

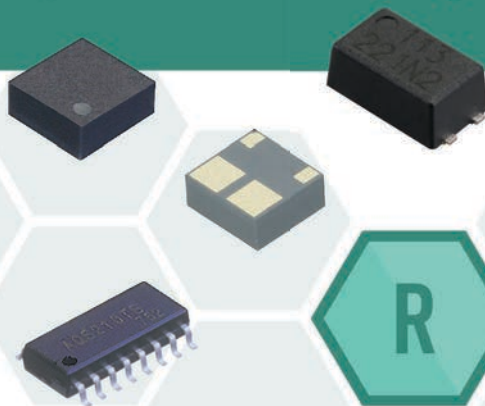
Panasonic



R

PhotoMOS[®]

Optically Isolated Solid State Relays



Design and specifications are subject to change without notice.
Please review technical specifications before purchase.

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PhotoMOS Brochure, FY16-081-xxxx

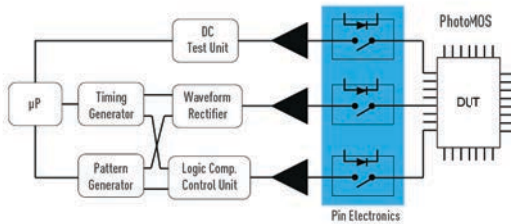
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Part Number Builder

Prefix	# Term	Output	Type	V-load	Function	Isolation	PKG.	T/R-Tube
AQ	A	B	C	D	E	F	G	H
A	Y: 4 pin				nil: Std		KL: SC Self Reset	
	V: 6 pin				D: V Drive		M: Soft On/Off	
	W: 8 pin				E: Std		P: DIA Config	
	S: 16 pin				G: High Current		R: Low Ron	
B	Z: SIL 4				L: Current Limit		T: Optocoupler	
					N: Low Cout		TZ: 2-Optocoupler	
					K: ShortCkt Prtctn		V: Varistor Prtctn	
C		1: 1FA (DC)						
		2: 1FA (AC/DC)						
		4: 1FB (AC/DC)						
		6: 1FA/B (AC/DC)						
D			0: HF (Low Ron)					
			1: GU (General Use)					
			2: RF (Low Ron Low Co)					
			3: HS (High Sensitivity)					
E			5: HE (Low Ron)					
			8: GU (General Use)					
F					nil: 1,500 V			
					H: 5,000 V			
G					nil: DIP (Through Hole)			
					A: DIP			
					S: SOP			
					T: VSSOP			
H					V: SSOP			
I					nil: Plastic Tube			
					W: T/R 3.5k			
					X: T/R 1k			
					Y: T/R 3.5k			
J					Z: T/R 1k			

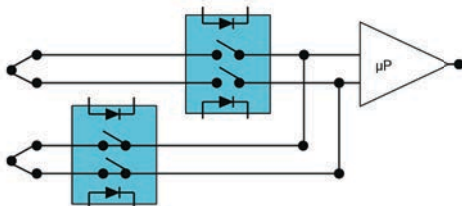
ATE (Automatic Test Equipment)

- IC/LSI Testers
- Battery Testers
- Board Testers
- LCD Testers



Thermocouple Switching

- Temperature Controls
- Data Acquisition Systems
- Programmable Controllers
- Multiplexers
- Scanners

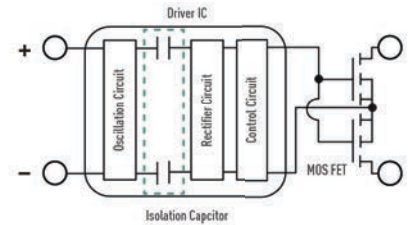


PhotoMOS CC TSON CxR

Capacitive Coupled Isolation Type

Panasonic has introduced a new technology that uses a voltage-driven method, with capacitive-coupled isolation (No LEDs in the input side) as opposed to current-driven, Optically Isolated Relays. The PhotoMOS CC Type Relays offer distinct benefits for certain markets including Test & Measurement, Safety & Security, and Industrial. These advantages include:

- Low Current Consumption (input current Max 0.2mA)
- High-Temperature Performance Guaranteed (Max 105°C or 221°F)
- Voltage Driven (3V to 5V)
- Low Output Capacitance and Low On Resistance
- Energy Savings and Increased Drivability (No LEDs on input side)

