

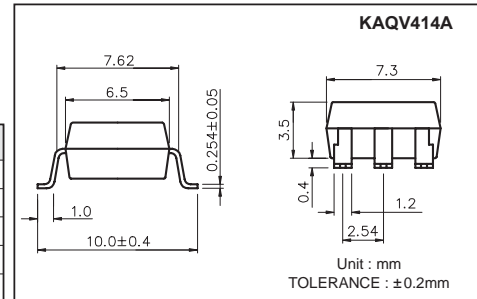
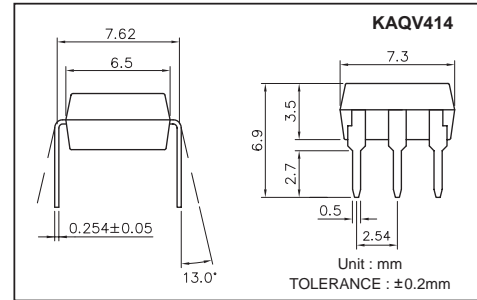
High Voltage, Photo Mos Relay

KAQV414/414A

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

Features

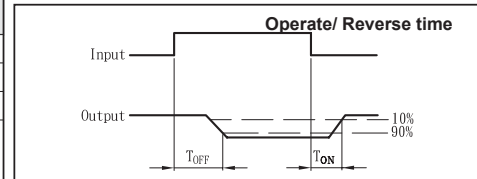
1. Normally Close, Single Pole Single Throw
2. Control 400VAC or DC Voltage
3. Switch 130mA Loads
4. LED control Current, 5mA
5. Low ON-Resistance
6. dv/dt, >500V/ms
7. Isolation Test Voltage, 3750VACrms



Absolute Maximum Ratings

(Ta=25°C)

Emitter (Input)	Detector (Output)
Reverse Voltage.....5.0V	Output Breakdown Voltage±400V
Continuous Forward Current50mA	Continuous Load Current±130mA
Peak Forward Current1A	Power Dissipation500mW
Power Dissipation100mW	
Derate Linearly from 25°C1.3mW/°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 ¹⁰ Ω	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

(Ta=25°C)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit	
Emitter (Input)							
Forward Voltage	V _F	I _F = 10mA		1.2	1.5	V	
Operation Input Current	I _{OFF}	V _L = ±20V, I _L ≤ 5μA			5	mA	
Recovery Input Current	I _{ON}	V _L = ±20V, I _L = 100mA, t = 10ms	0.2			mA	
Detector (Output)							
Output Breakdown Voltage	V _B	I _B = 50μA	400			V	
Output Off-State Leakage	I _{TOFF}	V _T = 100V, I _F = 10mA		0.2	2	μA	
I/O Capacitance	C _{ISO}	I _F = 0, f = 1MHz		6		pF	
ON Resistance	Connection	A	R _{ON}	I _L = 100mA, I _F = 10mA	40	50	Ω
		B			20	25	
		C			10	12.5	
Reverse (ON) Time	T _{ON}	I _F = 10mA, V _L = ±20V		0.6	1.5	ms	
Operate (OFF) Time	T _{OFF}	t = 10ms, I _L = ±100mA		0.3	1.0	ms	

Mos Relay Schematic and Wiring Diagrams

Type	Schematic	Output configuration	Load	Connection	Wiring Diagrams
KAQV414 & KAQV414A		1a	AC/DC	A	
			DC	B	
			DC	C	

Data Curve

