

COSMO High Voltage, Solid State Relay-MOSFET Output KAQW214/214A

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

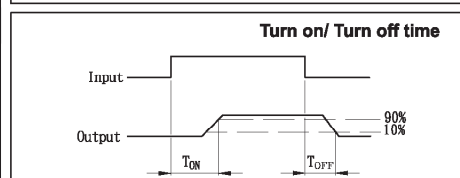
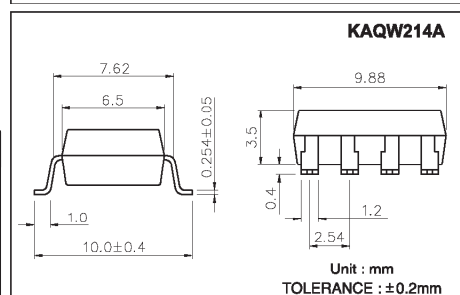
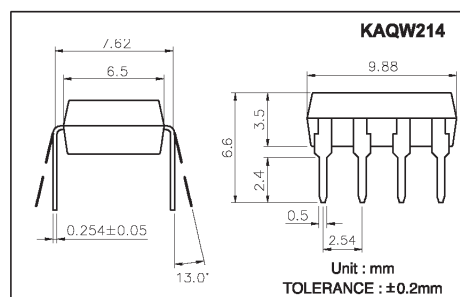
Features

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

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

Emitter (Input)	Detector (Output)
Reverse Voltage5.0V	Output Breakdown Voltage $\pm 400\text{V}$
Continuous Forward Current50mA	Continuous Load Current $\pm 130\text{mA}$
Peak Forward Current1A	Power Dissipation500mW
Power Dissipation100mW	
Derate Linearly from 25°C1.3mW/°C	
General Characteristics	
Isolation Test Voltage3750VACrms	Storage Temperature Range ...-40°C to +125°C
Isolation Resistance	Operating Temperature Range ...-30°C to +85°C
$V_{io}=500\text{V}$, $T_a=25^\circ\text{C}$ $\geq 10^{10}\Omega$	Junction Temperature.....100°C
Total Power Dissipation550mW	Soldering Temperature,
Derate Linearly from 25°C2.5mW/°C	2mm from case, 10 sec260°C



Electro-optical Characteristics

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

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}	$V_L=\pm 20\text{V}$, $I_L=100\text{mA}$, $t=10\text{ms}$			5	mA
Recovery Input Current	I_{FOFF}	$V_L=\pm 20\text{V}$, $I_L\leq 5\mu\text{A}$	0.2			mA
Detector (Output)						
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	μA
I/O Capacitance	C_{ISO}	$I_F=0$, $f=1\text{MHz}$		6		pF
ON Resistance	R_{ON}	$I_L=100\text{mA}$, $I_F=10\text{mA}$		20	30	Ω
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
KAQW214 & KAQW214A		2a	AC/DC	-	<p>(1) Two independent 1 Form A use</p> <p>(2) 2 Form A use</p>

Data Curve

