

RoHS compliant

FEATURES

- 1. 4-channel (4 Form A) in a small SOP16-pin package
The device comes in a miniature SOP measuring (W) 10.37 x (L) 4.4 x (H) 2.1mm (W) .408 x (L) .173 x (H) .083inch— approx. 50% of the footprint size of 8-pin (2-channel) type.
2. Low CxR and high response speed
• Output capacitance: 4.5pF (typ.)
• On resistance: 10.5Ω (typ.)
• Turn on time: 0.04ms (typ.)
3. Applicable for 4 Form A use, as well as 4 independent 1 Form A
4. Low-level off state leakage current of typ. 0.01nA
5. Controls low-level analog signals

TYPICAL APPLICATIONS

- For multi-circuit switching;
1. Measuring and testing equipment
IC tester, Liquid crystal driver tester, Probe card, Bear board tester, In-circuit tester, Function tester, etc.
2. Communication and broadcasting equipment
3. Medical equipment
Ultrasonic wave diagnostic machine
4. Multi-point recorder
Warping, Thermo couple

TYPES

Table with 8 columns: Output rating*, Package, Part No. (Tube packing style, Tape and reel packing style), Packing quantity (Tube, Tape and reel). Rows include AC/DC dual use, 80V, 70mA, SOP16-pin, AQS225R2S, AQS225R2SX, AQS225R2SZ, and packing quantities.

* Indicate the peak AC and DC values.
Note: The packing style indicator "X" or "Z" is not marked on the device.

RATING

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

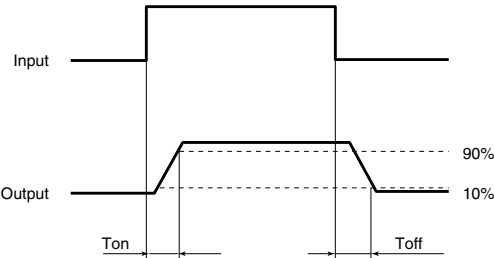
Table with 5 columns: Item, Symbol, AQS225R2S, Remarks. Rows include Input (LED forward current, LED reverse voltage, Peak forward current, Power dissipation), Output (Load voltage, Continuous load current, Peak load current, Power dissipation), Total power dissipation, I/O isolation voltage, and Temperature limits (Operating, Storage).

RF SOP 4 Form A C×R (AQS225R2S)

2. Electrical characteristics (Ambient temperature: 25°C 77°F)

Item			Symbol	AQS225R2S	Condition
Input	LED operate current	Typical	I _{Fon}	0.9 mA	I _L = Max.
		Maximum		3 mA	
	LED turn off current	Minimum	I _{Foff}	0.3 mA	I _L = Max.
		Typical		0.85 mA	
	LED dropout voltage	Typical	V _F	1.25 V (1.14 V at I _F = 5 mA)	I _F = 50 mA
Maximum		1.5 V			
Output	On resistance	Typical	R _{ton}	10.5Ω	I _F = 5 mA I _L = Max. Within 1 s on time
		Maximum		15Ω	
	Output capacitance	Typical	C _{out}	4.5 pF	I _F = 0 V _B = 0 V f = 1 MHz
		Maximum		6 pF	
	Off state leakage current	Typical	I _{Leak}	0.01 nA	I _F = 0 V _L = Max.
		Maximum		10 nA	
Transfer characteristics	Turn on time*	Typical	T _{on}	0.04 ms	I _F = 5 mA I _L = Max.
		Maximum		0.3 ms	
	Turn off time*	Typical	T _{off}	0.07 ms	I _F = 5 mA I _L = Max.
		Maximum		0.2 ms	
	I/O capacitance	Typical	C _{iso}	0.8 pF	f = 1 MHz V _B = 0
		Maximum		1.5 pF	
Initial I/O isolation resistance	Minimum	R _{iso}	1,000 MΩ	500 V DC	

*Turn on/Turn off time



RECOMMENDED OPERATING CONDITIONS

Please obey the following conditions to ensure proper device operation and resetting.

