



## DESCRIPTION

The M212 is a bi-directional, single-pole, single-throw, normally closed multipurpose solid-state relay in a miniature 4-pin small outline package. It is designed to replace electromechanical relays in general purpose switching applications. The relay consists of an integrated circuit that drives two rugged source-to-source depletion type DMOS transistors - optically coupled to a light emitting diode. The output MOS transistors are protected with free-wheeling diodes that can handle up to 1.5A of inrush current, making the relay ideal for switching lamps and highly inductive loads.

## FEATURES

- High input-to-output isolation
- Low input control power consumption
- 100mA maximum continuous load current
- 35 ohms maximum on-resistance
- Long life/high reliability
- Ultra miniature 4-pin small outline package

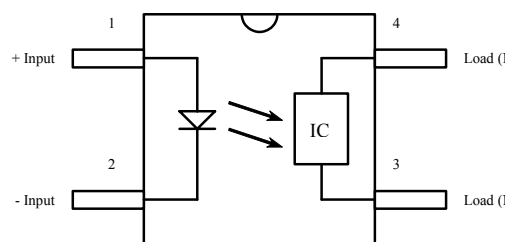
## APPLICATIONS

- Telecom switching
- Tip/Ring control
- PCMCIA modules
- Multiplexers
- Meter reading systems
- Data acquisition
- Medical equipment
- Battery monitoring
- Home/Safety security systems

## OPTIONS/SUFFIXES

- -TR Tape and Reel

## SCHEMATIC DIAGRAM



## MAXIMUM RATINGS

PARAMETER	UNIT	MIN	TYP	MAX
Storage Temperature	°C	-55		125
Operating Temperature	°C	-40		85
Continuous Input Current	mA			40
Transient Input Current	mA			400
Reverse Input Control Voltage	V	6		
Output Power Dissipation	mW			400

## APPROVALS

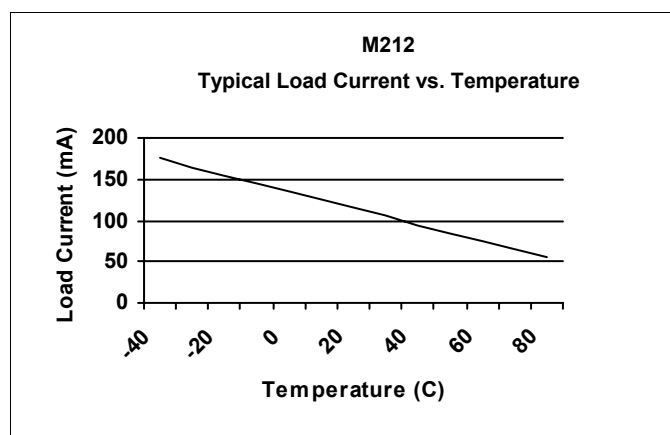
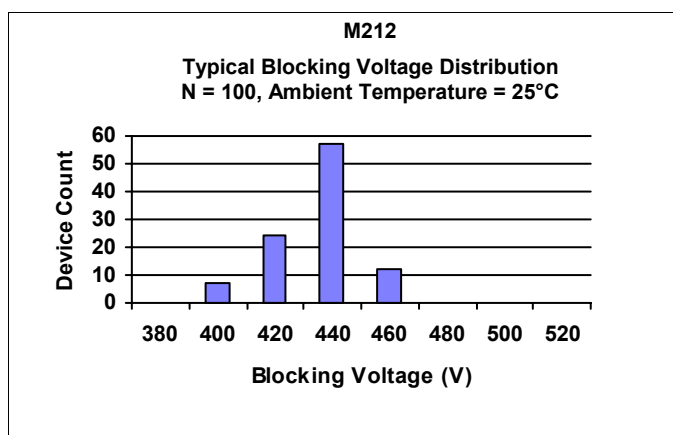
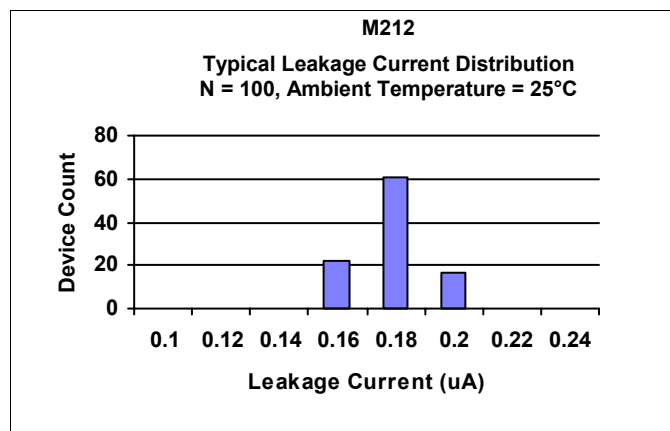
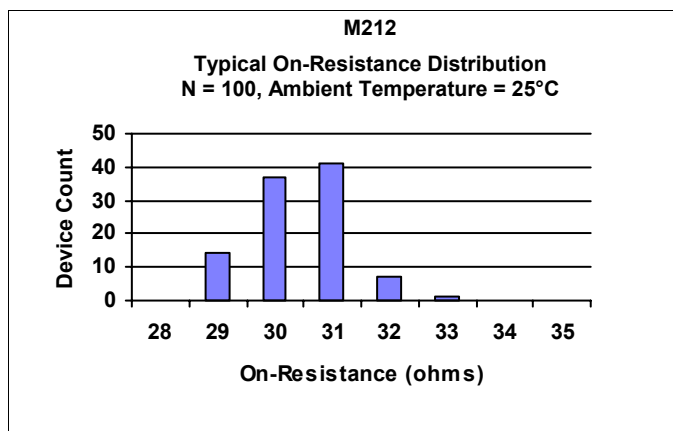
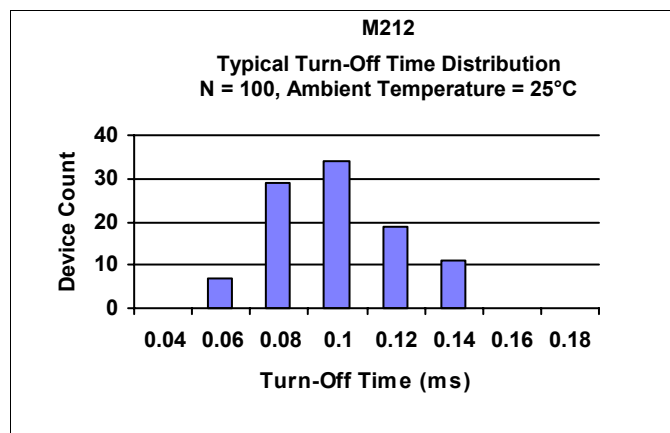
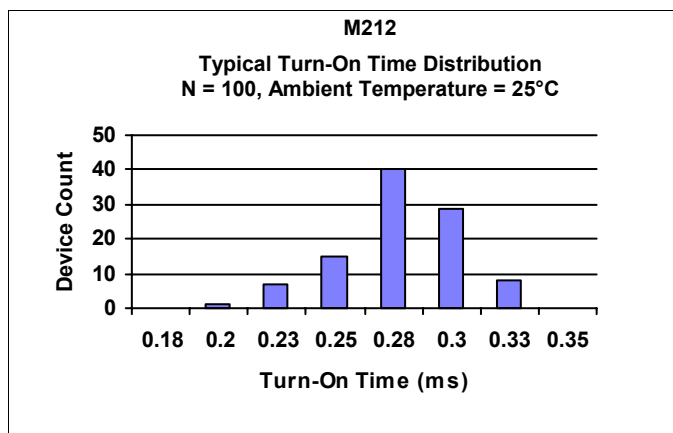
- BAPT CERTIFICATE #650192:  
BS EN 60950, BS EN 41003, BS EN 60065


