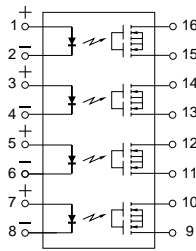
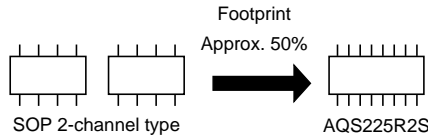


mm inch



2. 4-channel (4 Form A) of RF PhotoMOS Relays
3. SO package 16-pin type in super miniature design

The device comes in a super-miniature SO package measuring (W)10.37 × (L)4.4 × (H)2.1mm (W) .408×(L).173× (H).083inch— approx. 50% of the footprint size of 8-pin(2-channel) type.



4. Applicable for 4 Form A use, as well as 4 independent 1 Form A
5. Low capacitance between output terminals ensure high response speed:

The capacitance between output terminals is small, typically 4.5pF. This enables for a fast operation speed of 0.04ms(typ.).

6. Low-level off state leakage current
7. Controls low-level analog signals
PhotoMOS relays feature extremely low closed-circuit offset voltage to enable control of low-level analog signals without distortion

TYPICAL APPLICATIONS

For multi-circuit switching

1. Measuring instruments (probe cards, etc.)
2. Test equipment IC tester, Liquid crystal driver tester, semiconductor performance tester
3. Board tester Bear board tester, In-circuit tester, function tester
4. Medical equipment Ultrasonic wave diagnostic machine
5. Multi-point recorder Warping, thermo couple

FEATURES

1. High-level functions (high capacity and low on resistance)

Features: Compared to predecessor (AQS225S)

Type	AQS225S	AQS225R2S
C×R	*1 94.5pF·Ω (typ.)	*2 47.25pF·Ω (typ.)
Load current value	50mA	70mA

*1 4.5pF × 21Ω
*2 4.5pF × 10.5Ω

TYPES

Type	Output rating*		Part No.		Packing quantity in tape and reel
	Load voltage	Load current	Picked from the 1/2/3/4/5/6/7/8-pin side	Picked from the 9/10/11/12/13/14/15/16-pin side	
AC/DC type	80 V	70 mA	AQS225R2SX	AQS225R2SZ	1,000 pcs.

* Indicate the peak AC and DC values.

Notes: (1) Tape package is the standard packing style. Also available in tube. (Part No. suffix "X" or "Z" is not needed when ordering; Tube: 50 pcs.; Case: 1,000 pcs.)
(2) For space reasons, the package type indicator "X" and "Z" are omitted from the seal.

RATING

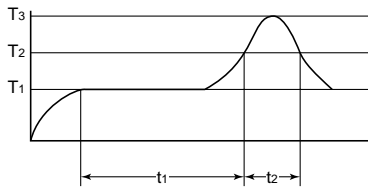
1. Absolute maximum ratings (Ambient temperature: 25°C 77°F)

Item		Symbol	AQS225R2S	Remarks
Input	LED forward current	I _F	50 mA	
	LED reverse voltage	V _R	5 V	
	Peak forward current	I _{FP}	1 A	f = 100 Hz, Duty factor = 0.1%
	Power dissipation	P _{in}	75 mW	
Output	Load voltage (peak AC)	V _L	80 V	
	Continuous load current (peak AC)	I _L	0.07 A	
	Peak load current	I _{peak}	0.2 A	100 ms (1 shot), V _L = DC
	Power dissipation	P _{out}	600 mW	
Total power dissipation		P _T	650 mW	
I/O isolation voltage		V _{iso}	1,500 V AC	
Temperature limits	Operating	T _{opr}	-40°C to +85°C -40°F to +185°F	Non-condensing at low temperatures
	Storage	T _{stg}	-40°C to +100°C -40°F to +212°F	

8. Soldering

When soldering this terminals, the following conditions are recommended.

(1) IR (Infrared reflow) soldering method



T₁ = 155 to 165°C 311 to 329°F
 T₂ = 180°C 200°C 356 to 392°F
 T₃ = 245°C 473°F or less
 t₁ = 120 s or less
 t₂ = 30 s or less

(2) Soldering iron method

Tip temperature: 280 to 300°C 536 to 572°F

Wattage: 30 to 60 W

Soldering time: within 5 s

(3) Others

Check mounting conditions before using other soldering methods (hot-air, hot plate, pulse heater, etc.)

- The temperature profile indicates the temperature of the soldered terminal on the surface of the PC board. The ambient temperature may increase excessively. Check the temperature under mounting conditions.

- The conditions for the infrared reflow soldering apply when preheating using the VPS method.

9. The following shows the packaging format

1) Tape and reel

mm inch

Type	Tape dimensions	Dimensions of paper tape reel
SO package 16-pin type	<p>(1) When picked from 1/2/3/4/5/6/7/8-pin side: Part No. AQS225R2SX (Shown above) (2) When picked from 9/10/11/12/13/14/15/16-pin side: Part No. AQS225R2SZ</p>	

10. Storage

PhotoMOS relays implemented in SO packages are sensitive to moisture and come in sealed moisture-proof packages. Observe the following cautions on storage.

- After the moisture-proof package is unsealed, take the devices out of storage as soon as possible (within 1 month at the most).
- If the devices are to be left in storage for a considerable period after the moisture-proof package has been unsealed, it is recommended to keep them in another moisture-proof bag containing silica gel (within 3 months at the most).

11. Transportation and storage

- Extreme vibration during transport will warp the lead or damage the relay. Handle the outer and inner boxes with care.
- Storage under extreme conditions will cause soldering degradation, external appearance defects, and deterioration of the characteristics. The following storage conditions are recommended:
 - Temperature: 0 to 45°C 32 to 113°F
 - Humidity: Less than 70% R.H.
 - Atmosphere: No harmful gasses such as sulfurous acid gas, minimal dust.

12. Notes for mounting

- If many different packages are combined on a single substrate, then lead temperature rise is highly dependent on package size. For this reason, please make sure that the temperature of the terminal solder area of the PhotoMOS relay falls within the temperature conditions of item 8 before mounting.
- If the mounting conditions exceed the recommended solder conditions in item 8, resin strength will fall and the nonconformity of the heat expansion coefficient of each constituent material will increase markedly, possibly causing cracks in the package, severed bonding wires, and the like. For this reason, please inquire with us about whether this use is possible.