

# SPACE QUALIFIED PARTS LIST

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

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

For technical inquiries on Aerospace Engineering Models please email us at [aero@analog.com](mailto: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>

## COMMITMENT TO THE SPACE MARKET

Analog Devices' entry into the space level market occurred in August 1990 when it acquired Precision Monolithics Inc. Analog Devices' certified facilities have been supplying products for military and space applications since 1972. With the addition of Linear Technology AND Hittite Microwave our combined product portfolio, technology base and specialist resources strengthen our capability to provide innovative analog, RF, power and mixed signal solutions for next generation spacecraft.

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 call our factory contacts 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, QML LEVEL V
- ▶ MIL-PRF-38535, QML R (LEVEL V with Radiation Qualification)
- ▶ MIL-PRF-38535, JAN S
- ▶ MIL-PRF-38535, Analog Devices, Inc.'s Aerospace Product Line Standard 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.

## ANALOG DEVICES SPACE LEVEL PRODUCTS

### Manufacturing Locations

Space Level Compliance	Wafer Fab	Assembly	Screening and Quality Conformance Inspection
MIL-PRF-38535 Class V Compliant QMLV Devices	<ul style="list-style-type: none"> <li>• ADI Wilmington MA</li> <li>• ADI Limerick, Ireland</li> <li>• ADI Santa Clara Die Bank</li> </ul>	ADI Phils, Inc. Cavite, Philippines	ADI Phils, Inc. Cavite, Philippines
Standard Space Products (non-QMLV)	<ul style="list-style-type: none"> <li>• ADI Wilmington MA</li> <li>• ADI Limerick, Ireland</li> <li>• ADI Santa Clara Die Bank</li> <li>• TSMC Taiwan</li> </ul>	ADI Phils, Inc. Cavite, Philippines	ADI Phils, Inc. Cavite, Philippines
Customer Specific Special Flows	<ul style="list-style-type: none"> <li>• ADI Wilmington MA</li> <li>• ADI Limerick, Ireland</li> <li>• ADI Santa Clara Die Bank</li> <li>• TSMC Taiwan</li> </ul>	ADI Phils, Inc. Cavite, Philippines	ADI Phils, Inc. Cavite, Philippines
Class K Die Qualification Hittite Microwave Products	<ul style="list-style-type: none"> <li>• Various Foundries</li> </ul>	Chelmsford, MA	Chelmsford, MA
Linear Technology Products	<ul style="list-style-type: none"> <li>• Camas, Washington</li> <li>• Hillview, California</li> </ul>	Milpitas, CA	Milpitas, CA

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 call factory for further information.

## ANALOG TO DIGITAL CONVERTERS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>AD571S</b>	<b>10-Bit Complete ADC</b>	<b>S</b>	<b>C, D-18</b>	
AD571SD/QMLV	5962-8680203VVA	S	D	
Space Level Die	AD571-000C	S	C	3
<b>AD574S</b>	<b>12-Bit-ADC w/Microprocessor Interface</b>	<b>T, U</b>	<b>C, D-28, F-28</b>	
AD574AUD/QMLR	5962R8512701VXA	U	D	
AD574AUF/QMLR	5962R8512701VZA	U	F	
AD574ATD/QMLR	5962R8512702VXA	T	D	
AD574ATF/QMLR	5962R8512702VZA	T	F	
Space Level Die	AD574-000C	T	C	3
Space Level Die	AD574R000C	T	C	
<b>AD670S</b>	<b>8-Bit Signal Conditioning Single Supply ADC</b>	<b>S</b>	<b>C, D-20</b>	
	AD670-703D	S	D	3
Space Level Die	AD670-000C	S	C	3
<b>AD1671S</b>	<b>12-Bit 1.25 MSPS ADC</b>	<b>S</b>	<b>D-28, F-28</b>	
	AD1671-703D	S	D	3
	AD1671-703F	S	F	3
	AD1671-713F	S	F	3
<b>AD1672S</b>	<b>12-Bit 3 MSPS ADC</b>	<b>S</b>	<b>D-28, F-28</b>	
	AD1672-703F	S	F	
	AD1672-713D	S	D	
<b>AD6645S</b>	<b>14-Bit 80 MSPS ADC</b>	<b>A</b>	<b>QS-52</b>	
AD6645ASQ/QMLR	5962R0423002VXC	A	QS-52	
AD6645ASQ/QMLL	5962L0423003VXC	A	QS-52	
<b>AD9042S</b>	<b>12-Bit 41 MSPS ADC</b>	<b>S</b>	<b>D-28, F-28</b>	
AD9042SD/QMLR	5962R0253801VXA	S	D	
AD9042SF/QMLR	5962R0253801VZA	S	F	
AD9042SF/QMLL	5962L0253802VZA	S	F	
<b>AD9054S</b>	<b>8-Bit 200MSPS ADC</b>	<b>S</b>	<b>J44</b>	
	AD9054-703J44	S	J44	2, 3
<b>AD9246S</b>	<b>14-Bit 125MSPS ADC</b>	<b>A</b>	<b>F-48</b>	
AD9246AF/QMLR	5962R1422701VXC	A	F-48	
<b>AD9254S</b>	<b>14-Bit 150 MSPS ADC</b>	<b>S</b>	<b>F-52</b>	
	AD9254R703F	S	F	2, 4
<b>AD9283S</b>	<b>8-Bit 100 MSPS 3.3V ADC</b>	<b>T</b>	<b>RC</b>	
	AD9283-703RC	T	RC	2, 3

## ANALOG TO DIGITAL CONVERTERS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
LTC1604	<b>16-Bit 333 KSPS SAMPLING ADC</b>	A	G	
	LTC1604AIG#90117	A	G	
RT2378-20	<b>20-Bit 1MSPS SAR ADC</b>	-	MS	
	RT2378IMS-20	-	MS	

## COMPARATORS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>AD8561S</b>	<b>7nS Single Comparator</b>	A	Q-8, L	
AD8561AQ/QMLV	5962-0051501VPA	A	Q	
AD8561AL/QMLR	5962R0051501VHA	A	L	
AD8561AQ/QMLR	5962R0051501VPA	A	Q	
AD8561AL/QMLL	5962L0051502VHA	A	L	
<b>PM111S</b>	<b>Precision Voltage Comparator</b>	X	J, Z	
PM111SJ6	JM38510/10304SGA	X	J	
PM111SZ7	JM38510/10304SPA	X	Z	
<b>PM139S</b>	<b>Quad Low-Power Voltage Comparator</b>	A, X	C, Y, M, RC	
PM139AY/QMLR	5962R8773901VCA	A	Y	
PM139AM/QMLR	5962R8773901VDA	A	M	
PM139ARC/QMLR	5962R8773901V2A	A	RC	
PM139AM/QMLL	5962L8773903VDA	A	M	
Space Level Die	PM139-000C	X	C	3
Space Level Die	PM139R000C	X	C	
<b>RH1016</b>	<b>10nS Precision Comparator</b>	-	DICE, W	
05-08-5222	RH1016MW	-	W	
05-08-5242	RH1016DICE	-	DICE	
<b>RH119</b>	<b>80nS Dual High Performance Comparator</b>	-	DICE, H, J, W	
05-08-5026 Option 1	RH119H	-	H <sup>2</sup>	
05-08-5026 Option 2	RH119J	-	J <sup>2</sup>	
05-08-5026 Option 3	RH119W	-	W	
05-08-5145	RH119DICE	-	DICE	
<b>RH1011</b>	<b>150nS General Purpose Comparator</b>	-	DICE, H, J8, W	
05-08-5012 Option 1	RH1011H	-	H <sup>2</sup>	
05-08-5012 Option 2	RH1011J8	-	J8	
05-08-5012 Option 3	RH1011W	-	W	
05-08-5149	RH1011DICE	-	DICE	