**ELECTRICAL CHARACTERISTICS - 25°**

PARAMETER	UNIT	MIN	TYP	MAX	TEST CONDITIONS
<b>INPUT SPECIFICATIONS</b>					
LED Forward Voltage	V		1.2	1.5	If = 10mA
LED Reverse Voltage	V	6	12		Ir = 10uA
Turn-On Current	m A		0.5		Io = 100mA
Turn-Off Current	m A		2.5	5	
<b>OUTPUT SPECIFICATIONS</b>					
Blocking Voltage	V	400			Io = 10uA
Continuous Load Current	m A			100	If = 0mA
On-Resistance	$\Omega$		25	35	Io = 100mA
Leakage Current	$\mu$ A		0.2	10	Vo = 400V
Output Capacitance	p F		25	50	Vo = 25V, f = 1.0MHz
Offset Voltage	m V			0.2	If = 0mA
<b>COUPLED SPECIFICATIONS</b>					
Isolation Voltage	V	1500			T = 1 minute
Turn-On Time	m s		0.1	0.5	If = 0mA, Io = 100mA
Turn-Off Time	m s		0.5	1	If = 5mA, Io = 100mA
Isolation Resistance	G $\Omega$	100			
Coupled Capacitance	p F		3		
Contact Transient Ratio	V / $\mu$ s	2000	7000		dV = 50V



## PERFORMANCE DATA

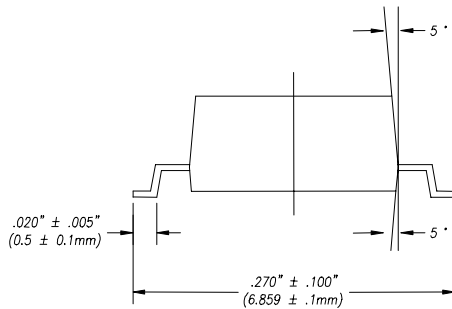




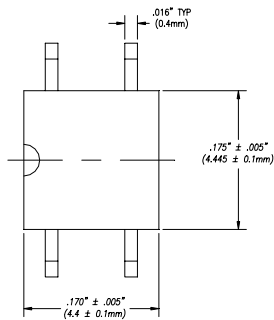
1 Form B  
Solid State Relay

## MECHANICAL DIMENSIONS

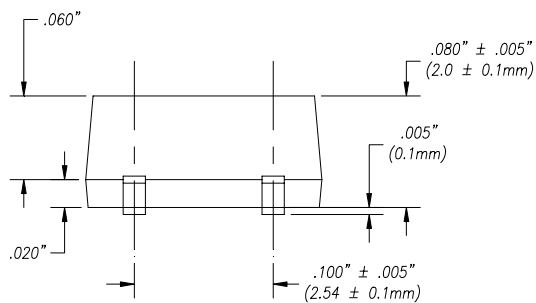
### 4 PIN SMALL OUTLINE PACKAGE



END VIEW



TOP VIEW



BACK VIEW