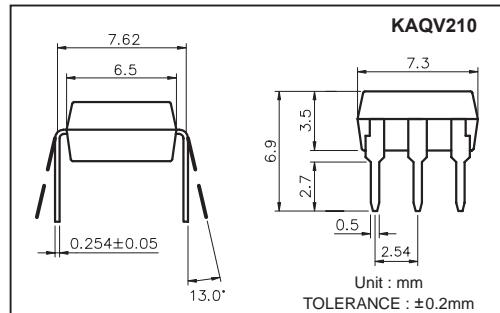


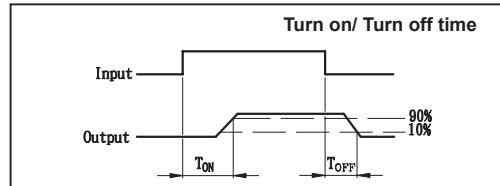
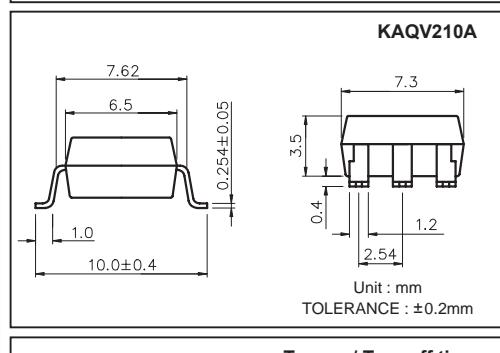
Features

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

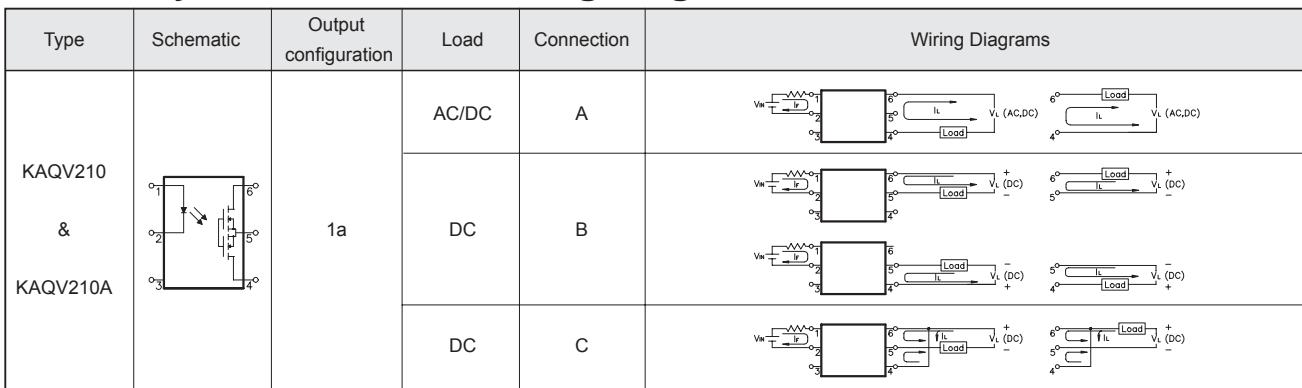
		(Ta=25°C)
Emitter (Input)	Detector (Output)	
Reverse Voltage.....	5.0V	Output Breakdown Voltage±350V
Continuous Forward Current	50mA	Continuous Load Current±130mA
Peak Forward Current	1A	Power Dissipation500mW
Power Dissipation	100mW	
Derate Linearly from 25°C	1.3mW/°C	
General Characteristics		
Isolation Test Voltage.....	3750VACrms	Storage Temperature Range ...-40°C to +125°C
Isolation Resistance		Operating Temperature Range...-30°C to +85°C
Vio=500V, Ta=25°C	≥10 ¹⁰ Ω	Junction Temperature.....100°C
Total Power Dissipation	550mW	Soldering Temperature,
Derate Linearly from 25°C	2.5mW/°C	2mm from case, 10 sec260°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	IFON	VL =±20V, IL =100mA, t =10mS			5	mA	
Recovery Input Current	IOFF	VL =±20V, IL ≤5μA	0.2			mA	
Detector (Output)							
Output Breakdown Voltage	VB	IB=50μA	350			V	
Output Off-State Leakage	ITOFF	VT =100V, IF =0mA	0.2	1	1	uA	
I/O Capacitance	CISO	IF =0, f =1MHz	6			pF	
ON Resistance	Connection	RON	IL =100mA, IF =10mA	20	30	Ω	
				10	15		
				5	7.5		
Turn-On Time		TON	IF =10mA, VL =±20V t =10ms, IL =±100mA	0.3	1.0	ms	
Turn-Off Time		TOFF		0.7	1.5	ms	