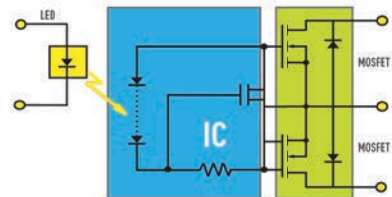


PhotoMOS

Optically Isolated Solid State Relays

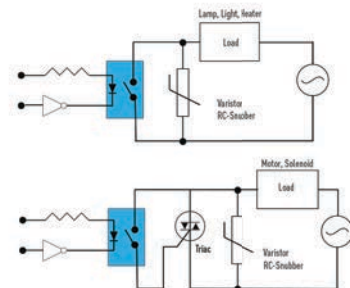
Panasonic's patented PhotoMOS Relays are optically isolated MOSFET Relays. The input has an LED which transmits light when activated to a series of photocells that, in turn, charges a pair of MOSFETs on the output side.

- Low Power Consumption
- No Arc
- No Noise
- No Contact Wear
- No Bounce

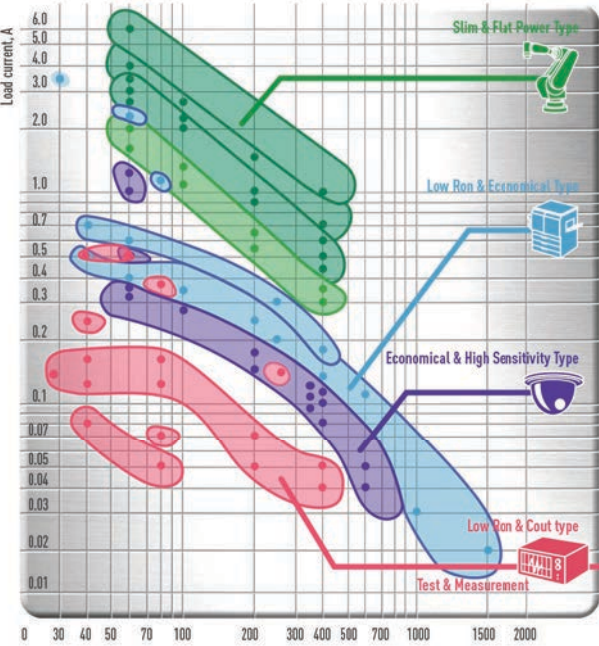


Industrial Controls

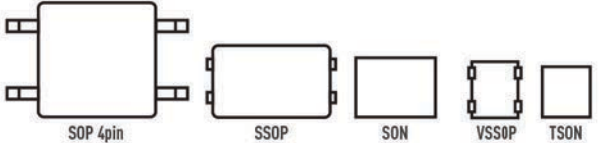
- Programmable
- Light Control Panels
- Automation
- Appliances



PhotoMOS Product Offering



PhotoMOS Sizing Comparison



Actual Size:



Please note, not all part numbers are shown in this guide, please consult with your local sales representative for other possible combinations.

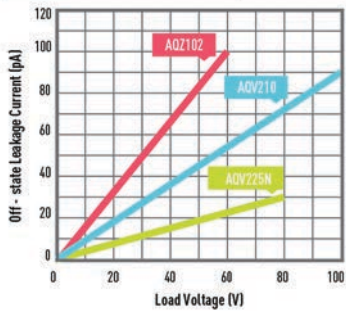
R.F. PhotoMOS (Test & Measurement)

