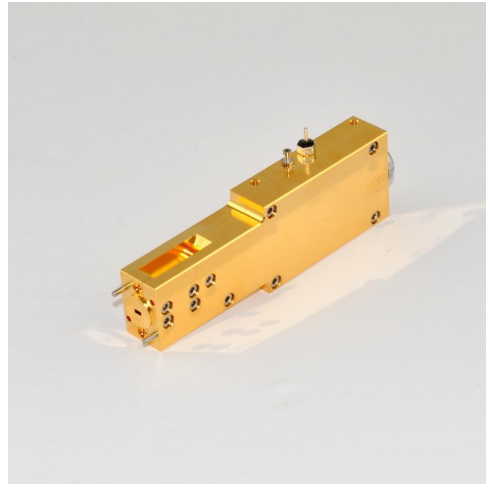


Datasheet

Description

Passive mm-wave (PMMW) imaging provides the unique capability to create high resolution images in low visibility conditions (e.g. through clothing, clouds or fog) and therefore useful for such an applications as concealed weapon detection and airplane landing. A low attenuation atmospheric window from 80-110GHz (W Band) makes this band an ideal candidate for PMMW systems. Passive imagers operate by detecting naturally emitted thermal (black body) radiation from an object.



Features

- ~ Direct detection . no LO signals present
- ~ Low noise figure for high sensitivity
- ~ Integrated video amplification

Applications

- ~ Airport security screening
- ~ Material composition
- ~ Remote sensing
- ~ Medical
- ~ Metrology
- ~ Metal detection in food

Specification	Unit	Min	Typ	Max
Frequency	GHz	75		110
Noise Figure	dB		4	4.5
Gain	dB		25	
Sensitivity @ +25°C <sup>NOTE 1</sup>	K		4.0	4.4
Video output @ +25°C Load <sup>NOTE 2</sup>	mV	1,000		1,200
Physical Size		90 x 28 x 13mm		
Mass		85g		
Power Consumption	W	0.25 (5V @ 50mA)		

Notes:

1. Sensitivity calculated from on  $\Delta T = \frac{T_A + T_N}{\sqrt{\beta\tau}}$ . Where  $T_A=295K$ ,  $\beta=35GHz$ ,  $\tau=1 s$
2. Differential output . can be customer defined as FTL can adjust the video gain to give required output voltage