Mos Relay Schematic and Wiring Diagrams



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>130</td></tr> <tr><td>20</td><td>130</td></tr> <tr><td>40</td><td>110</td></tr> <tr><td>60</td><td>80</td></tr> <tr><td>80</td><td>65</td></tr> <tr><td>85</td><td>60</td></tr> </tbody> </table>	Ambient Temperature Ta (°C)	Load Current (mA)	-40	130	0	130	20	130	40	110	60	80	80	65	85	60	<p>Fig.2 On resistance vs. ambient temperature Across terminals 4 and 6 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>18</td></tr> <tr><td>0</td><td>18</td></tr> <tr><td>20</td><td>20</td></tr> <tr><td>40</td><td>25</td></tr> <tr><td>60</td><td>30</td></tr> <tr><td>80</td><td>30</td></tr> </tbody> </table>	Ambient Temperature Ta (°C)	On Resistance (Ω)	-40	18	0	18	20	20	40	25	60	30	80	30	<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>0.15</td></tr> <tr><td>20</td><td>0.25</td></tr> <tr><td>40</td><td>0.4</td></tr> <tr><td>60</td><td>0.7</td></tr> <tr><td>80</td><td>1.2</td></tr> </tbody> </table>	Ambient Temperature Ta (°C)	Turn on Time Msec	-40	0.1	0	0.15	20	0.25	40	0.4	60	0.7	80	1.2																																				
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<p>Fig.4 Turn off time vs. ambient temperature LED current: 5mA; Load voltage: 350V(DC) Continuous load current: 130mA(DC)</p> <table border="1"> <thead> <tr> <th>Ambient Temperature Ta (°C)</th> <th>Turn off Time Msec</th> </tr> </thead> <tbody> <tr><td>-40</td><td>1.0</td></tr> <tr><td>0</td><td>0.8</td></tr> <tr><td>20</td><td>0.6</td></tr> <tr><td>40</td><td>0.4</td></tr> <tr><td>60</td><td>0.3</td></tr> <tr><td>80</td><td>0.3</td></tr> </tbody> </table>	Ambient Temperature Ta (°C)	Turn off Time Msec	-40	1.0	0	0.8	20	0.6	40	0.4	60	0.3	80	0.3	<p>Fig.5 LED operate vs. ambient temperature Load voltage 350V(DC) Continuous load current: 130mA(DC)</p> <table border="1"> <thead> <tr> <th>Ambient Temperature Ta (°C)</th> <th>LED Operate Current (mA)</th> </tr> </thead> <tbody> <tr><td>-40</td><td>1.5</td></tr> <tr><td>0</td><td>1.8</td></tr> <tr><td>20</td><td>2.2</td></tr> <tr><td>40</td><td>2.6</td></tr> <tr><td>60</td><td>3.0</td></tr> <tr><td>80</td><td>4.0</td></tr> </tbody> </table>	Ambient Temperature Ta (°C)	LED Operate Current (mA)	-40	1.5	0	1.8	20	2.2	40	2.6	60	3.0	80	4.0	<p>Fig.6 LED turn off current vs. ambient temperature Load voltage 350V(DC) Continuous load current: 130mA(DC)</p> <table border="1"> <thead> <tr> <th>Ambient Temperature Ta (°C)</th> <th>LED Turn off Current (mA)</th> </tr> </thead> <tbody> <tr><td>-40</td><td>0.5</td></tr> <tr><td>0</td><td>0.6</td></tr> <tr><td>20</td><td>0.8</td></tr> <tr><td>40</td><td>1.0</td></tr> <tr><td>60</td><td>1.2</td></tr> <tr><td>80</td><td>2.5</td></tr> </tbody> </table>	Ambient Temperature Ta (°C)	LED Turn off Current (mA)	-40	0.5	0	0.6	20	0.8	40	1.0	60	1.2	80	2.5																																						
