



AHEAD OF WHAT'S POSSIBLE™

AEROSPACE DIE

January 2016



For general information on Analog Devices Space Qualified products please visit the following address.

<http://www.analog.com/aerospace>

For technical inquiries on Class K Die please email us at aero@analog.com

For Sales and Distribution contacts please visit the following address.

<http://www.analog.com/en/about-adi/corporate-information/sales-distribution.html>

Analog Devices Aerospace Group provides Space Qualified Chips (Die) manufactured in the same wafer fab sites as packaged parts. Element Evaluation is performed per MIL-PRF-38534, TABLE C-II unless otherwise noted¹. Die are fully traceable to the wafer lot or if requested to the individual wafer.

Significant advantages of purchasing Analog Devices Space Qualified Die over Up-screened die from die vendors:

- ▶ Die manufactured in ADI's MIL-PRF-38535 Class V certified wafer fabrication sites conforms to Wafer Lot Acceptance Test Method 5007 of MIL-STD-883.
- ▶ Complete traceability provided to wafer lot and if requested to the individual wafer.
- ▶ Direct contact with the manufacturer to clarify end product performance.
- ▶ Individual die datasheets available with details of electrical parameters. See "Space Qualified Parts List" and "Standard Space Level Products" Brochure for ordering information.
- ▶ Selected die datasheets include radiation guarantee.
 - Group E, Subgroup 2 with lot charge plus samples at sample unit price. Certificate of Conformance and test report included.
 - Standard Radiation Test Plan. Test in accordance with MIL-PRF-38535 with test points at 0K, 100Krad, and post 24 hours biased anneal.
- ▶ Direct manufacturer support in defining end point performance for Radiation Tolerance.

¹ See individual Die Datasheets for all applicable exceptions.

COMMITMENT TO THE SPACE MARKET

Analog Devices is committed to serving the needs of the world space community by manufacturing the highest quality data conversion and signal processing products.

. Analog Devices' certified facilities have been supplying products for military and space applications since 1972. Analog Devices now offers state-of-the-art, data conversion and linear products to the space market place which were previously only available as commercial or military Class B products.

Analog Devices space level operations located in Greensboro, North Carolina coordinates all space level V (class S) activities, including business development, manufacturing and engineering. The addition of new products is derived from our customers' needs and the ability of these products to meet MIL-PRF-38535 QML level V requirements.

Visit our web site (<http://www.analog.com/aerospace>) or contact our factory for the latest Class S updates as well as for radiation information on these and other products.

Analog Devices, Inc. Aerospace Product Line standard product is available in one or more of the following processes:

- ▶ MIL-PRF-38535, QMLV (level V)
- ▶ MIL-PRF-38535, QMLR (level V With Radiation Qualification)
- ▶ MIL-PRF-38535, JAN S
- ▶ Analog Devices, Inc.'s Standard Aerospace Level Product

See <http://www.analog.com/aerospace>. (Standard Space Level Products Program)

The table beginning on page 3 lists the standard product offered by Analog Device's Aerospace Product Line.

Product is also available in accordance with source control drawings. Please call factory for further information.

For further information see contact list on cover page.

ANALOG DEVICES SPACE LEVEL PRODUCTS

Manufacturing Locations

Space Level Compliance	Wafer Fab	Assembly	Screening and Quality Conformance Inspection
Class K Die Qualification (with full SEM Inspection per TM2018)	QMLV Certified Fabs: Wilmington, MA Limerick, Ireland Santa Clara, CA Die Bank	Cavite, Philippines	Cavite, Philippines
Class K Die Qualification (without SEM Inspection)	QMLQ Certified Fab or non-QMLV products TSMC, Taiwan ¹ (or any of the above.)	Cavite, Philippines	Cavite, Philippines
Class K Die Qualification (former Hittite Microwave Products)	Various Foundries	Chelmsford, MA	Chelmsford, MA

The following table lists the standard product available from Analog Devices, Inc. Aerospace Product Line. Product is also available in accordance with source control drawings. Please contact factory for further information.

Product	Function	X ¹	Y ¹	Area	Notes
AD524S	Instr Amp	103	171	17613	
AD534S	Multiplier	76	100	7600	3
AD561S	DAC	106	153	16218	3
AD565S	DAC	119	146	17374	3
AD571S	ADC	126	158	19908	3
AD574S	ADC	179	180	32220	3, 4
AD584S	REF	61	80	4880	
AD585S	REF	96	124	11904	
AD589S	REF	40	60	2400	
AD590S	Temp	66	42	2772	
AD648S	Dual Amp	113	67	7571	
AD667S	DAC	142	184	26128	3
AD670S	ADC	111	174	19314	3
AD844S	Op Amp	76	95	7220	
AD847S	Op Amp	64	57	3648	
AD8001S	Op Amp	38	41	1558	
AD8041S	Op Amp	42	50	2100	3
AD8212	I Monitor	46	32	1472	
AD8561S	Comp	51	42	2142	
AD8629	Op Amp	47	57	2679	
ADG201S	Switch	58	65	3770	2
ADH141S	Mixer	60	60	3600	3
ADH232S	SPDT SW	41	81	3321	3
ADH346S	A Atten	33	33	1089	3
ADH424S	Dig Atten	33	57	1881	3
ADH463S	LNA	51	120	6120	3
ADH1015S	Mixer	44	45	16539	3
AMP01S	Instr Amp	111	149	16539	3
DAC08S	DAC	87	63	5481	3, 4
MAT02S	NPN Trans	61	57	3477	3
MAT03S	PNP Trans	70	60	4200	3
MUX08S	MUX	93	59	5487	
OP07S	Op Amp	100	55	5500	3, 4
OP11S	Op Amp	86	72	6192	3

Product	Function	X ¹	Y ¹	Area	Notes
OP12S	Op Amp	50	43	2150	3
OP15S	Op Amp	68	56	3808	
OP16S	Op Amp	68	56	3808	
OP22S	Op Amp	70	50	3500	
OP27S	Op Amp	109	55	5995	3, 4
OP37S	Op Amp	98	56	5488	
OP42S	Op Amp	98	70	6860	
OP43S	Op Amp	103	74	7622	
OP77S	Op Amp	93	57	5301	
OP200S	Dual Amp	120	106	12720	
OP215S	Dual Amp	110	75	8250	3, 4
OP270S	Dual Amp	94	92	8648	3, 4
OP400S	Quad Amp	181	123	22263	3
OP467S	Quad Amp	111	100	11100	
OP470S	Quad Amp	163	106	17278	3, 4
OP471S	Quad Amp	163	106	17278	
OP484S	Quad Amp	80	110	8800	3, 4
PM108S	Op Amp	43	59	2537	3, 4
PM111S	Comp	66	50	3300	
PM139S	Comp	51	48	2448	3, 4
PM155S	Op Amp	68	56	3808	
PM156S	Op Amp	68	56	3808	
REF01S	REF	74	48	3552	
REF02S	REF	74	48	3552	3, 4
REF05S	REF	74	48	3552	
REF10S	REF	74	48	3552	
SMP11S	S/H	88	83	7304	

Notes

¹ All dimensions in mils.

² Not available with wafer lot acceptance. Available as MIL-STD 883 Class B Die plus SEM and M2010 Condition A Visual only.

³ To be offered as Standard Die with class K element evaluation.

⁴ To be offered with total dose radiation guarantee.