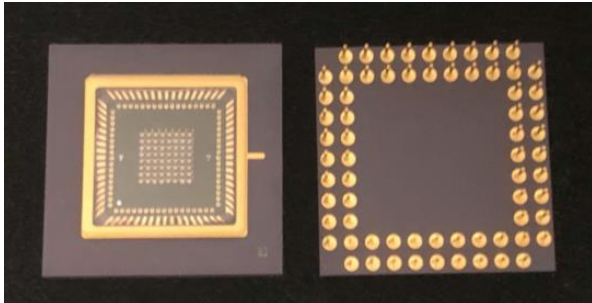


InGaAs avalanched photodiode

Array (8*8)



Description

The frontside-illuminated operation of the IGA64AA-APD array provide both higher responsivity and lower capacitance.

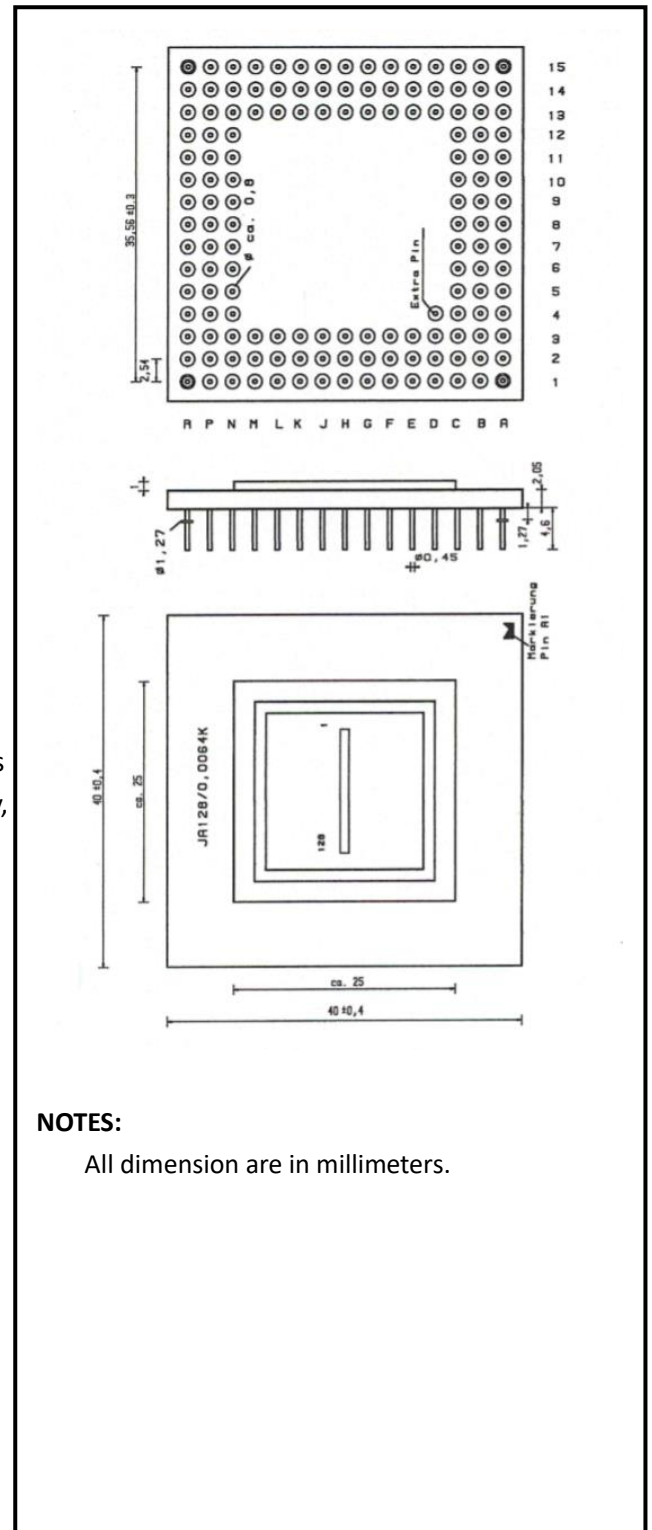
OTRON IGA64AA-APD is custom engineered for reduced excess Noise, which allows this APD array to achieve higher sensitivity, Better signal-to-noise performance, and lower bit error rates Than conventional APD arrays.