P/N	Pkg.	Form Factor	Load Voltage (V)	Load Current (mA)	On Res. (Ron) Typ/Max (Ohm)	Turn on (Ton) Typ/Max in (mS)	Turn off time (Toff) Typ/Max (mS)	LED Turn off Typ/Max (mA)	LED op. Current Typ/Max (mA)	Output Cap. Typ/Max pF
VSSOP										
AQY221R2T	VSSOP	1A	40	0.12	0.8/1.25	0.1/0.5	0.06/0.2	0.1/0.4	0.5/3	14/18
AQY221N3TY(W)	VSSOP	1A	25	0.15	5.5/7.5	0.01/0.2	0.03/0.2	0.2/0.6	0.7/3	1.1/1.5
AQY221N2TW	VSSOP	1A	40	0.12	9.5/12.5	0.01/0.2	0.03/0.2	0.2/0.6	0.7/3	1.1/1.5
Low Cout Series										
AQY221N2S	SOP 4	1A	40	0.12	9.5	0.03/0.5	0.03/0.2	0.2/0.85	0.9/3	1/1.5
AQY221N2M	SON	1A	40	0.12	9.5	0.02/0.2	0.02/0.2	0.2/0.9	1.0/3	1.1/1.5
AQY221N3S	SOP 4	1A	40	0.15	5.5				1	
AQY221N3M	SON	1A	25	0.15	5.5	0.02/0.2	0.02/0.2	0.2/0.9	1.0/3.0	1.1/1.5
AQY225R2V	SSOP	1A	80	0.12	10.5	0.05/0.5	0.05/0.2	0.1/0.45	0.5/3	4.5/6
AQS221N2S	SOP 16	4A	40	0.06	9.5	0.03/0.2	0.03/0.2	0.1/0.85	0.9/3	1.0/1.5
Low Ron Series										
AQY221R2S	SOP 4	1A	40	0.25	0.8/1.25	0.1/0.5	0.06/0.2	0.1/0.4	0.5/3	13/18
AQY221R2V	SSOP	1A	40	0.25	0.8	0.1/0.5	0.08/0.2	0.1/0.8	0.9/3	12.5/18
AQY221R2T	VSSOP	1A	40	0.25	0.8/1.25	0.1/0.5	0.06/0.2	0.1/0.4	0.5/3	14/18
AQY221R4V	SSOP	1A	40	0.5	0.55/1	0.25/0.75	0.08/0.2	0.1/0.8	0.9/3	24/30
AQY225R1S	SOP 4	1A	80	0.35	0.8/1.2	0.25/0.75	0.08/0.2	0.1/0.45	0.5/3	37.5/45
AQY221R2S	SOP 4	1A	80	0.15	10.5/15	0.05/0.5	0.05/0.2	0.1/0.45	0.5/3	4.5/6
High Capacity Series										
AQV252G	DIP 6	1A	60	2.5A	0.08	1.1/5	0.25/0.5	0.2/0.45	0.5/3	240
AQV251G	DIP 7	1A	30	3.5A	0.035/0.04	1.1/5	0.1/0.5	0.2/0.45	0.55/3	330
AQY212GH	DIP 4	1A	60	1.1	0.34/0.7	1.3/5	0.1/0.5	0.3/1	1.1/3	220
AQY212G2S	SOP 4	1A	60	1.25	0.2/0.5	1.3/5	0.1/0.5	0.3/1	1.1/3	-
AQY212FG2S	SOP 4	1A	60	1.25	0.2/0.5	0.7/5	0.1/0.5	1.4/4	0.8/1.4	-
AQV255GS	SOP 6	1A	80	1.25	0.09/0.15	1.3/5	0.1/0.5	0.2/0.4	0.5/3	-
AQY222R1S	SOP 4	1A	60	0.5	0.8/1.2	0.15/0.5	0.06/0.2	0.1/0.45	0.5/3	24.5/30
High Voltage Series										
AQW227NS	SOP 8	2A	200	0.04	30/50	0.25/0.5	0.08/0.2	0.4/0.65	0.7/3	10.0/15.0
AQW223R2S	SOP 8	2A	250	0.14	11.0/15.0	0.15/0.5	0.05/0.2	0.1/0.45	0.5/3	33/40
AQY230S	SOP 4	1A	350	0.12	19/25	1.2/5	0.1/2	0.1/0.3	0.35/0.5	-
CC Series										
AQY2C1R6PX	TSON	1A	30V	0.75A	0.2/0.4	0.12/0.5	0.1/0.5	-	-	-
AQY2C1R2PX	TSON	1A	40V	0.3A	0.8/1.5	0.06/0.5	0.06/0.5	-	-	-

