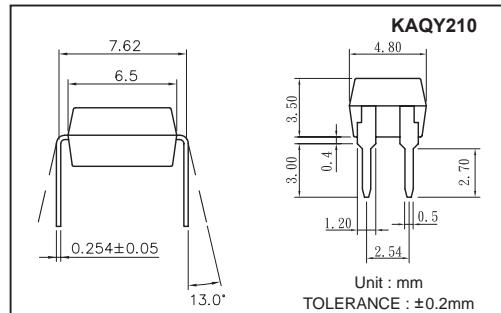


Features

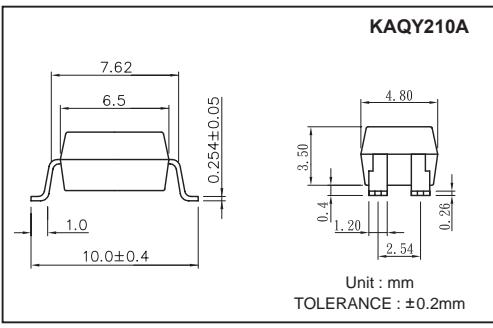
1. Normally Open, Single Pole Single Throw
2. Control 350VAC or DC Voltage
3. Switch 130mA Loads
4. LED control Current, 5mA
5. Low ON-Resistance
6. dv/dt, >500V/ms
7. Isolation Test Voltage, 3750VACrms



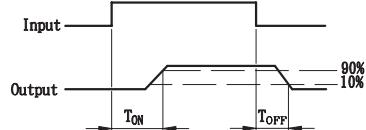
Absolute Maximum Ratings

(Ta=25°C)

Emitter (Input)	Detector (Output)
Reverse Voltage.....5.0V	Output Breakdown Voltage±350V
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



Turn on/ Turn off time



Electro-optical Characteristics

(Ta=25°C)

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	350			V
Output Off-State Leakage	I _{OFF}	VT =100V, IF =0mA	0.2	1		μA
I/O Capacitance	C _{ISO}	IF =0, f =1MHz	6			pF
ON Resistance	R _{ON}	IL =100mA, IF =0mA	20	30		Ω
Turn-On Time	T _{ON}	IF =10mA, VL =±20V	0.3	1.0		ms
Turn-Off Time	T _{OFF}	t =10ms, IL =±100mA	0.7	1.5		ms

Mos Relay Schematic and Wiring Diagrams

Type	Schematic	Output configuration	Load	Connection	Wiring Diagrams
KAQY210 & KAQY210A		1a	AC/DC	-	

Data Curve

<p>Fig.1 Load current vs. ambient temperature Allowable ambient temperature: -40°C to +85°C</p> <table border="1"> <thead> <tr> <th>Ambient Temperature Ta (°C)</th> <th>Load Current (mA)</th> </tr> </thead> <tbody> <tr><td>-40</td><td>130</td></tr> <tr><td>0</td><td>120</td></tr> <tr><td>20</td><td>100</td></tr> <tr><td>40</td><td>80</td></tr> <tr><td>60</td><td>60</td></tr> <tr><td>80</td><td>40</td></tr> <tr><td>85</td><td>70</td></tr> </tbody> </table>	Ambient Temperature Ta (°C)	Load Current (mA)	-40	130	0	120	20	100	40	80	60	60	80	40	85	70	<p>Fig.2 On resistance vs. ambient temperature Across terminals 3 and 4 pin LED current: 5mA Continuous load current: 130mA(DC)</p> <table border="1"> <thead> <tr> <th>Ambient Temperature Ta (°C)</th> <th>On Resistance (Ω)</th> </tr> </thead> <tbody> <tr><td>-40</td><td>15</td></tr> <tr><td>0</td><td>18</td></tr> <tr><td>20</td><td>22</td></tr> <tr><td>40</td><td>26</td></tr> <tr><td>60</td><td>30</td></tr> <tr><td>80</td><td>34</td></tr> </tbody> </table>	Ambient Temperature Ta (°C)	On Resistance (Ω)	-40	15	0	18	20	22	40	26	60	30	80	34	<p>Fig.3 Turn on time vs. ambient temperature Load voltage 350V(DC) LED current: 5mA Continuous load current: 130mA(DC)</p> <table border="1"> <thead> <tr> <th>Ambient Temperature Ta (°C)</th> <th>Turn on Time Msec</th> </tr> </thead> <tbody> <tr><td>-40</td><td>0.1</td></tr> <tr><td>0</td><td>0.2</td></tr> <tr><td>20</td><td>0.4</td></tr> <tr><td>40</td><td>0.8</td></tr> <tr><td>60</td><td>1.6</td></tr> <tr><td>80</td><td>3.2</td></tr> <tr><td>85</td><td>1.2</td></tr> </tbody> </table>	Ambient Temperature Ta (°C)	Turn on Time Msec	-40	0.1	0	0.2	20	0.4	40	0.8	60	1.6	80	3.2	85	1.2																																								
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