Features

- * Low-capacitance high sensitivity front-side illuminated design
- * 900-1700nm response
- * Reduced excess noise design from conventional APDs
- * Operation up to a multiplication gain of M=20
- * Custom devices available upon request

Applications

- * Laser range finder, Lidar
- * High speed optical communications
- * Laser scanner



NOTES:

All dimension are in millimeters.

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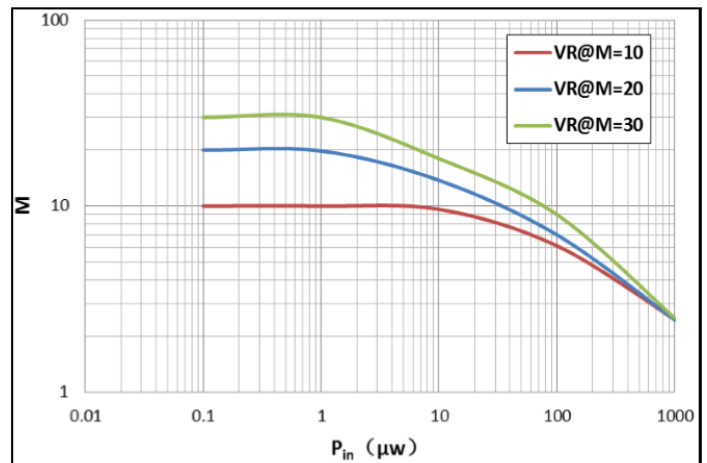
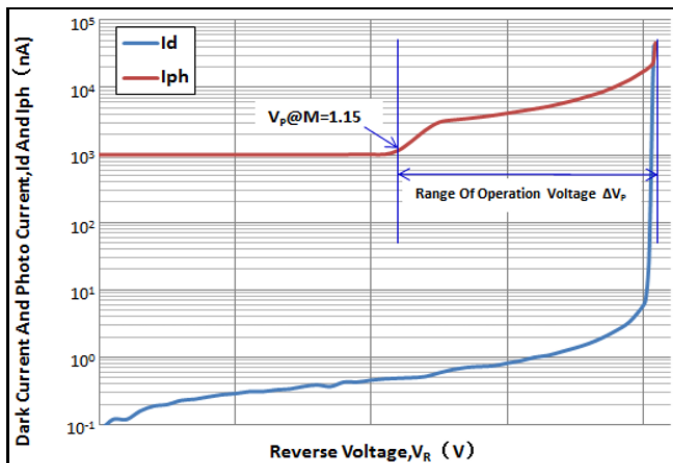
Absolute Maximum Ratings (Ta=25 °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Active diameter	A		200			um/pixel
Gap/ Separation (center to center)			800			um
Pitch		Element to element	600			um
Operating Gain	M		1	10	75	
Quantum Efficiency(1550nm)			80%		85%	
Bandwidth			1.25			GHz
Reverse breakdown voltage	V _(BR)	I _R =100μA Ev=0Ix, Id>0.1mA, T=294K	40		60	V
ΔVbr/ΔT				0.12	0.15	V/°C
Junction Capacitance	C _J	M>3, V _R =V _{BR} *0.9, f=1M		1.5		pF
Photo sensitivity@M=10	S _R	λ _p =1.55um, M=1	0.85	1.05		A/W
		λ _p =1.55um, M=1, V _R =V _{BR} -4	9	10		
Spectral Application Range	λ _{range}		900	1000-1600	1700	nm
Spectral Response-Peak	λ _p			1064-1550		nm
Excess Noise Factor		M=10		1.7		
Noise Spectral Density		M=10		0.47		PA/√Hz
Dark Current		M=10, T=298K		30	50	nA
Operation Voltage	V	0.9*V _(BR)				
Max. Instantaneous Input Power		10nS, 1064nm signal at a 20Hz PRF with M=10			128	mW/pixel

