

PhotoMOS

7
RELAYS

		GU SOP Type						
		1b Types		1b Types		2a Types		2a MOSFET & optocoupler
		AC/DC Type		AC/DC Type		AC/DC Type		AC/DC Type
		4-Pin		6-Pin				
• Type of relay								
• Features		<ul style="list-style-type: none"> • Super miniature design • SOP (1 Form B) 4-pin type 		<ul style="list-style-type: none"> • Ultra small size • SOP (1 Form B) 6-pin type 		<ul style="list-style-type: none"> • 2-channel in SO package 		<ul style="list-style-type: none"> • 2-channel (MOSFET & optocoupler type)
Part No.		AQY414S		AQV414S		AQW210S AQW214S		AQW210TS
Load voltage*		Peak AC 400 V DC 400 V		400 V 400 V		350 V 400 V 350 V 400 V		350 V BV _{CEC} 30 V
• Output		Continuous load current		0.1 A		0.1 A 0.08 A		0.12 A CTR value Min. 33% Typ. 100%
Peak load current		0.24 A		0.3 A		0.3 A 0.24 A		0.36 A
Power dissipation*		300 mW		450 mW		600 mW		400 mW 150 mW
ON resistance		Typical 26 Ω Maximum 35 Ω		26 Ω 50 Ω		16 Ω 30 Ω 35 Ω 50 Ω		16 Ω Saturation voltage 0.08 V 0.5 V
Output capacitance (Typical)		100 pF		100 pF		45 pF		45 pF 6 pF
Off state leakage current		Max. 1 μA		Max. 1 μA		Max. 1 μA		Max. 1 μA Max. 500 nA
LED forward current*		50 mA		50 mA		50 mA		50 mA
LED reverse voltage*		3 V		3 V		3 V		3 V
Peak forward current		1 A		1 A		1 A		1 A
Power dissipation*		75 mW		75 mW		75 mW		75 mW 75 mW
• Input		LED operate current (LED operate (OFF) current)		Typical 0.9 mA Maximum 3.0 mA		0.9 mA 3.0 mA		0.9 mA 3.0 mA 2 mA 6 mA
LED turn off current (LED reverse (ON) current)		Minimum 0.4 mA Typical 0.85 mA		0.4 mA 0.55 mA		0.4 mA 0.8 mA		0.4 mA 0.8 mA 5 μA 35 μA
LED dropout voltage (I _F = 5 mA)		Typical 1.14 V Maximum 1.5 V		1.14 V 1.5 V		1.14 V 1.5 V		1.14 V 1.5 V
• Switching speed		Turn on time (Operate (OFF) time)		Typical 0.47 ms Maximum 1.0 ms		0.23 ms 0.21 ms 0.5 ms 0.5 ms		0.23 ms 0.01 ms 0.5 ms —
Turn off time (Reverse (ON) time)		Typical 0.28 ms Maximum 1.0 ms		0.28 ms 1 ms		0.04 ms 0.2 ms		0.04 ms 0.03 ms 0.2 ms —
• Total power dissipation*		350 mW		500 mW		650 mW		650 mW
• I/O isolation voltage*		1,500 V AC		1,500 V AC		1,500 V AC		1,500 V AC (Between input and output/ between contact sets)
• Temperature limits		Operating* -40°C to +85°C -40°F to +185°F Storage* -40°C to +100°C -40°F to +212°F		-40°C to +85°C -40°F to +185°F -40°C to +100°C -40°F to +212°F		-40°C to +85°C -40°F to +185°F -40°C to +100°C -40°F to +212°F		-40°C to +85°C -40°F to +185°F -40°C to +100°C -40°F to +212°F
• I/O capacitance		Typical — Maximum 1.5 pF		0.8 pF 1.5 pF		0.8 pF 1.5 pF		0.8 pF 1.5 pF
• Initial I/O isolation resistance		Min. 1,000 MΩ		Min. 1,000 MΩ		Min. 1,000 MΩ		Min. 1,000 MΩ
• Terminal layout (100, inch grid)		Recommended mounting pad (Top view) 		Recommended mounting pad (Top view) 		Recommended mounting pad (Top view) 		
• Standards		UL (E43149), CSA (LR26550), TÜV, BSI		UL (E43149), CSA (LR26550), TÜV		UL (E43149), CSA (LR26550), TÜV, BSI		
• Mounting method								

Note: Meaning of symbol marks ◻ : PC board terminal; □ : Surface-mounting