## DIGITAL TO ANALOG CONVERTERS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>AD561S</b>	<b>10-Bit, Current Output</b>	<b>S</b>	<b>C, D-16</b>	
	AD561-703D	S	D	3
Space Level Die	AD561-000C	S	C	3
<b>AD565AS</b>	<b>12-Bit, Current Output, Complete High Speed DAC</b>	<b>S, T</b>	<b>C, D-24</b>	
	AD565ASD/QMLV	S	D	
	AD565ATD/QMLV	T	D	
Space Level Die	AD565-000C	T	C	3
<b>AD667S</b>	<b>12-Bit Microprocessor Compatible DAC</b>	<b>S</b>	<b>C, D-28, F-28</b>	
	AD667-703D	S	D	3
	AD667-703F	S	F	3
	AD667-713F	S	F	3
Space Level Die	AD667-000C	S	C	3
<b>AD768S</b>	<b>16-Bit 30MSPS DAC</b>	<b>A</b>	<b>F-28</b>	
	AD768AF/QMLR	A	F-28	
<b>AD9731S</b>	<b>10-Bit 170MSPS DAC</b>	<b>S</b>	<b>D-28, F-28</b>	
	AD9731-703D	S	D	2, 3
	AD9731-713D	S	D	2, 3
	AD9731-703F	S	F	2, 3
	AD9731-713F	S	F	2, 3
<b>DAC08S</b>	<b>8-Bit High Speed Multiplying DAC</b>	<b>A, X</b>	<b>C, F-16, Q, RC</b>	
	DAC08SAQ7	A	Q	
	DAC08AF/QMLR	A	F	
	DAC08AF/QMLL	A	F	
	DAC08AQ/QMLR	A	Q	
	DAC08ARC/QMLR	A	RC	
	DAC08XF/QMLR	X	F	
	DAC08XQ/QMLR	X	Q	
	DAC08XRC/QMLR	X	RC	
Space Level Die	DAC08-000C	X	C	
Space Level Die	DAC08R000C	X	C	
<b>DAC100S</b>	<b>10-Bit Current Output DAC</b>	<b>BC</b>	<b>Q</b>	
	DAC100-703Q	BC	Q	3
	DAC100-713Q	BC	Q	3

## CURRENT SENSE AMPLIFIERS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>AD8210S</b>	<b>Bidirectional Current Shunt Monitor</b>	<b>A</b>	<b>F-10</b>	
AD8210AF/QMLR	5962R1223301VXA	A	F	
AD8210AF/QMLL	5962L1223302VXA	A	F	
<b>AD8212S</b>	<b>High Voltage Current Shunt Monitor</b>	<b>A</b>	<b>L</b>	
AD8212AL/QMLR	5962R0924401VHA	A	L	
AD8212AL/QMLL	5962L0924402VHA	A	L	
<b>RH6105</b>	<b>Micropower R-R Current Sense Amp</b>		<b>DICE</b>	
	RH6105MILDICE	A	DICE	

## LOGARITHMIC AMPLIFIERS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>ADL5513S</b>	<b>4 GHz Logarithmic Amplifier</b>	<b>A</b>	<b>F-16</b>	
ADL5513AF/QMLR	5962R1120301VXA	A	F	
<b>AD8306S</b>	<b>400 MHz Demodulating Log Amp</b>	<b>A</b>	<b>F-16</b>	
AD8306AF/QMLR	5962R9864602VXA	A	F	
AD8306AF/QMLL	5962L9864603VXA	A	F	

## INSTRUMENTATION AMPLIFIERS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>AD524S</b>	<b>Instrumentation Amplifier</b>	<b>S</b>	<b>D-16, E-20</b>	
AD524SD/QMLR	5962R8853901VEA	S	D	
AD524SE/QMLR	5962R8853901V2A	S	E	
<b>AMP01S</b>	<b>Low-Noise Precision Instrumentation Amp</b>	<b>A, X</b>	<b>C, N, D-18,TC</b>	
AMP01AD/QMLV	5962-8863001VVA	A	D	
AMP01ATC/QMLV	5962-8863001V3A	A	TC	
AMP01D/QMLV	5962-8863003VVA	X	D	
AMP01N/QMLV	5962-8863003VKA	X	N	
AMP01TC/QMLV	5962-8863003V3A	X	TC	
Space Level Die	AMP01-000C	X	C	3
<b>AD8229S</b>	<b>Low-Noise Instrumentation Amplifier</b>	<b>S</b>	<b>F-14</b>	
AD8229AF/QMLR	5962R1420501VXA	S	F	
AD8229AF/QMLL	5962L1420502VXA	S	F	

## MULTIPLIERS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>AD534S</b>	<b>Internally Trimmed Precision IC Multiplier</b>	<b>T</b>	<b>C, D-14, H-10</b>	
AD534TD/QMLV	5962-9053701VCA	T	D	
Space Level Die	AD534-000C	T	C	3

## VARIABLE GAIN AMPLIFIERS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>AD8367S</b>	<b>500 MHz, Variable Gain Amplifier</b>	<b>S</b>	<b>F-16</b>	
	AD8367R703F	S	F	
	AD8367L703F	S	F	