■ Reverse Voltage vs. Dark current and

■ Input Power vs. M

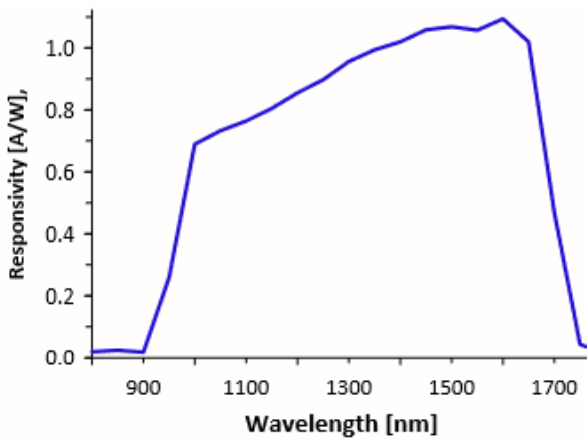
Photon current



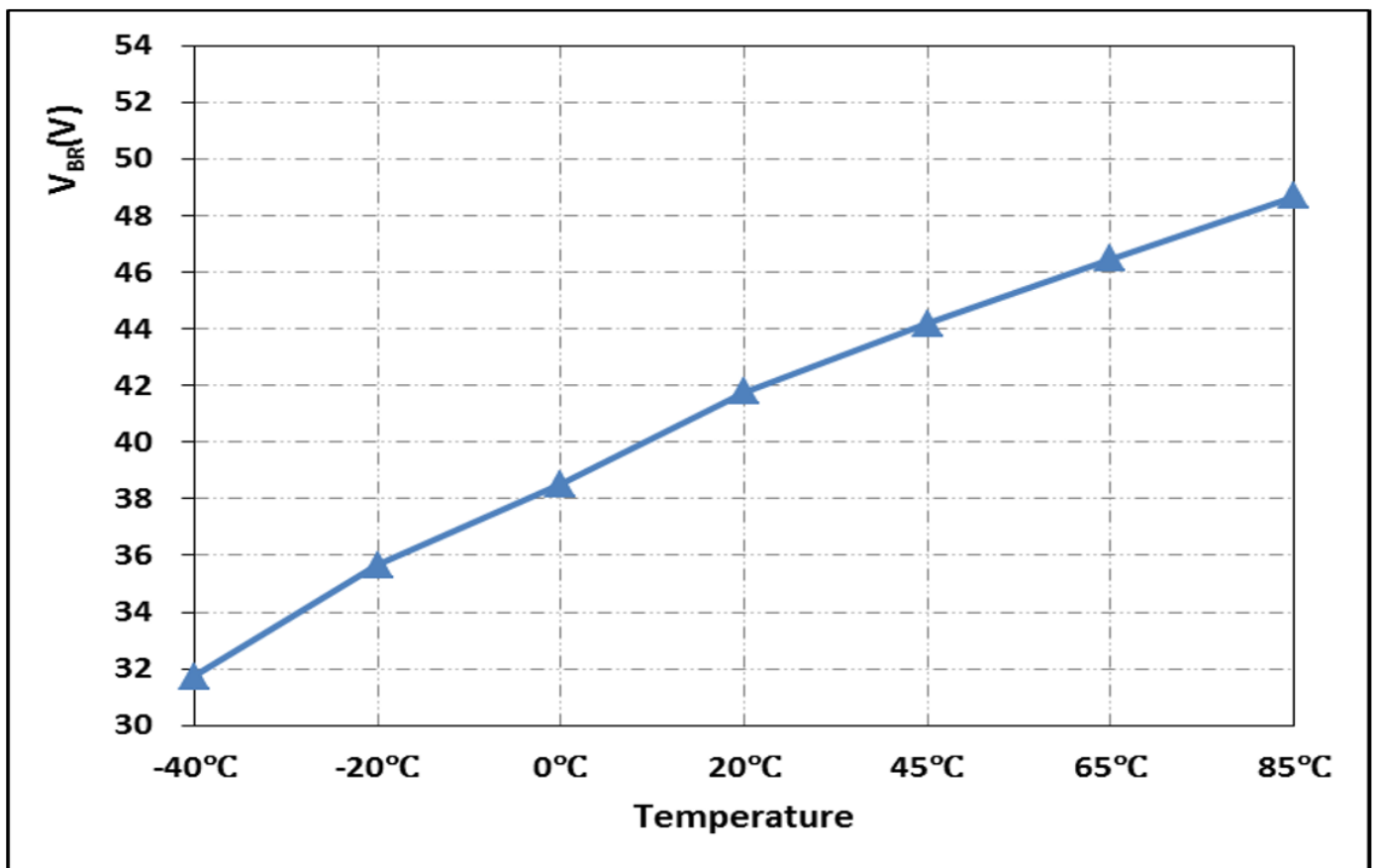
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Specifications are subject change without notice

