

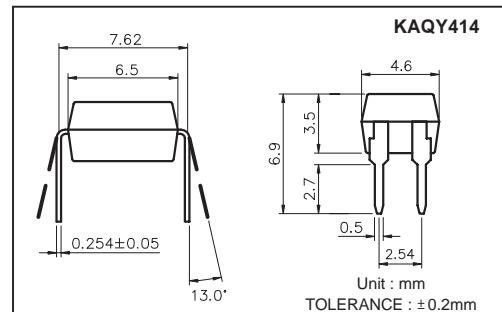


High Voltage, Solid State Relay-MOSFET Output **KAQY414/414A**

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

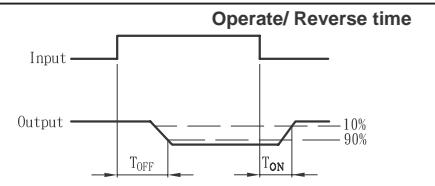
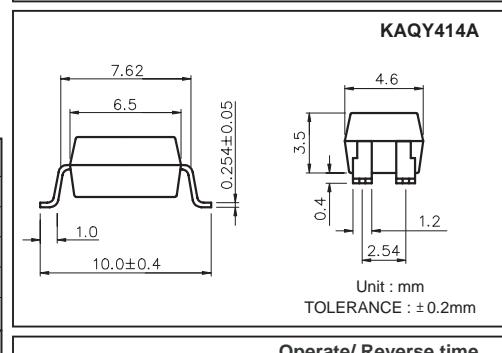
Features

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

Emitter (Input)	Detector (Output)	(Ta=25°C)
Reverse Voltage	5.0V	Output Breakdown Voltage $\pm 400V$
Continuous Forward Current	50mA	Continuous Load Current $\pm 130mA$
Peak Forward Current	1A	Power Dissipation 500mW
Power Dissipation	100mW	
Derate Linearly from 25°C	1.3mW/°C	
General Characteristics		
Isolation Test Voltage	3750VACrms	Storage Temperature Range -40°C to +125°C
Isolation Resistance	$\geq 10^{10}\Omega$	Operating Temperature Range -30°C to +85°C
Vio=500V, Ta=25°C		Junction Temperature 100°C
Total Power Dissipation	550mW	Soldering Temperature, 2mm from case, 10 sec 260°C
Derate Linearly from 25°C	2.5mW/°C	



Electro-optical Characteristics

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

Mos Relay Schematic and Wiring Diagrams

Type	Schematic	Output configuration	Load	Connection	Wiring Diagrams
KAQY414 & KAQY414A		1b	AC/DC	—	

Data Curve