## OPERATIONAL AMPLIFIERS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>AD648S</b>	<b>Dual Precision, Low Power BiFET Op Amp</b>	<b>S, T</b>	<b>H-8, Q-8</b>	
AD648SH/QMLV	5962-9753501VGA	S	H <sup>1</sup>	
AD648SQ/QMLV	5962-9753501VPA	S	Q	
AD648TH/QMLV	5962-9753502VGA	T	H <sup>1</sup>	
AD648TQ/QMLV	5962-9753502VPA	T	Q	
<b>AD844S</b>	<b>60 MHz, 2000V/μs Op Amp</b>	<b>S</b>	<b>Q-8</b>	
AD844SQ/QMLR	5962R8964401VPA	S	Q	
AD844SQ/QMLL	5962L8964402VPA	S	Q	
<b>AD847S</b>	<b>High Speed, Low Power Op Amp</b>	<b>S</b>	<b>Q-8</b>	
	AD847-703Q	S	Q	
<b>AD8001S</b>	<b>800 MHz, 50mW Current Feedback Amplifier</b>	<b>S</b>	<b>Q-8, L</b>	
AD8001SQ/QMLR	5962R9459301VPA	S	Q	
AD8001SL/QMLR	5962R9459301VHA	S	L	
AD8001SL/QMLL	5962L9459302VHA	S	L	
<b>AD8041S</b>	<b>160 MHz Rail-to-Rail Amplifier with Disable</b>	<b>S</b>	<b>C, Q-8, L</b>	
AD8041SQ/QMLR	5962R9683902VPA	S	Q	
AD8041SL/QMLR	5962R9683902VHA	S	L	
AD8041SL/QMLL	5962L9683903VHA	S	L	
AD8041-000C	Space Level Die	S	C	
<b>AD8138S</b>	<b>320 MHz Low Distortion Differential Amplifier</b>	<b>A</b>	<b>L</b>	
AD8138AL/QMLR	5962R0922001VHA	A	L	
AD8138AL/QMLL	5962L0922002VHA	A	L	

## OPERATIONAL AMPLIFIERS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>AD8351S</b>	<b>Low Distortion Fully Differential Amplifier</b>	<b>A</b>	<b>RC</b>	
AD8351ARC/QMLR	5962R0821801V2A	A	RC	
AD8351ARC/QMLL	5962L0821802V2A	A	RC	
<b>AD8629S</b>	<b>Dual Low Offset Precision Amplifier</b>	<b>S</b>	<b>L</b>	
	AD8629D703L	S	L	2, 4
<b>AD8671S</b>	<b>Low Noise, Low Input Bias Current, Low Offset</b>	<b>A</b>	<b>L</b>	
AD8671AL/QMLL	5962L0922301VHA	A	L	
<b>ADA4077-2S</b>	<b>Dual Low Offset and Drift, High Precision Amp</b>	<b>A</b>	<b>F-10</b>	
ADA4077-2AF/QMLR	5962R1423301VXA	A	F	
ADA4077-2AF/QMLL	5962L1423302VXA	A	F	
<b>ADA4084-2S</b>	<b>Dual Low Noise, R-R I/O, Low Power Amp</b>	<b>A</b>	<b>F-10</b>	
ADA4084-2AF/QMLR	5962R1324501VXA	A	F	
ADA4084-2AF/QMLL	5962L1324502VXA	A	F	
<b>ADA4084-4S</b>	<b>Quad Low Noise, R-R I/O, Low Power Amp</b>	<b>A</b>	<b>F-14</b>	
ADA4084-4AF/QMLR	5962R1523601VXA	A	F	
<b>ADA4096-2S</b>	<b>Dual Micropower Op Amplifier</b>	<b>S</b>	<b>F-10</b>	
ADA4096-2AF/QMLR	5962R1420601VXA	S	F	
<b>ADA4610-2S</b>	<b>Dual Low Input Bias Op Amplifier</b>	<b>S</b>	<b>F-10</b>	
ADA4610-2BF/QMLR	5962R1420701VXA	S	F	
ADA4610-2BF/QMLL	5962L1420702VXA	S	F	
<b>OP07S</b>	<b>Ultra Low Offset Voltage Op Amplifier</b>	<b>A, X</b>	<b>C, J, L, Z</b>	
OP07SAJ6	JM38510/13501SGA	A	J <sup>1</sup>	
OP07SAZ7	JM38510/13501SPA	A	Z	
OP07SZ7	JM38510/13502SPA	X	Z	
OP07AJ/QMLR	5962R9863901VGA	A	J <sup>1</sup>	
OP07AL/QMLR	5962R9863901VHA	A	L	
OP07AZ/QMLR	5962R9863901VPA	A	Z	
Space Level Die	OP07-000C	A	C	3
Space Level Die	OP07R000C	A	C	
<b>OP11S</b>	<b>Quad Matched 741-Type Op Amplifier</b>	<b>A</b>	<b>C, M, Y</b>	
OP11AM/QMLV	5962-8980101VDA	A	M	
Space Level Die	OP11-000C	A	C	3
<b>OP12S</b>	<b>Precision Low Input Current Op Amplifier</b>	<b>A</b>	<b>C</b>	
Space Level Die	OP12-000C	A	C	3



## OPERATIONAL AMPLIFIERS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>OP15S</b>	<b>Precision JFET-Input Op Amplifier</b>	<b>A</b>	<b>J, L, Z</b>	
OP15AJ/QMLR	5962R8954203VGA	A	J <sup>1</sup>	
OP15AL/QMLR	5962R8954203VHA	A	L	
OP15AZ/QMLR	5962R8954203VPA	A	Z	
<b>OP16S</b>	<b>Precision JFET-Input Op Amplifier</b>	<b>A</b>	<b>J, Z</b>	
OP16AJ/QMLR	5962R8954304VGA	A	J <sup>1</sup>	
OP16AZ/QMLR	5962R8954304VPA	A	Z	
<b>OP22S</b>	<b>Programmable Micro Power Op Amplifier</b>	<b>A</b>	<b>J</b>	
	OP22-903J	A	J <sup>1</sup>	3
<b>OP27S</b>	<b>Low Noise Precision Op Amplifier</b>	<b>A</b>	<b>C, J, L, RC, Z</b>	
OP27SAJ6	JM38510/13503SGA	A	J <sup>1</sup>	
OP27SAZ7	JM38510/13503SPA	A	Z	
OP27AJ/QMLR	5962R9468002VGA	A	J <sup>1</sup>	
OP27AL/QMLR	5962R9468002VHA	A	L	
OP27ARC/QMLR	5962R9468002V2A	A	RC	
OP27AZ/QMLR	5962R9468002VPA	A	Z	
OP27AL/QMLL	5962L9468003VHA	A	L	
Space Level Die	OP27-000C	A	C	3
Space Level Die	OP27R000C	A	C	
<b>OP37S</b>	<b>Low Noise Precision High Speed Op Amp</b>	<b>A</b>	<b>J, Z</b>	
OP37AJ/QMLV	5962-8853701VGA	A	J <sup>1</sup>	
OP37AZ/QMLV	5962-8853701VPA	A	Z	
<b>OP42S</b>	<b>Hi Speed, Fast Settling Precision JFET-Input</b>	<b>A</b>	<b>J, Z</b>	
OP42AJ/QMLV	5962-8851301VGA	A	J <sup>1</sup>	
OP42AZ/QMLV	5962-8851301VPA	A	Z	
<b>OP77S</b>	<b>Next Generation OP07</b>	<b>A</b>	<b>J, L, RC, Z</b>	
OP77AJ/QMLV	5962-8773802VGA	A	J <sup>1</sup>	
OP77AL/QMLV	5962-8773802VHA	A	L	
OP77ARC/QMLV	5962-8773802V2A	A	RC	
OP77AZ/QMLV	5962-8773802VPA	A	Z	
<b>OP200S</b>	<b>Dual Low-Offset, Low Power Op Amplifier</b>	<b>A</b>	<b>RC, Z</b>	
OP200ARC/QMLV	5962-8859301V2A	A	RC	
OP200AZ/QMLV	5962-8859301VPA	A	Z	