■ Spectral response (M=10)

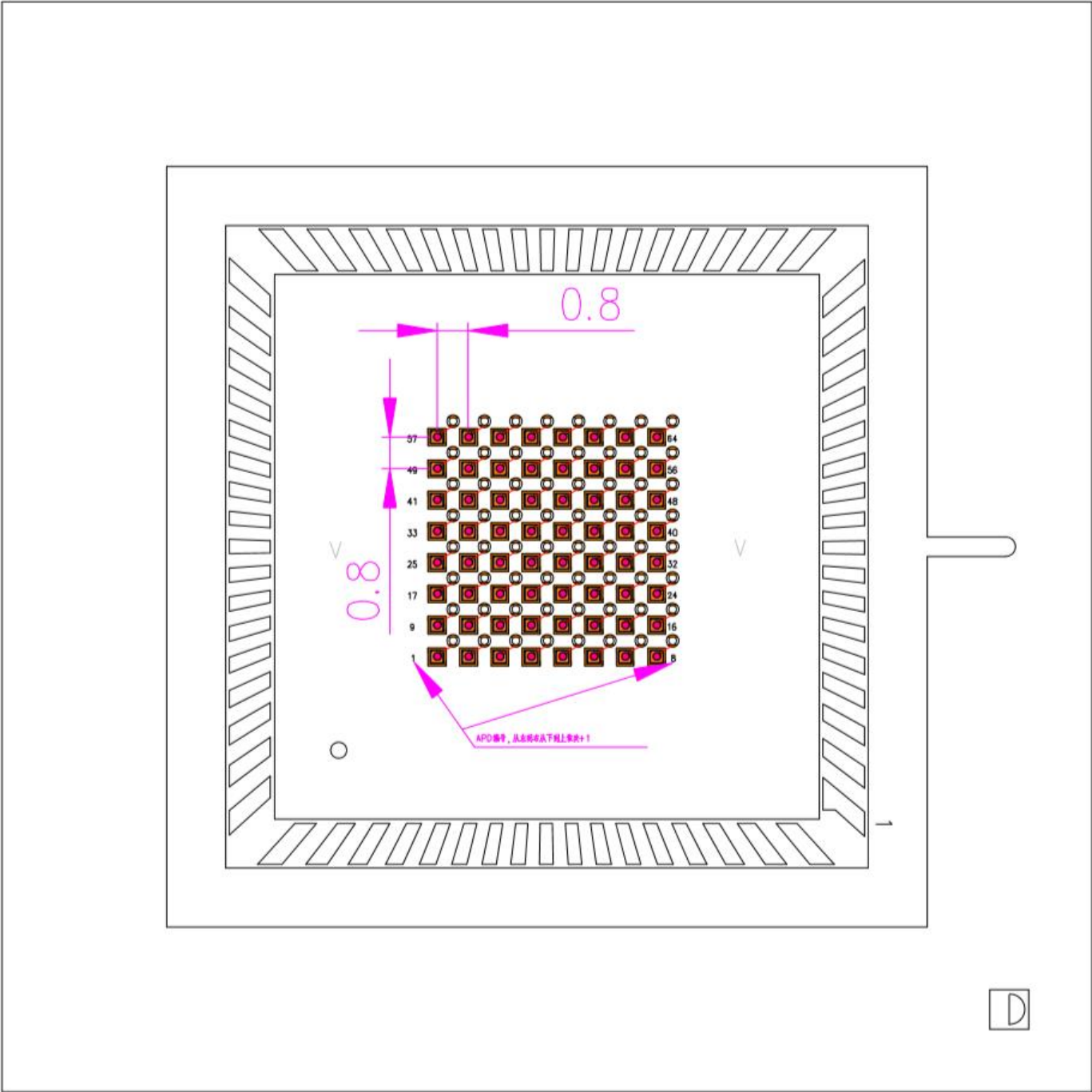


■ Breakdown Voltage vs. Temperature (M=10)