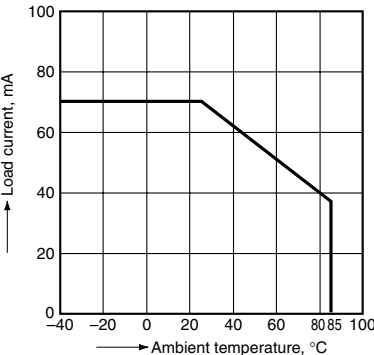
Item	Symbol	Recommended value	Unit
Input LED current	I _F	5	mA

- For Dimensions.
- For Schematic and Wiring Diagrams.
- For Cautions for Use.

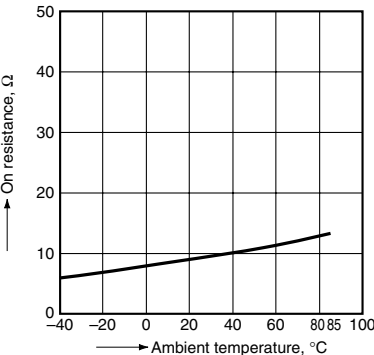
■ These products are not designed for automotive use.
If you are considering to use these products for automotive applications, please contact your local Panasonic Corporation technical representative.
For more information.

REFERENCE DATA

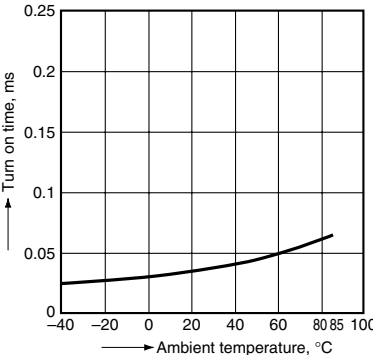
1. Load current vs. ambient temperature characteristics
Allowable ambient temperature: -40°C to +85°C
-40°F to +185°F



2. On resistance vs. ambient temperature characteristics
LED current: 5 mA;
Continuous load current: 70 mA (DC)



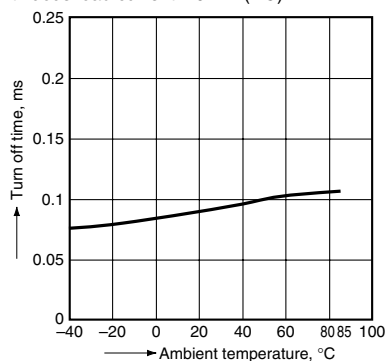
3. Turn on time vs. ambient temperature characteristics
LED current: 5 mA; Load voltage: 80 V (DC);
Continuous load current: 70 mA (DC)



RF SOP 4 Form A C×R (AQS225R2S)

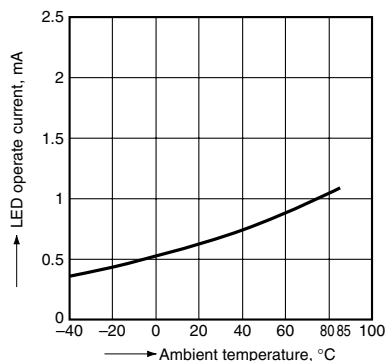
4. Turn off time vs. ambient temperature characteristics

LED current: 5 mA; Load voltage: 80 V (DC);
Continuous load current: 70 mA (DC)



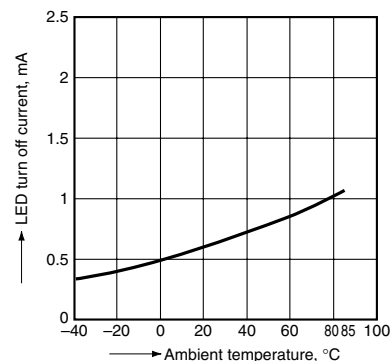
5. LED operate current vs. ambient temperature characteristics

Continuous load current: 70 mA (DC)



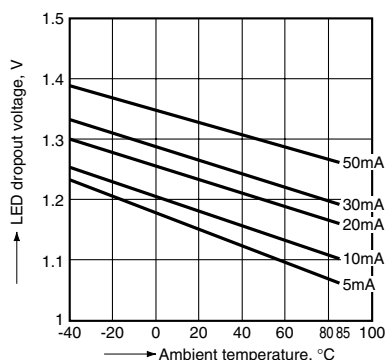
6. LED turn off current vs. ambient temperature characteristics

Continuous load current: 70 mA (DC)