## OPERATIONAL AMPLIFIERS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>OP215S</b>	<b>Dual Precision JFET Input Op Amplifier</b>	<b>A</b>	<b>C, J, RC, Z</b>	
OP215AJ/QMLR	5962R8853801VGA	A	J <sup>1</sup>	
OP215AZ/QMLR	5962R8853801VPA	A	Z	
OP215ARC/QMLR	5962R8853804V2A	A	RC	
Space Level Die	OP215-000C	A	C	3
Space Level Die	OP215R000C	A	C	
<b>OP227S</b>	<b>Dual Low Noise Low Offset Inst. Op Amp</b>	<b>A</b>	<b>Y, M</b>	
	OP227R903Y	A	Y	
	OP227R903M	A	M	
<b>OP270S</b>	<b>Dual Very Low Noise Precision Op Amplifier</b>	<b>A</b>	<b>C, RC, Z, M</b>	
OP270AZ/QMLV	5962-8872101VPA	A	Z	
OP270ARC/QMLV	5962-8872101V2A	A	RC	
OP270AZ/QMLR	5962R8872101VPA	A	Z	
OP270AM/QMLR	5962R8872101VDA	A	M	
OP270ARC/QMLR	5962R8872101V2A	A	RC	
OP270AM/QMLL	5962L8872103VDA	A	M	
Space Level Die	OP270-000C	A	C	3
Space Level Die	OP270R000C	A	C	
<b>OP400S</b>	<b>Quad Low-Offset, Low-Power Op Amplifier</b>	<b>A</b>	<b>C, N, TC, Y</b>	
OP400AN/QMLV	5962-8777101VKA	A	N	
OP400ATC/QMLV	5962-8777101V3A	A	TC	
OP400AY/QMLV	5962-8777101VCA	A	Y	
OP400AY/QMLR	5962R8777101VCA	A	Y	
OP400AN/QMLR	5962R8777101VKA	A	N	
OP400AN/QMLL	5962L8777102VKA	A	N	
Space Level Die	OP400-000C	A	C	3
<b>OP467S</b>	<b>Quad High-Speed Precision Op Amplifier</b>	<b>A</b>	<b>RC, Y, M</b>	
OP467ARC/QMLV	5962-9325801V2A	A	RC	
OP467AM/QMLR	5962R9325801VDA	A	M	
OP467AY/QMLR	5962R9325801VCA	A	Y	

## OPERATIONAL AMPLIFIERS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>OP470S</b>	<b>Very Low-Noise Quad Op Amplifier</b>	<b>A</b>	<b>C, N,RC,TC,Y</b>	
OP470ARC/QMLV	5962-8856501V2A	A	RC	
OP470ARC/QMLR	5962R8856501V2A	A	RC	
OP470AN/QMLR	5962R8856501VKA	A	N	
OP470AY/QMLR	5962R8856501VCA	A	Y	
OP470AY/QMLL	5962L8856503VCA	A	Y	
OP470-903TC	OP470-903TC	A	TC	3
Space Level Die	OP470-000C	A	C	3
Space Level Die	OP470R000C	A	C	
<b>OP471S</b>	<b>High Speed Low Noise Quad Op Amplifier</b>	<b>A</b>	<b>M, N, Y</b>	
OP471AM/QMLR	5962R8856502VDA	A	M	
OP471AN/QMLR	5962R8856502VKA	A	N	
OP471AY/QMLR	5962R8856502VCA	A	Y	
OP471AM/QMLL	5962L8856504VDA	A	M	
<b>OP484S</b>	<b>Precision, Rail to Rail IP/OP Op Amplifier</b>	<b>A</b>	<b>C, Y, M</b>	
OP484AY/QMLV	5962-0051701VCA	A	Y	
OP484AM/QMLV	5962-0051701VDA	A	M	
OP484AY/QMLR	5962R0051701VCA	A	Y	
OP484AM/QMLR	5962R0051701VDA	A	M	
OP484AM/QMLL	5962L0051702VDA	A	M	
Space Level Die	OP484-000C	A	C	3
Space Level Die	OP484R000C	A	C	
<b>PM108S</b>	<b>Low Input Current Op Amplifier</b>	<b>A</b>	<b>C, J, L, Z</b>	
PM108SAJ6	JM38510/10104SGA	A	J <sup>1</sup>	
PM108AJ/QMLR	5962R9863701VGA	A	J <sup>1</sup>	
PM108AL/QMLR	5962R9863701VHA	A	L	
PM108AZ/QMLR	5962R9863701VPA	A	Z	
Space Level Die	PM108-000C	A	C	3
Space Level Die	PM108R000C	A	C	
<b>PM155S</b>	<b>Monolithic JFET Input Op Amplifier</b>	<b>A, X</b>	<b>J, Z</b>	
PM155SAJ6	JM38510/11404SGA	A	J <sup>1</sup>	
PM155SAZ7	JM38510/11404SPA	A	Z	
PM155AJ/QMLR	5962R9863601VGA	A	J <sup>1</sup>	
PM155AZ/QMLR	5962R9863601VPA	A	Z	