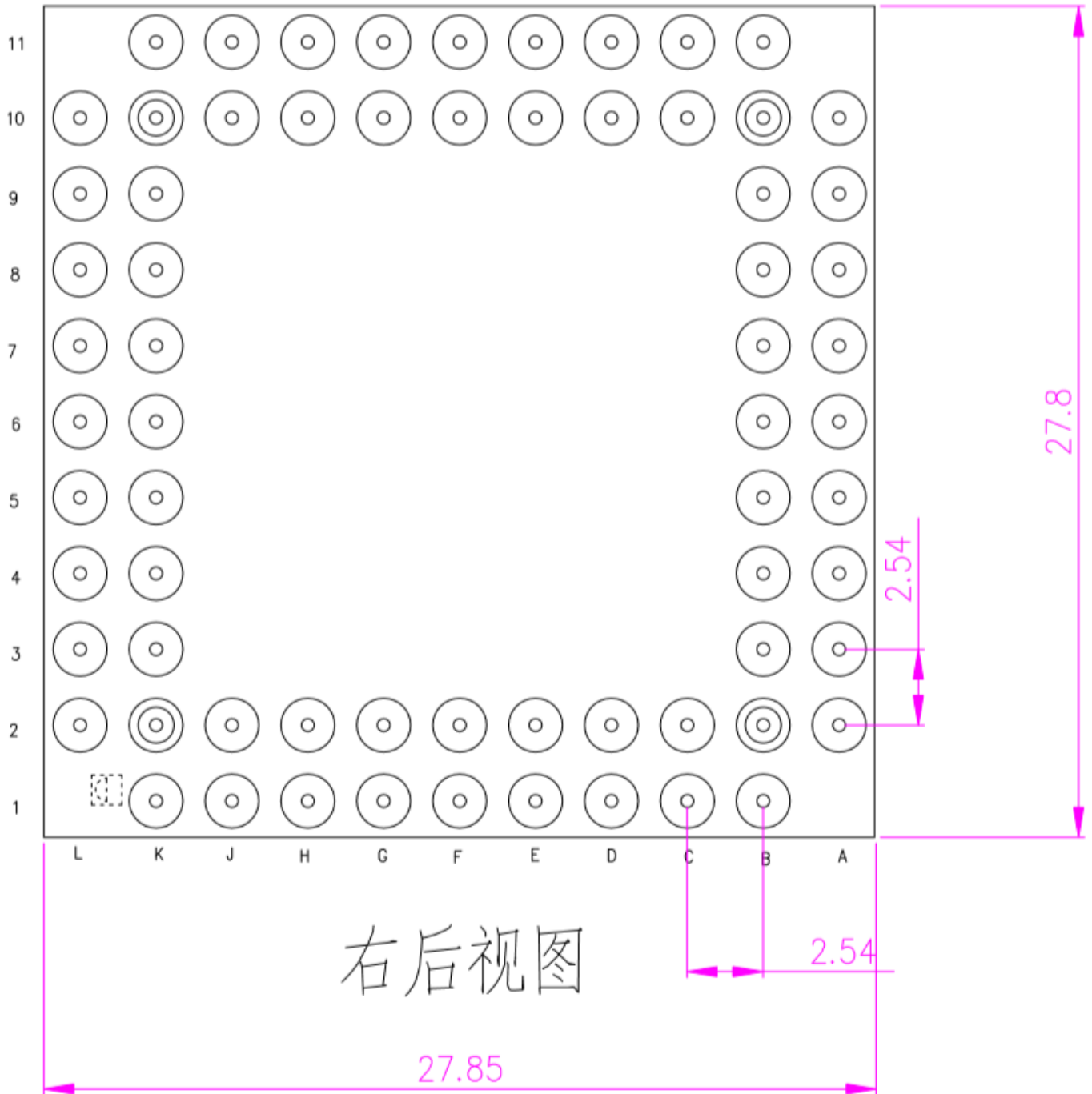


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