**.

ESD Sensitivity

This product is **ESD Sensitive**, and should be handled according to the industry standard **JESD-625**.

Soldering Profile

Provided in the table below is the Classification Temperature (T_C) of this product and the maximum dwell time the body temperature of this device may be (T_C - 5)ºC or greater. The classification temperature sets the Maximum Body Temperature allowed for this device during lead-free reflow processes. For through-hole devices, and any other processes, the guidelines of **J-STD-020** must be observed.

Board Wash

MosRelay Integrated Circuits Division recommends the use of no-clean flux formulations. Board washing to reduce or remove flux residue following the solder reflow process is acceptable provided proper precautions are taken to prevent damage to the device. These precautions include, but are not limited to: using a low pressure wash and providing a follow up bake cycle sufficient to remove any moisture trapped within the device due to the washing process. Due to the variability of the wash parameters used to clean the board, determination of the bake temperature and duration necessary to remove the moisture trapped within the package is the responsibility of the user (assembler). Cleaning or drying methods that employ ultrasonic energy may damage the device and should not be used. Additionally, the device must not be exposed to flux or solvents that are Chlorine- or Fluorine-based.