

Front-end amplifiers available from IDE AS

VA Family: Multi-channel Charge Sensitive Amplifiers								
Chip	Feature	Detector Load	Readout	Dynamic Range (fC)	#Ch	Gain ($\mu\text{A/fC}$)	Noise (rms. e^-)	Tp ¹ (CR-RC)
VA1		High	Serial Analogue Readout	72fC	128	10	165 + 6.1/pF	2 μs
VA2		Medium	Serial Analogue Readout	28fC	128	25	60 + 11/pF	2 μs
VA3		Low	Serial Analogue Readout	18fC	128	50	40 + 12/pF	2 μs
VA_HDR1	Very High Dynamic Range	High	Serial Analogue Readout	320fC	128	2	660 + 4.2/pF	1.5 μs
VA64_HDR1	Very High Dynamic Range	High	Serial Analogue Readout	320fC	64	2	660 + 4.2/pF	1.8 μs
VA64_HDR4	High Dynamic Range	High	Serial Analogue Readout	720fC	64	0.56	350 + 4/pF	6 μs
VA_RICH	Input Protection	Medium	Serial and/or Parallel Analogue Readout	144fC	64	10 - 12	100 + 15/pF	2 μs
VA_1CH		High		500fC	1	2 ²		
VA1_8CH		High	Parallel Analogue Readout	50fC	8	Voltage		
VA1'	Radiation Hardness (~1Mrad)	High	Serial Analogue Readout	72fC	128	10		1 μs
VA32_HDR2	High Dynamic Range	High	Serial Analogue Readout; Parallel Preamplifier Output	1650fC	32	0.4	2000 + 3.3/pF	2 μs
VA32C		Low	Serial Analogue Readout; Parallel Preamplifier Output	18fC	32	50	40 + 12/pF	2 μs
VAS		Medium	Serial Stretched Analogue Output; Parallel Preamplifier Output					2 μs
VA32-75		Medium	Serial and/or Parallel Analogue Readout	72fC	32	10	400 + 25/pF	75ns
VA32-500		Medium	Serial and/or Parallel Analogue Readout	28fC	32	25	140 + 26/pF	500ns

¹ Tp: Nominal peaking time. ΔTp approximately $\pm 50\%$ of the nominal value.

² Voltage output. Value given in mV/fC.

Notice: This is a preliminary document and may be subject to changes without notice. Informational purposes. No warranty conveyed.

Trigger Family								
Chip	Feature	Detector Load	Readout	Dynamic Range (fC)	#Ch	Gain ($\mu\text{A/fC}$)	Noise (rms. e^-)	Tp ¹ (CR-RC)
CA1	VA-type Amplifier with Parallel Trigger Output	Medium	Parallel Trigger Outputs	72fC	128		500 + 50/pF	100ns
TA1	VA-type CSA with Wired-Or Trigger Output	Medium	Serial Analogue Readout; Trigger Output	36fC	128	20	165 + 6.1/pF	2 μs
TA2_75	VA-type CSA with Wired-Or Trigger Output	Medium	Trigger Output		128			75ns
TA32C	Part of the VA-TA chip-set ²		Trigger Output		32			75ns
TAT	Part of the VA-TA chip-set ² ; Timing Output		Trigger Output; Serial Timing Output					75ns
TAN	Part of the VAN-TAN chip-set ² ; Energy Window Discriminator		Digital Address Output; Trigger Output					
VA2TA	One Die VA-TA ²	Medium	Serial Analogue Readout; Trigger Output					
XA Family								
XA1.2	Self-triggering, Data-Driven CSA	Medium	Address Output (Analogue); Trigger Output	13.3fC	128		70 + 12/pF	2 μs
XA1.3	Self-triggering, Data-Driven CSA	Low	Address Output (Analogue) ; Trigger Output	4.3fC	128		40 + 15/pF	2 μs
XA1T2	Single Channel Self-triggering CSA	High	Stretched/Non-Stretched Analogue Output; Adjustable Gain CSA	100fC	1			
Charge Sensitive Integrator (CSI)								
VAI	Very High Dynamic Range CSI with Reset		Serial Analogue Readout	30pC	128		4000e ⁻ @100pF	

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² More information in the VA-TA Description leaflet.

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