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<p>Fig.7 LED dropout voltage vs. ambient temperature LED current: 5 to 50mA</p> <table border="1"> <thead> <tr> <th>Ambient Temperature Ta (°C)</th> <th>5mA</th> <th>10mA</th> <th>20mA</th> <th>30mA</th> <th>50mA</th> </tr> </thead> <tbody> <tr><td>-40</td><td>1.5</td><td>1.5</td><td>1.5</td><td>1.5</td><td>1.5</td></tr> <tr><td>0</td><td>1.4</td><td>1.4</td><td>1.4</td><td>1.4</td><td>1.4</td></tr> <tr><td>20</td><td>1.3</td><td>1.3</td><td>1.3</td><td>1.3</td><td>1.3</td></tr> <tr><td>40</td><td>1.2</td><td>1.2</td><td>1.2</td><td>1.2</td><td>1.2</td></tr> <tr><td>60</td><td>1.1</td><td>1.1</td><td>1.1</td><td>1.1</td><td>1.1</td></tr> <tr><td>80</td><td>1.0</td><td>1.0</td><td>1.0</td><td>1.0</td><td>1.0</td></tr> </tbody> </table>	Ambient Temperature Ta (°C)	5mA	10mA	20mA	30mA	50mA	-40	1.5	1.5	1.5	1.5	1.5	0	1.4	1.4	1.4	1.4	1.4	20	1.3	1.3	1.3	1.3	1.3	40	1.2	1.2	1.2	1.2	1.2	60	1.1	1.1	1.1	1.1	1.1	80	1.0	1.0	1.0	1.0	1.0	<p>Fig.8 Voltage vs. current characteristics of output at MOS FET portion Measured portion: across terminals 4 and 6 pin Ambient temperature: 25°C</p> <table border="1"> <thead> <tr> <th>Voltage (V)</th> <th>Current (mA)</th> </tr> </thead> <tbody> <tr><td>-5</td><td>-10</td></tr> <tr><td>-4</td><td>-20</td></tr> <tr><td>-3</td><td>-30</td></tr> <tr><td>-2</td><td>-40</td></tr> <tr><td>-1</td><td>-50</td></tr> <tr><td>0</td><td>0</td></tr> <tr><td>1</td><td>10</td></tr> <tr><td>2</td><td>20</td></tr> <tr><td>3</td><td>30</td></tr> <tr><td>4</td><td>40</td></tr> <tr><td>5</td><td>50</td></tr> </tbody> </table>	Voltage (V)	Current (mA)	-5	-10	-4	-20	-3	-30	-2	-40	-1	-50	0	0	1	10	2	20	3	30	4	40	5	50	<p>Fig.9 Off state leakage current Across terminals 4 and 6 pin Ambient temperature: 25°C</p> <table border="1"> <thead> <tr> <th>Load Voltage (V)</th> <th>Off State Leakage Current (mA)</th> </tr> </thead> <tbody> <tr><td>0</td><td>1e-12</td></tr> <tr><td>20</td><td>1e-11</td></tr> <tr><td>40</td><td>1e-10</td></tr> <tr><td>60</td><td>1e-09</td></tr> <tr><td>80</td><td>1e-08</td></tr> <tr><td>100</td><td>1e-07</td></tr> </tbody> </table>	Load Voltage (V)	Off State Leakage Current (mA)	0	1e-12	20	1e-11	40	1e-10	60	1e-09	80	1e-08	100	1e-07
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