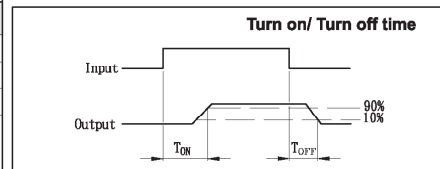
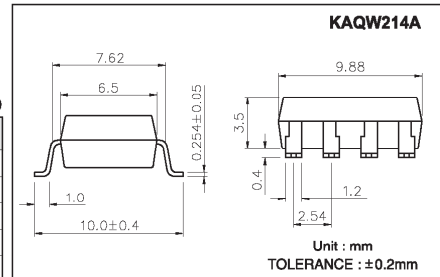
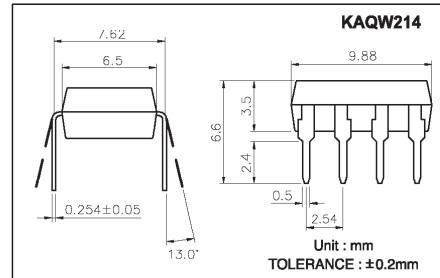


# cosmo High Voltage, Solid State Relay-MOSFET Output **KAQW214/214A**

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

## Features

1. Normally Open, Single Pole Single Throw
2. Control 400VAC or DC Voltage
3. Switch 130mA 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 .....	±400V
Continuous Forward Current .....	50mA	Continuous Load Current .....	±130mA
Peak Forward Current .....	1A	Power Dissipation .....	500mW
Power Dissipation .....	100mW		
Derate Linearly from 25°C .....	1.3mW/°C		
<b>General Characteristics</b>			
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	400			V
Output Off-State Leakage	I <sub>TOFF</sub>	V <sub>T</sub> = 100V, 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		20	30	Ω
Turn-On Time	T <sub>ON</sub>	I <sub>F</sub> = 10mA, V <sub>L</sub> = ±20V		0.3	1.0	ms
Turn-Off Time	T <sub>OFF</sub>	t = 10ms, I <sub>L</sub> = ±100mA		0.7	1.5	ms

## Schematic and Wiring Diagrams

Type	Schematic	Output configuration	Load	Connection	Wiring Diagrams
KAQW214 & KAQW214A		2a	AC/DC	-	<p>(1) Two independent 1 Form A use</p> <p>(2) 2 Form A use</p>

## Data Curve