## OPERATIONAL AMPLIFIERS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>PM156S</b>	<b>Monolithic JFET Input Op Amplifier</b>	<b>A, X</b>	<b>J, Z</b>	
PM156SJ6	JM38510/11402SGA	X	J <sup>1</sup>	
PM156SAJ6	JM38510/11405SGA	A	J <sup>1</sup>	
PM156AJ/QMLR	5962R9863602VGA	A	J <sup>1</sup>	
<b>RH07</b>	<b>Precision Op Amplifier</b>	<b>-</b>	<b>DICE, H, W, J8</b>	
05-08-5010 Option 1	RH07H	-	H <sup>2</sup>	
05-08-5010 Option 2	RH07J8	-	J8	
05-08-5010 Option 3	RH07W	-	W	
05-08-5254	RH07DICE	-	DICE	
<b>RH1013</b>	<b>Dual Precision Op Amplifier</b>	<b>-</b>	<b>DICE, H, W, J8</b>	
05-08-5013 Option 1	RH1013MH	-	H <sup>2</sup>	
05-08-5013 Option 2	RH1013MJ8	-	J8	
RH1013MW (05-08-5013 Option 3)	5962R8876003VHA	-	W	9
RH1013DICE (05-08-5112)	5962R8876003V9A	-	DICE	9
<b>RH1014</b>	<b>Quad Precision Op Amplifier</b>	<b>-</b>	<b>J, W</b>	
05-08-5014 Option 1	RH1014MJ	-	J <sup>2</sup>	
RH1014MW (05-08-5014 Option 2)	5962R8967703VDA	-	W	9
<b>RH101A</b>	<b>Operational Amplifier</b>	<b>A</b>	<b>DICE, H, W, J8</b>	
05-08-5015 Option 1	RH101AH	A	H <sup>2</sup>	
05-08-5015 Option 2	RH101AJ8	A	J8	
05-08-5015 Option 3	RH101AW	A	W	
05-08-5154	RH101ADICE	A	DICE	
<b>RH1028</b>	<b>Ultralow Noise Precision Op Amplifier</b>	<b>-</b>	<b>DICE, W</b>	
05-08-5217	RH1028MW	-	W	
05-08-5238	RH1028MDICE	-	DICE	
<b>RH1056</b>	<b>Precision High Speed JFET Input Op Amplifier</b>	<b>A</b>	<b>DICE, H, W</b>	
05-08-5019 Option 1	RH1056AMH	A	H <sup>2</sup>	
05-08-5019 Option 2	RH1056AMW	A	W	
05-08-5212	RH1056ADICE	A	DICE	
<b>RH1078</b>	<b>Dual Micropower Precision Op Amplifier</b>	<b>-</b>	<b>DICE, H, MJ8, W</b>	
05-08-5020 Option 1	RH1078MH	-	H	
05-08-5020 Option 2	RH1078MJ8	-	J8	
05-08-5020 Option 3	RH1078MW	-	W	
05-08-5209	RH1078MDICE	-	DICE	

## OPERATIONAL AMPLIFIERS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>RH108A</b>	<b>General Purpose Op Amplifier</b>	<b>A</b>	<b>DICE, H, MJ8, W</b>	
05-08-5022 Option 1	RH108AH	A	H <sup>2</sup>	
05-08-5022 Option 2	RH108AJ8	A	J8	
05-08-5022 Option 3	RH108AW	A	W	
05-08-5111	RH108ADICE	A	DICE	
<b>RH1128</b>	<b>Ultralow Noise Precision Op Amplifier</b>	<b>-</b>	<b>DICE, W</b>	
05-08-5218	RH1128MW	-	W	
05-08-5238	RH1128MDICE	-	DICE	
<b>RH118</b>	<b>Precision High Speed Op Amplifier</b>	<b>-</b>	<b>H, J8, W</b>	
05-08-5025 Option 1	RH118H	-	H <sup>2</sup>	
05-08-5025 Option 2	RH118J8	-	J8	
05-08-5025 Option 3	RH118W	-	W	
<b>RH1498</b>	<b>Dual R-R Precision C-Load Op Amplifier</b>	<b>-</b>	<b>DICE, W</b>	
RH1498MW (05-08-5201)	5962R1325001VHA	-	W	9
RH1498DICE (05-08-5208)	5962R1325001V9A	-	DICE	9
<b>RH1499</b>	<b>Quad R-R Precision C-Load Op Amplifier</b>	<b>-</b>	<b>W</b>	
RH1499MW (05-08-5208)	5962R1325001V9A	-	W	9
<b>RH1814</b>	<b>Quad High Speed, High Slew Rate Op Amplifier</b>	<b>-</b>	<b>DICE, W</b>	
05-08-5204	RH1814MW	-	W	
05-08-5220	RH1814MDICE	-	DICE	8
<b>RH27</b>	<b>Precision Low Offset Op Amplifier</b>	<b>AE, E, C</b>	<b>DICE, H, J8, W</b>	
05-08-5029 Option 1	RH27CH	C	H <sup>2</sup>	
05-08-5029 Option 2	RH27CJ8	C	J8	
05-08-5029 Option 3	RH27CW	C	W	
05-08-5029 Option 4	RH27EW	E	W	
05-08-5029 Option 5	RH27EH	E	H <sup>2</sup>	
05-08-5029 Option 6	RH27AEW	AE	W	
05-08-5114	RH27CDICE	C	DICE	
<b>RH37</b>	<b>Precision High Speed Op Amplifier</b>	<b>C</b>	<b>H, J8, W</b>	
05-08-5030 Option 1	RH37CH	C	H <sup>2</sup>	
05-08-5030 Option 2	RH37CJ8	C	J8	
05-08-5030 Option 3	RH37CW	C	W	
<b>RH6200</b>	<b>High Speed R-R Low Noise Op Amplifier</b>	<b>-</b>	<b>DICE, W</b>	
05-08-5249	RH6200MW	-	W	
05-08-5250	RH6200MDICE	-	DICE	

## VOLTAGE REFERENCES

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>AD584S</b>	<b>Pin Programmable Precision Voltage Ref</b>	<b>S, T</b>	<b>H-8</b>	
AD584SH/QMLV	5962-3812801VGA	S	H <sup>1</sup>	
AD584TH/QMLV	5962-3812802VGA	T	H <sup>1</sup>	
AD584SH/QMLR	5962R3812801VGA	S	H <sup>1</sup>	
AD584TH/QMLR	5962R3812802VGA	T	H <sup>1</sup>	
AD584TH/QMLL	5962L3812805VGA	T	H <sup>1</sup>	
<b>AD589S</b>	<b>Precision 1.2 Volt IC Reference</b>	<b>T</b>	<b>H-2</b>	
AD589TH/QMLV	5962-8992901VXA	T	H <sup>1</sup>	
<b>REF01S</b>	<b>+10V Precision Voltage Reference</b>	<b>A</b>	<b>J, L, RC, Z</b>	
REF01AJ/QMLR	5962R8958101VGA	A	J <sup>1</sup>	
REF01AL/QMLR	5962R8958101VHA	A	L	
REF01ARC/QMLR	5962R8958101V2A	A	RC	
REF01AL/QMLL	5962L8958105VHA	A	L	
Space Level Die	REF01-000C	A	C	3
Space Level Die	REF01R000C	A	C	
<b>REF02S</b>	<b>+5V Precision Volt Ref./Temp. Transducer</b>	<b>A</b>	<b>C, J, L, RC, Z</b>	
REF02AJ/QMLR	5962R8551401VGA	A	J <sup>1</sup>	
REF02AL/QMLR	5962R8551401VHA	A	L	
REF02ARC/QMLR	5962R85514 01V2A	A	RC	
REF02AZ/QMLR	5962R8551401VPA	A	Z	
REF02AL/QMLL	5962L8551405VHA	A	L	
Space Level Die	REF02-000C	A	C	3
Space Level Die	REF02R000C	A	C	
<b>REF05S</b>	<b>+5V Precision Voltage Reference</b>	<b>A</b>	<b>J, L, Z</b>	
REF05AJ/QMLR	5962R0051601VGA	A	J <sup>1</sup>	
REF05AL/QMLR	5962R0051601VHA	A	L	
REF05AZ/QMLR	5962R0051601VPA	A	Z	
REF05AL/QMLL	5962L0051602VHA	A	L	
<b>REF10S</b>	<b>+10V Precision Voltage Reference</b>	<b>A</b>	<b>J, L</b>	
REF10AJ/QMLR	5962R8947901VGA	A	J <sup>1</sup>	
REF10AL/QMLR	5962R8947901VHA	A	L	
REF10AL/QMLL	5962L8947903VHA	A	L	