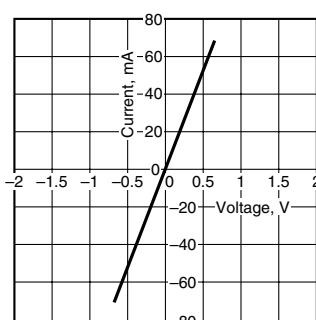
7. LED dropout voltage vs. ambient temperature characteristics

LED current: 5 to 50 mA



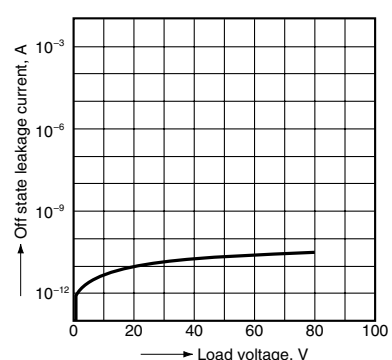
8. Current vs. voltage characteristics of output at MOS portion

Ambient temperature: 25°C 77°F



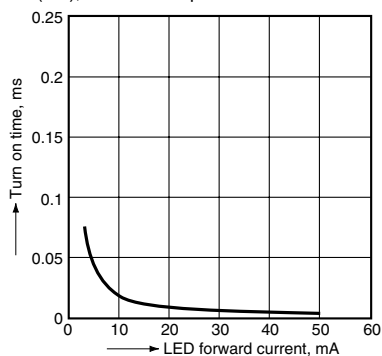
9. Off state leakage current vs. load voltage characteristics

Ambient temperature: 25°C 77°F



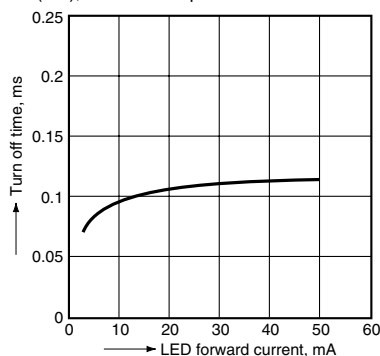
10. Turn on time vs. LED forward current characteristics

Load voltage: 80 V (DC); Continuous load current: 70 mA (DC); Ambient temperature: 25°C 77°F



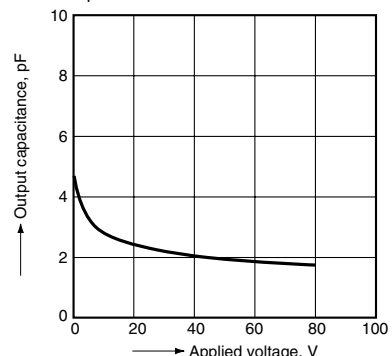
11. Turn off time vs. LED forward current characteristics

Load voltage: 80 V (DC); Continuous load current: 70 mA (DC); Ambient temperature: 25°C 77°F



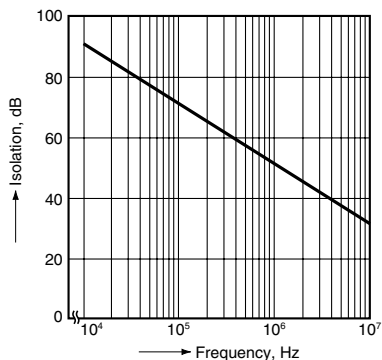
12. Output capacitance vs. applied voltage characteristics

Frequency: 1 MHz, 30 m Vrms;
Ambient temperature: 25°C 77°F



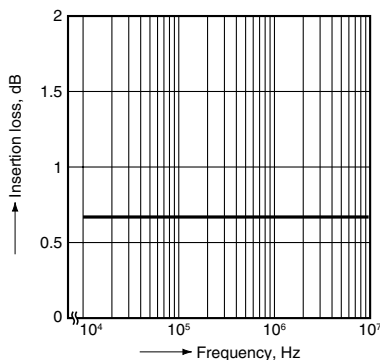
13. Isolation vs. frequency characteristics (50Ω impedance)

Ambient temperature: 25°C 77°F



14. Insertion loss vs. frequency characteristics (50Ω impedance)

Ambient temperature: 25°C 77°F



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[AQS225R2S](#) [AQS225R2SX](#) [AQS225R2SZ](#) [AQS225S](#)