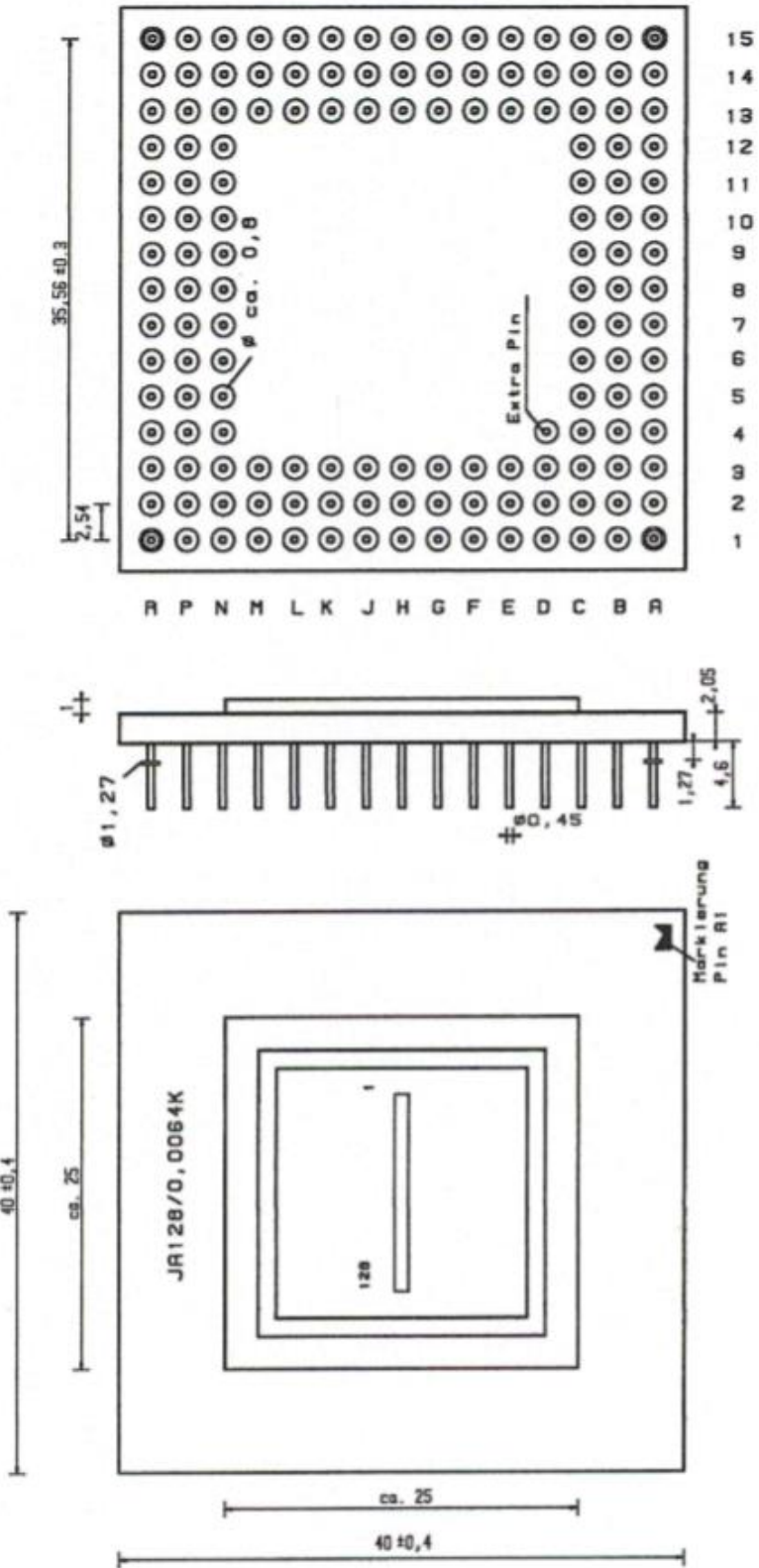
PIN LEGS:



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