## VOLTAGE REFERENCES

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>REF43S</b>	<b>+2.5V Low-Power Precision Voltage Ref</b>	<b>B</b>	<b>J, L, RC, Z</b>	
REF43AZ/QMLR	5962R9060302VPA	B	Z	
REF43AL/QMLR	5962R9060303VHA	B	L	
REF43AL/QMLL	5962L9060304VHA	B	L	
	REF43-803J	B	J <sup>1</sup>	3
	REF43-803L	B	L	3
	REF43-803RC	B	RC	3
	REF43-803Z	B	Z	3
	REF43R803J	B	J <sup>1</sup>	
	REF43R803RC	B	RC	
<b>RH1009</b>	<b>+2.5V Precision Voltage Reference</b>	<b>-</b>	<b>H, W, DICE</b>	
RH1009MH (05-08-5011 Option 1)	5962R8961002VXC	-	H <sup>2</sup>	9
RH1009MW (05-08-5011 Option 2)	5962R8961002VHA	-	W	9
RH1009MDICE (05-08-5115)	5962R8961002V9A	-	DICE	9
<b>RH1021</b>	<b>+5V, +7V, +10V Precision Voltage Reference</b>	<b>B, C, D</b>	<b>H, W, DICE</b>	
RH1021BMH-5 (05-08-5016 Option 1)	5962R8876201VGA	B	H <sup>2</sup>	9
RH1021CMH-5 (05-08-5016 Option 2)	5962R8876202VGA,	C	H <sup>2</sup>	9
05-08-5016 Option 3	RH1021DMH-5	D	H <sup>2</sup>	
RH1021CMW-5 (05-08-5016 Option 4)	5962R8876202VHA	C	W	9
RH1021C-5DICE (05-08-5117)	5962R8876202V9A	C	DICE	9
05-08-5017 Option 1	RH1021BMH-7	B	H <sup>2</sup>	
05-08-5017 Option 2	RH1021DMH-7	D	H <sup>2</sup>	
RH1021BMH-10 (05-08-5018 Option 1)	5962R8860001VGA	B	H <sup>2</sup>	9
RH1021CMH-10 (05-08-5018 Option 2)	5962R8860002VGA,	C	H <sup>2</sup>	9
05-08-5018 Option 3	RH1021DMH-10	D	H <sup>2</sup>	

## VOLTAGE REFERENCES

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>RH1021 Cont</b>	<b>+5V, +7V, +10V Precision Voltage Reference</b>	<b>B, C, D</b>	<b>H, W, DICE</b>	
RH1021CMW-10 (05-08-5018 Opt 4)	5962R8860002VHA	C	W	9
RH1021C-10DICE (05-08-5118)	5962R8860002V9A	C	DICE	9
<b>RH1034-1.2</b>	<b>+1.2V Voltage Reference (+7V Aux)</b>	<b>-</b>	<b>H, W</b>	
05-08-5229 Option 1	RH1034MW-1.2	-	W	
05-08-5229 Option 2	RH1034MH-1.2	-	H <sup>2</sup>	
<b>RH129A</b>	<b>+6.9V Voltage Reference</b>	<b>A</b>	<b>H</b>	
05-08-5027	RH129AH	A	H <sup>2</sup>	

## SWITCHES AND MULTIPLEXERS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>AD8182S</b>	<b>Dual 2:1 Buffered Mux</b>	<b>A</b>	<b>M</b>	
AD8182AM/QMLR	5962R1021101VDA	A	M	
AD8182AM/QMLL	5962L1021102VDA	A	M	
<b>ADG201S</b>	<b>LCMOS Hi-speed QUAD SPST Switches</b>	<b>T</b>	<b>Q-16</b>	
	ADG201-803Q	T	Q	2, 3
<b>SW201S</b>	<b>Quad SPST JFET Analog Switch</b>	<b>B</b>	<b>Q</b>	
	SW201-803Q	B	Q	3

## SAMPLE-AND-HOLD AMPLIFIERS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>AD585S</b>	<b>Hi Speed, Precision Sample-and-Hold Amp</b>	<b>S</b>	<b>M</b>	
	AD585-703M	S	M	3
	AD585-713M	S	M	3
<b>SMP11S</b>	<b>Low Droop Rate/Accurate Sample/Hold Amp</b>	<b>B</b>	<b>Y</b>	
	SMP11-803Y	B	Y	3

## RF/IF ICs

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>ADL5501S</b>	<b>Tru Pwr RMS Detector 50MHz - 6GHz</b>	<b>A</b>	<b>L</b>	
ADL5501AL/QMLR	5962R1123901VHA	A	L	
ADL5501AL/QMLL	5962L1123902VHA	A	L	



## RF/IF ICs

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>ADL5513S</b>	<b>4 GHz Log Amp</b>	<b>A</b>	<b>F-16</b>	
ADL5513AF/QMLR	5962R1120301VXA	A	F	
<b>AD8346S</b>	<b>2.5 GHz Modulator</b>	<b>A</b>	<b>F-16</b>	
AD8346AF/QMLR	5962R0922701VXA	A	F	
AD8346AF/QMLL	5962L0922702VXA	A	F	
<b>ADF4108S</b>	<b>7 GHz PLL Frequency Synthesizer</b>	<b>A,B</b>	<b>F-16</b>	
ADF4108L703F	5962L1420401VXA	A	F	
ADF4108L803F	5962L1420402VXA	B	F	

## CLOCK GENERATION AND DISTRIBUTION

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>ADCLK925S</b>	<b>ECL Clock/Data Fanout Buffer 7GHz</b>	<b>A</b>	<b>F-16</b>	
ADCLK925AF/QMLR	5962R1320501VXA	A	F	
ADCLK925AF/QMLL	5962L1320502VXA	A	F	

## ISOLATORS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>ADuM7442S</b>	<b>25 MBPS Quad Channel Digital Isolator</b>	<b>S</b>	<b>F-16</b>	
	ADUM7442R703F	S	F	
<b>ADuM3190S</b>	<b>High Stability Isolated Error Amplifier</b>	<b>S</b>	<b>F-16</b>	
	ADUM3190P703F	S	F	

## LINEAR REGULATORS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>RH1085</b>	<b>3A LDO Regulator</b>	<b>-</b>	<b>DICE, K</b>	
05-08-5105	RH1085MK	-	K	
05-08-5140	RH1085MKDICE	-	DICE	

