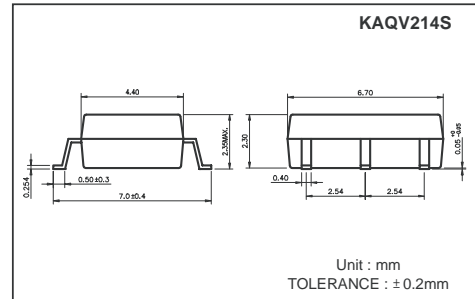


# cosmo High Voltage, Solid State Relay-MOSFET Output KAQV214S

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

## Features

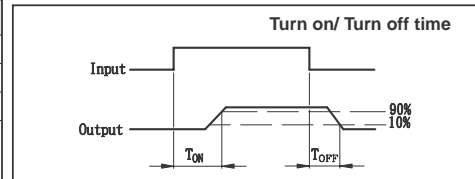
1. Normally Open, Single Pole Single Throw
2. Control 400VAC or DC Voltage
3. Switch 130mA Loads
4. LED control Current, 5mA
5. Low ON-Resistance
6.  $dv/dt$ , >500V/ms
7. Isolation Test Voltage, 1500VACrms



## Absolute Maximum Ratings

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

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	
General Characteristics	
Isolation Test Voltage.....1500VACrms	Storage Temperature Range...-40°C to +125°C
Isolation Resistance	Operating Temperature Range...-30°C to +85°C
$V_{io}=500V, T_a=25^\circ\text{C}$ ..... $\geq 10^{10}\Omega$	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

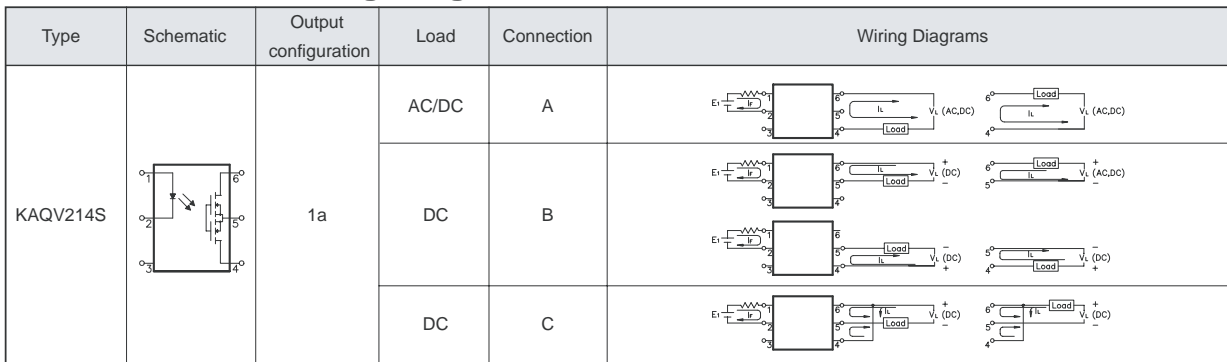


## Electro-optical Characteristics

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

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Emitter (Input)						
Forward Voltage	$V_F$	$I_F = 10\text{mA}$		1.2	1.5	V
Operation Input Current	$I_{FON}$	$V_L = \pm 20V, I_L = 100\text{mA}, t = 10\text{ms}$			5	mA
Recovery Input Current	$I_{FOFF}$	$V_L = \pm 20V, I_L \leq 5\mu\text{A}$	0.2			mA
Detector (Output)						
Output Breakdown Voltage	$V_B$	$I_B = 50\mu\text{A}$	400			V
Output Off-State Leakage	$I_{TOFF}$	$V_T = 100V, I_F = 0\text{mA}$		0.2	1	$\mu\text{A}$
I/O Capacitance	$C_{ISO}$	$I_F = 0, f = 1\text{MHz}$		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	$T_{ON}$	$I_F = 10\text{mA}, V_L = \pm 20V$		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



## Data Curve

