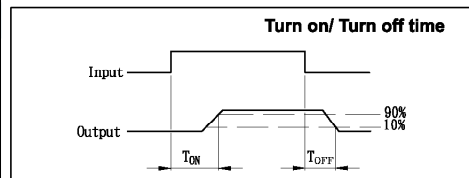
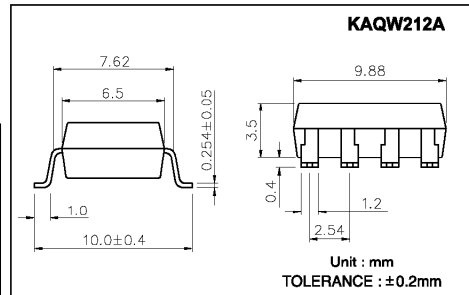
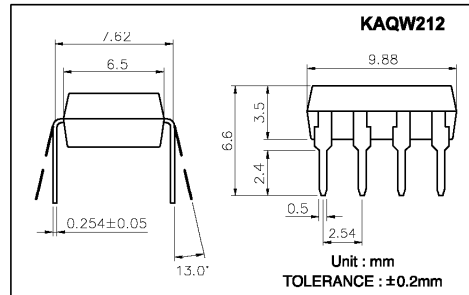


# COSMO High Voltage, Solid State Relay-MOSFET Output KAQW212/212A

UL 1577/ UL 508 (File No.E108430), FI EN60950 (File No.FI13698)

## Features

1. Normally Open, Single Pole Single Throw
2. Control 60V AC or DC Voltage
3. Switch 400mA Loads
4. LED control Current, 5mA
5. Low ON-Resistance
6.  $dv/dt$ , >500V/ms
7. Isolation Test Voltage, 3750VACrms



## Absolute Maximum Ratings

(Ta=25°C)

Emitter ( Input )		Detector ( Output )	
Reverse Voltage	5.0V	Output Breakdown Voltage	±60V
Continuous Forward Current	50mA	Continuous Load Current	±400mA
Peak Forward Current	1A	Power Dissipation	500mW
Power Dissipation	100mW		
Derate Linearly from 25°C	1.3mW/°C		
General Characteristics			
Isolation Test Voltage	3750VACrms	Storage Temperature Range	-40°C to +125°C
Isolation Resistance		Operating Temperature Range	-30°C to +85°C
Vio=500V, Ta=25°C	≥10 <sup>10</sup> Ω	Junction Temperature	100°C
Total Power Dissipation	550mW	Soldering Temperature,	
Derate Linearly from 25°C	2.5mW/°C	2mm from case, 10 sec	260°C

## Electro-optical Characteristics

(Ta=25°C)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
<b>Emitter (Input)</b>						
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 10mA		1.2	1.5	V
Operation Input Current	I <sub>FON</sub>	V <sub>L</sub> = ±20V, I <sub>L</sub> = 100mA, t = 10mS			5	mA
Recovery Input Current	I <sub>FOFF</sub>	V <sub>L</sub> = ±20V, I <sub>L</sub> ≤ 5uA	0.2			mA
<b>Detector (Output)</b>						
Output Breakdown Voltage	V <sub>B</sub>	I <sub>B</sub> = 50uA	60			V
Output Off-State Leakage	I <sub>TOFF</sub>	V <sub>T</sub> = 60V, I <sub>F</sub> = 0mA		0.2	1	uA
I/O Capacitance	C <sub>ISO</sub>	I <sub>F</sub> = 0, f = 1MHz		6		pF
ON Resistance	R <sub>ON</sub>	I <sub>L</sub> = 100mA, I <sub>F</sub> = 10mA		0.83	2.50	Ω
Turn-On Time	T <sub>ON</sub>	I <sub>F</sub> = 10mA, V <sub>L</sub> = ±20V		0.2	1.5	ms
Turn-Off Time	T <sub>OFF</sub>	t = 10ms, I <sub>L</sub> = ±100mA		0.3	1.5	ms

## Schematic and Wiring Diagrams

Type	Schematic	Output configuration	Load	Connection	Wiring Diagrams
KAQW212 & KAQW212A		2a	AC/DC	-	<p>(1) Two independent 1 Form A use</p> <p>(2) 2 Form A use</p>

## Data Curve