## LINEAR REGULATORS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>RH1086</b>	<b>0.5A &amp; 1.5A LDO Regulator</b>	-	<b>DICE, H, K</b>	
05-08-5021	RH1086MH	-	H <sup>2</sup>	
05-08-5021	RH1086MK	-	K	
05-08-5134	RH1086BHKDICE	-	DICE	
05-08-5134	RH1086BKDICE	-	DICE	
<b>RH117</b>	<b>0.5A &amp; 1.5A Regulator</b>	-	<b>DICE, H, K</b>	
05-08-5024	RH117H	-	H <sup>2</sup>	
05-08-5024	RH117K	-	K	
05-08-5116	RH117DICE	-	DICE	
05-08-5116	RH117KDICE	-	DICE	
<b>RH1185</b>	<b>3A Negative LDO Regulator</b>	<b>A</b>	<b>DICE, K</b>	
05-08-5206	RH1185AMK	A	K	
05-08-5232	RH1185AMKDICE	A	DICE	
<b>RH137</b>	<b>0.5A &amp; 1.5A Negative Regulator</b>	-	<b>DICE, H, K</b>	
05-08-5028	RH137H	-	H <sup>2</sup>	
05-08-5028	RH137K	-	K	
05-08-5113	RH137DICE	-	DICE	
05-08-5113	RH137KDICE	-	DICE	
<b>RH1573</b>	<b>LDO PNP Regulator Driver</b>	-	<b>DICE</b>	
05-08-5223	RH1573MKDICE	-	DICE	
<b>RH1965</b>	<b>0.9A Low Noise, LDO Regulator</b>	-	<b>DICE</b>	
05-08-5273	RH1965MKDICE	-	DICE	
<b>RH3080</b>	<b>0.9A Single Resistor LDO Regulator</b>	-	<b>DICE</b>	
05-08-5246	RH3080MKDICE	-	DICE	
<b>RH3083</b>	<b>2.8A Single Resistor LDO Regulator</b>	-	<b>DICE</b>	
05-08-5744	RH3083MKDICE	-	DICE	

## SWITCHING REGULATORS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>RH1959</b>	<b>4.5A Switching Regulator</b>		<b>DICE</b>	
	RH1959MILDICE		DICE	
<b>RH3845</b>	<b>60Vin Synchronous Switching Controller</b>		<b>DICE</b>	
	RH3845MKDICE		DICE	

## SWITCHING REGULATORS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
RHK3845	60Vin Synchronous Switching Controller Kit Including 1 x RH3845 & 2 x RH411	-	DICE	
	RHK3845MKDICE	-	DICE	

## RF &amp; MICROWAVE

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
ADH232S	DC - 15GHz, High Isolation, Non Reflective SPDT Switch		C	
	Space Level Die	HMC8800	C	
ADH346S	DC - 20GHz, Voltage Variable Attenuator,		C	
	Space Level Die	HMC8801	C	
ADH424S	DC - 13GHz, 0.5dB LSB 6-Bit Digital Attenuator		C	
	Space Level Die	HMC8802	C	
ADH463S	2 - 20GHz, Low Noise Amplifier with Adjustable Gain Control		C	
	Space Level Die	HMC8803	C	
ADH141S	6 - 18GHz, Double Balanced Mixer RF & LO=6-18GHz, IF=DC-6GHz		C	
	Space Level Die	HMC8804	C	
ADH1015S	26 - 32GHz, Triple Balanced Mixer RF=26-32GHz, LO=7-11GHz & IF=16-22GHz		C	
	Space Level Die	HMC8805	C	

## OTHER FUNCTIONS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
AD537S	Voltage to Frequency Converter, +/-30V to 150kHz	S	D-14	
	AD537-703D	S	D	2, 3
AD590S	2 Terminal Temperature Transducer, 1uA/°K	L, M	H-3, F-2	
	AD590MF/QMLR	M	F	
	AD590MH/QMLR	M	H <sup>1</sup>	
	AD590LF/QMLR	L	F	
	AD590LH/QMLR	L	H <sup>1</sup>	
	AD590MH/QMLL	M	H <sup>1</sup>	
AD652S	Synchronous Voltage to Frequency Conv	S	Q-16	
	AD652SQ/QMLV	S	Q-16	

## OTHER FUNCTIONS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>AD9814S</b>	<b>14-Bit, 3-Channel CCD Signal Processor</b>		<b>F-28</b>	
	AD9814-703F		F-28	2, 3
<b>MAT02S</b>	<b>Low Noise, Matched Dual NPN Transistor</b>	<b>A</b>	<b>C, H</b>	
	MAT02-903H	A	H <sup>1</sup>	3
Space Level Die	MAT02-000C	A	C	3
<b>MAT03S</b>	<b>Low Noise, Matched Dual PNP Transistor</b>	<b>A</b>	<b>C, L</b>	
	MAT03-903L	A	L	3
Space Level Die	MAT03-000C	A	C	3

**Partner products :**

Partner products are built using LTC RHDICE and sold by ANAREN INC. formerly MS KENNEDY CORP. (MSK prefix) and COBHAM plc formerly AEROFLEX MICROELECTRONIC SOLUTIONS (VRG and RAD prefix).

LTC RH DICE part numbers are shown for each partner product, please contact the partner company for the latest status or visit the following web pages to access the SMDs and data sheets.

Websites:

[http://www.linear.com/products/Space\\_Qualified\\_Products](http://www.linear.com/products/Space_Qualified_Products)

<http://mskennedy.com/products/Rad-Hard-Products>

<http://ams.aeroflex.com/pagesproduct/prods-hirel-voltage.cfm>

**ANALOG TO DIGITAL CONVERTERS**

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
RAD1419 (R1419DICE)	14-Bit 800KSPS ADC	A	FP	
	RAD-1419ADC-01	A	FP	5

**OPERATIONAL AMPLIFIERS**

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
MSK0041 (RH101ADICE)	0.5A Power Op Amplifier	-	TO-8	
	MSK0041KRH	-	TO-8	6
MSK106 (RH101ADICE)	2A Power Op Amplifier	-	FP	
	MSK106KRH	-	FP	6
	MSK106KRHG	-	FP	6

**CURRENT SENSE AMPLIFIERS**

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
MSK196 (RH6105DICE)	Micropower R-R Current Sense Amp	-	FP	
	MSK196VRH	-	FP	6
	MSK196VRHG	-	FP	6
MSK496 (4 x RH6105DICE)	Quad Micropower R-R Current Sense Amp	-	FP	
	MSK496KRH	-	FP	6

