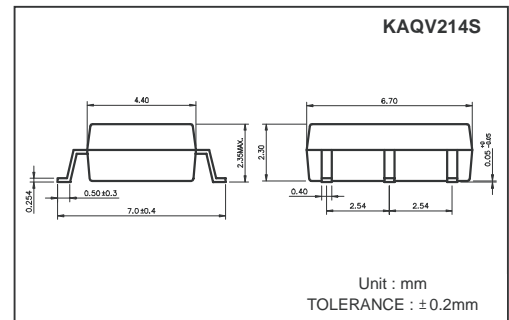


# COSMO High Voltage, Solid State Relay-MOSFET Output KAQV214S

UL 1577/ UL 508 (File No.E108430), FI EN60950 (File No.F113698)

## Features

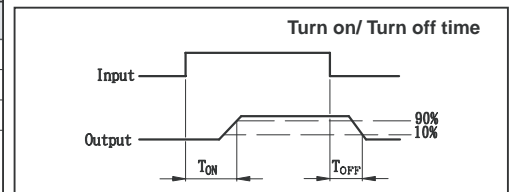
1. Normally Open, Single Pole Single Throw
2. Control 400VAC or DC Voltage
3. Switch 130mA Loads
4. LED control Current, 5mA
5. Low ON-Resistance
6.  $dv/dt$ , >500V/ms
7. Isolation Test Voltage, 1500VACrms



## Absolute Maximum Ratings

( $T_a=25^\circ\text{C}$ )

Emitter ( Input )		Detector ( Output )	
Reverse Voltage.....	5.0V	Output Breakdown Voltage .....	$\pm 400\text{V}$
Continuous Forward Current .....	50mA	Continuous Load Current .....	$\pm 130\text{mA}$
Peak Forward Current .....	1A	Power Dissipation .....	500mW
Power Dissipation .....	100mW		
Derate Linearly from $25^\circ\text{C}$ .....	1.3mW/ $^\circ\text{C}$		
General Characteristics			
Isolation Test Voltage.....	1500VACrms	Storage Temperature Range ...	$-40^\circ\text{C}$ to $+125^\circ\text{C}$
Isolation Resistance		Operating Temperature Range...	$-30^\circ\text{C}$ to $+85^\circ\text{C}$
$V_{io}=500\text{V}$ , $T_a=25^\circ\text{C}$ .....	$\geq 10^{10}\Omega$	Junction Temperature.....	$100^\circ\text{C}$
Total Power Dissipation .....	550mW	Soldering Temperature,	
Derate Linearly from $25^\circ\text{C}$ .....	2.5mW/ $^\circ\text{C}$	2mm from case, 10 sec .....	$260^\circ\text{C}$



## Electro-optical Characteristics

( $\bar{V}=25^\circ\text{C}$ )

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
<b>Emitter (Input)</b>						
Forward Voltage	$V_F$	$I_F=10\text{mA}$		1.2	1.5	V
Operation Input Current	$I_{FON}$	$V_L=\pm 20\text{V}$ , $I_L=100\text{mA}$ , $t=10\text{ms}$			5	mA
Recovery Input Current	$I_{FOFF}$	$V_L=\pm 20\text{V}$ , $I_L\leq 5\mu\text{A}$	0.2			mA
<b>Detector (Output)</b>						
Output Breakdown Voltage	$V_B$	$I_B=50\mu\text{A}$	400			V
Output Off-State Leakage	$I_{TOFF}$	$V_T=100\text{V}$ , $I_F=0\text{mA}$		0.2	1	$\mu\text{A}$
I/O Capacitance	CISO	$I_F=0$ , $f=1\text{MHz}$		6		pF
ON Resistance	Connection	A	$I_L=100\text{mA}$ , $I_F=10\text{mA}$	20	30	$\Omega$
		B		10	15	
		C		5	7.5	
Turn-On Time	$T_{ON}$	$I_F=10\text{mA}$ , $V_L=\pm 20\text{V}$		0.3	1.0	ms
Turn-Off Time	$T_{OFF}$	$t=10\text{ms}$ , $I_L=\pm 100\text{mA}$		0.7	1.5	ms

## Schematic and Wiring Diagrams

Type	Schematic	Output configuration	Load	Connection	Wiring Diagrams
KAQV214S		1a	AC/DC	A	
			DC	B	
			DC	C	

## Data Curve

