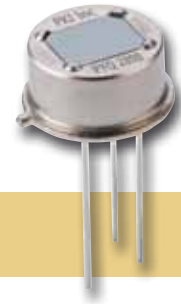


DIGITAL PYROELECTRIC FOUR ELEMENT DETECTORS FOR MOTION SENSING



PYQ 2898 – DigiPyro® Dual Channel

Applications

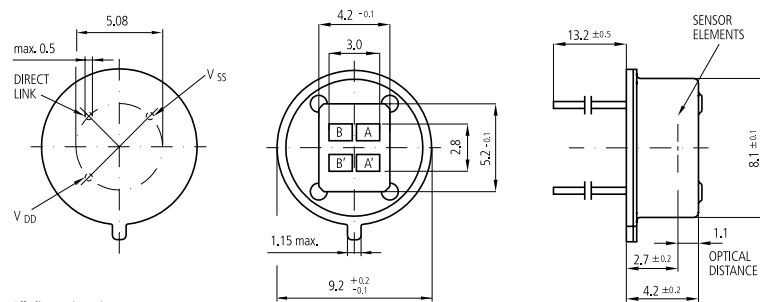
- Passive intrusion alarm
- High-end motion sensing
- Ceiling mount sensors

Features and Benefits

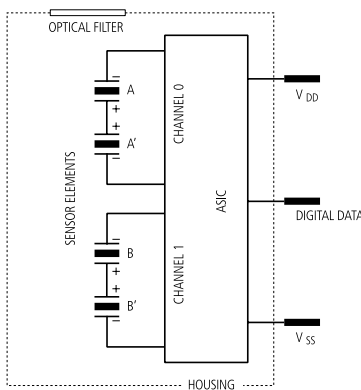
- Digital direct link
- Excellent EMI protection

Product Description

This family of DigiPyro® detectors in TO-5 housing includes serial signal output, which provides two signal outputs of the 2 element pairs and an additional temperature reference signal. All 3 channels are part of one 42-bit digital bit stream output via a single wire “direct link” connection to a suitable host microprocessor.



All dimensions in mm



PYQ 2898 – DigiPyro® Dual Channel

Main Parameter	Symbol	PYQ 2898	Unit	Remark
Responsivity, min.	R_{min}	3.5	kV/W	$f = 1 \text{ Hz}$
Responsivity, typ.	R	4.5	kV/W	$f = 1 \text{ Hz}$
Match, max.	M_{max}	10	%	
Noise, max. / typ.		80 / 30	μV_{pp}	0.4 ... 10 Hz / 20° C
Field of view, horizontal	FoV	96°		Unobstructed
Field of view, vertical	FoV	56°		Unobstructed
Operating voltage	V_{DD}	2.7 ... 3.6	V	
Supply current	I_{DDmax}	15	μA	$V_{DD} = 3.3 \text{ V}$
Digital Data				
Serial interface update time	t_{REP}	14	ms	
ADC resolution		14	Bits	Max. count = $2^{14}-1$
Output data format		3 x 14	Bits	
ADC sensitivity		6.1 ... 7	$\mu V/\text{count}$	
ADC output offset		7000 ... 9200	Counts	
ADC output offset, typ.		8192	Counts	
Temperature Reference				
Gain (temperature)		80	Counts/K	-20° C to +80° C
Linearity		-5 ... +5	%	-20° C to +80° C
Filter				
Digital filter cut off		10	Hz	