MT6415DA1

640×512-15µm DI ROIC

Features

- DI ROIC for 640×512-15µm FPAs including T2SL, MCT, InSb, and QWIP
- 2, 4, or 8 analog outputs with reference
- Programmable Biasing, Gain, and Windowing
- Snapshot Operation: ITR and IWR
- Low Power and High Frame Rates
- Cryogenic operation down to 65K

Technical Specifications

Array Format and Pitch	640×512		15µm×15µm	
Pixel Polarity and Type	p-on-n		T2SL, MCT, InSb, and QWIP	
Input Circuit Type	Direct Injection (DI)			
Full Well Capacity	Programmable (High, Mid, and Low-Gain) Settings			
	HG: 2 Me-	MG: 5 Me-	LG: 10 Me-	
Detector Biasing	Programmable in steps of < 1mV			
Integration Time	Programmable from 1µs to 1s in 100ns steps			
Number of Analog Outputs	Programmable 2, 4, or 8 outputs with reference			
Output Swing	≤ 2.0 V with adjustable gain and offset			
Readout Gain	Programmable			
Readout Modes	Snapshot Operation: ITR and IWR Modes			
Windowing	Programmable size and location			
Frame Rate	≤ 200 Hz at full frame, upto 1000 Hz with windowing			
System Clock	Nominal 10 MHz (upto 12MHz)			
Supply Voltage	3.3 V and 1.8 V			
Power Dissipation	≤ 150 mW (100 Hz, 4 outputs)			
Input Referred Noise	≤ 850 e- rms at 77K for 10 Me- FWC			
Operating Temperature	Cryogenic (T ≥ 65K)			
Temperature Sensor	On-chip active sensor with 1mV/K sensitivity			
Wafer / Die Sizes, DPW	Wafer: 200mm	Die: 12.20 mm × 13.30 mm	Total Dies: 133	100 A+ Grade Die (Typical)