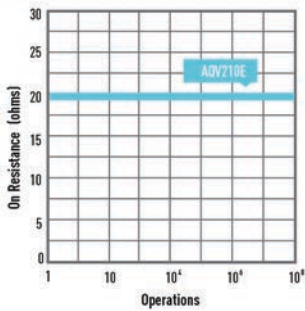
General Use PhotoMOS

P/N	Pkg.	Form Factor	Load Voltage (V)	Load Current (mA)	On Res. (Ron) Typ/Max (Ohm)	Turn on Typ/Max (mS)	Turn off Typ/Max (mS)	LED Turn off Typ/Max (mA)	LED op. Current Typ/Max (mA)
Standard									
AQY282SX	SOP 4	1A	60	500	0.85/2.5	0.9/3	0.5/2	0.2/1.6	1.8/3
AQY280SX	SOP 4	1A	350	120	20/25	0.3/3	0.5/2	0.2/1.6	1.8/3
AQY284SX	SOP 4	1A	400	100	28/35	0.3/3	0.5/2	0.2/1.6	1.8/3
AQW282SX	SOP 8	2A	60	350	0.85/2.5	0.9/3	0.5/2	0.2/1.6	1.8/3
AQW280SX	SOP 8	2A	350	100	20/25	0.3/3	0.5/2	0.2/1.6	1.8/3
AQW284SX	SOP 8	2A	400	80	28/35	0.3/3	0.5/2	0.2/1.6	1.8/3
AQY282EH	DIP 4	1A	60	500	0.85/2.5	1.8/5	0.5/2	0.2/1.6	1.8/3
AQY280EH	DIP 4	1A	350	130	20/25	1.5/5	0.5/2	0.2/1.6	1.8/3
AQY284EH	DIP 4	1A	400	120	28/35	1.5/5	0.5/2	0.2/1.6	1.8/3
AQW282EH	DIP 8	2A	60	400	0.85/2.5	1.8/5	0.5/2	0.2/1.6	1.8/3
AQW280EH	DIP 8	2A	350	120	20/25	1.5/5	0.5/2	0.2/1.6	1.8/3
AQW280EH	DIP 8	2A	400	100	28/35	1.5/5	0.5/2	0.2/1.6	1.8/3
High Performance									
AQY212S	SOP 4	1A	60	500	0.83/2.5	0.65/2	0.008/0.2	0.4/0.85	0.9/3
AQY210S	SOP 4	1A	350	120	17/25	0.23/0.5	0.04/0.2	0.4/0.85	0.9/3
AQY214S	SOP 4	1A	400	100	25/35	0.21/0.5	0.04/0.2	0.4/0.85	0.9/3
AQW212S	SOP 8	2A	60	400	0.83/2.5	0.65/2	0.008/0.2	0.4/0.85	0.9/3
AQW210S	SOP 8	2A	350	100	16/35	0.23/0.5	0.04/0.2	0.4/0.85	0.9/3
AQW214S	SOP 8	2A	400	80	30/50	0.21/0.5	0.04/0.2	0.4/0.85	0.9/3
AQY211EH	DIP 4	1A	30	1000	0.25/0.5	1.5/5	0.1/1	0.4/1.1	1.2/3
AQY212EH	DIP 4	1A	60	550	0.85/2.5	1.0/4.0	0.05/1	0.4/1.1	1.2/3
AQY210EH	DIP 4	1A	350	130	18/25	0.5/2	0.08/1	0.4/1.1	1.2/3
AQY214EH	DIP 4	1A	400	120	26/35	0.5/2	0.08/1	0.4/1.1	1.2/3
AQY216EH	DIP 4	1A	600	50	52/120	0.5/2	0.04/1	0.4/1.1	1.2/3
AQW212EH	DIP 8	2A	60	500	0.83/2.5	1.0/4.0	0.08/1	0.4/1.1	1.2/3
AQW210EH	DIP 8	2A	350	120	18/25	0.5/2	0.08/1	0.4/1.1	1.2/3
AQW214EH	DIP 8	2A	400	100	24/35	0.5/2	0.08/1	0.4/1.1	1.2/3
AQW216EH	DIP 8	2A	600	40	52/120	0.5/2	0.04/1	0.4/1.1	1.2/3

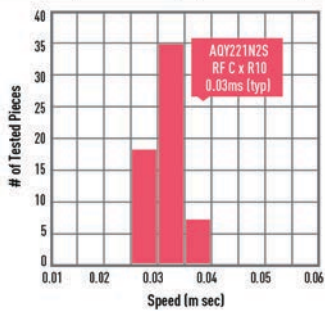
Off State Low Leakage Current



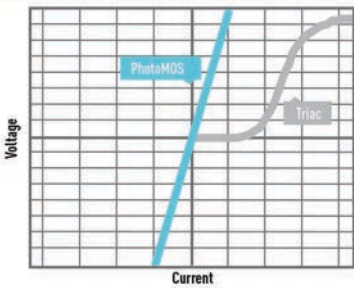
Stable On-Resistance



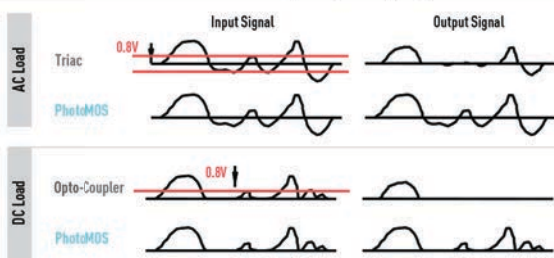
High Speed Switching Speed Test (60 pcs.)



High Linearity



No Output Signal Clipping



Long Product Life