## LINEAR REGULATORS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>MSK5800 (RH1573DICE)</b>	<b>4A ULDO Regulator</b>	-	<b>FP-12</b>	
MSK5800KRH	5962F09216	-	FP-12	6
<b>MSK5805 (RH1573DICE)</b>	<b>1A ULDO Regulator</b>	-	<b>FP-16</b>	
MSK5805KRHx		-	FP-16	6, 7
<b>MSK5810 (RH1573DICE)</b>	<b>5A ULDO Regulator</b>	-	<b>FP-20</b>	
MSK5810KRHx	5962F09216	-	FP-20	6, 7
<b>MSK5820 (RH1573DICE)</b>	<b>5A ULDO Regulator (1.5, 1.8, 1.9, 2.5, 2.8, 3.3 &amp; 5V Fixed Voltages)</b>	-	<b>TAB-PP</b>	
MSK5820-x.xKRHx	5962F09216	-	TAB-PP	6, 7
<b>MSK5821 (RH1573DICE)</b>	<b>5A ULDO Regulator</b>	-	<b>TAB-PP</b>	
MSK5821KRHx	5962F09216	-	TAB-PP	6, 7
<b>MSK5822 (RH1573DICE)</b>	<b>5A ULDO Regulator Split Bias (1.5, 1.9, 2.5, 2.8, 3.3 &amp; 5V Fixed Voltages)</b>	-	<b>TAB-PP</b>	
MSK5822-x.xKRHx	5962F09236	-	TAB-PP	6, 7
<b>MSK5823 (RH1573DICE)</b>	<b>3A ULDO Regulator (1.8 &amp; 2.5V Fixed Voltages)</b>	-	<b>FP-8</b>	
MSK5823-x.xKRHx	5962F08246	-	FP-8	6, 7
<b>MSK5824 (RH1573DICE)</b>	<b>3A ULDO Regulator</b>	-	<b>FP-8</b>	
MSK5824KRHx	5962F09208	-	FP-8	6, 7
<b>MSK5825 (RH1573DICE)</b>	<b>3A ULDO Regulator (2.5 &amp; 3.3V Fixed Voltages)</b>	-	<b>FP-8</b>	
MSK5825KRHx	5962F09209	-	FP-8	6, 7
<b>MSK5826 (RH1573DICE)</b>	<b>3A ULDO Regulator</b>	-	<b>FP-8</b>	
MSK5826KRHx	5962F09210	-	FP-8	6, 7
<b>MSK5940 (RH1185ADICE)</b>	<b>3A Negative LDO Regulator (-5, -5.2, -10, -12, -15V Fixed Voltages)</b>	<b>A</b>	<b>TO-257</b>	
MSK5940-x.xKRHx		A	TO-257	6, 7
<b>MSK5953 (2 x RH3080DICE)</b>	<b>Dual 1A Single Resistor LDO Regulator</b>	-	<b>FP-12</b>	
MSK5953KRH		-	FP-12	6
<b>MSK5965 (RH1965DICE)</b>	<b>0.9A Low Noise LDO Regulator</b>	-	<b>FP-10</b>	
MSK5965KRHx		-	FP-10	6, 7

## LINEAR REGULATORS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>MSK5970 (RH1086DICE)</b>	<b>1.5A LDO Regulator</b>	-	<b>SMD-1, TO-257</b>	
MSK5970KRHx	5962R09211	-	TO-257	6, 7
MSK5970KRHL	5962R09211	-	SMD-1	6
<b>MSK5971 (RH1085DICE)</b>	<b>3A LDO Regulator</b>	-	<b>SMD-1, TO-257</b>	
MSK5971KRHx	5962R09212	-	TO-257	6, 7
MSK5971KRHL	5962R09212	-	SMD-1	6
<b>MSK5972 (RH117DICE)</b>	<b>1.5A LDO Regulator</b>	-	<b>SMD-1, TO-257</b>	
MSK5972KRHx	5962R09213	-	TO-257	6, 7
MSK5972KRHL	5962R09213	-	SMD-1	6
<b>MSK5973 (RH137DICE)</b>	<b>1.5A Negative LDO Regulator</b>	-	<b>SMD-1, TO-257</b>	
MSK5973KRHx	5962R09214	-	TO-257	6, 7
MSK5973KRHL	5962R09214	-	SMD-1	6
<b>MSK5978 (RH3080DICE)</b>	<b>0.7A Single Resistor LDO Regulator</b>	-	<b>FP-10</b>	
MSK5978VRHx	MSK5978VRHx	-	FP-10	6, 7
<b>MSK5979 (RH3080DICE)</b>	<b>0.9A Single Resistor LDO Regulator</b>	-	<b>TO-257</b>	
MSK5979VRHx	MSK5979VRHx	-	TO-257	6, 7
<b>MSK5983 (RH3083DICE)</b>	<b>2.25A Single Resistor LDO Regulator</b>	-	<b>FP-16</b>	
MSK5983KRHx	MSK5983KRHx	-	FP-16	6, 7
<b>MSK5984 (RH3083DICE)</b>	<b>2.8A Single Resistor LDO Regulator</b>	-	<b>TO-257</b>	
MSK5984KRHx	MSK5984KRHx	-	TO-257	6, 7
<b>MSK5985 (RH3083DICE)</b>	<b>1.9A Single Resistor LDO Regulator</b>	-	<b>TAB-PP</b>	
MSK5985KRHx	MSK5985KRHx	-	TAB-PP	6, 7
<b>VRG8601 / VRG8602 (RH117DICE + RH137DICE)</b>	<b>Dual 1.5A (Positive) &amp; 1.5A (Negative) Regulator</b>	-	<b>TAB-PP</b>	
VRG8601 / VRG8602	5962R05219	-	TAB-PP	5, 7
<b>VRG8607 / VRG8608 (2 x RH117DICE)</b>	<b>Dual 1.5A Regulator</b>	-	<b>TAB-PP</b>	
VRG8601 / VRG8602	5962R05219	-	TAB-PP	5, 7
<b>VRG8651 / VRG8652 (RH1086DICE + RH1185ADICE)</b>	<b>Dual 1A (Positive) &amp; 3A (Negative) LDO Regulator</b>	-/A	<b>TAB-PP</b>	
VRG8651 / VRG8652	5962R09201	-/A	TAB-PP	5, 7
<b>VRG8657 / VRG8658 (2 x RH1086DICE)</b>	<b>Dual 1A LDO Regulator</b>	-	<b>TAB-PP</b>	
VRG8657 / VRG8658	5962R09201	-	TAB-PP	5, 7

## LINEAR REGULATORS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>VRG8660 (RH117DICE)</b>	<b>1A LDO Regulator</b>	-	<b>SMD-0.5</b>	
VRG8660	5962R09206	-	SMD-0.5	
<b>VRG8662 (RH1086DICE)</b>	<b>1A LDO Regulator</b>	-	<b>SMD-0.5</b>	
VRG8662	5962R09207	-	SMD-0.5	5
<b>VRG8663 (RH1185ADICE)</b>	<b>3A Negative LDO Regulator</b>	<b>A</b>	<b>SMD</b>	
VRG8663	5962R09207	A	SMD-0.5	5
<b>VRG8666 (RH3080DICE)</b>	<b>1A Single Resistor LDO Regulator</b>	-	<b>SMD</b>	
VRG8666	5962R11205	-	SMD	5
<b>VRG8667 / VRG8668 (2 x RH3080DICE)</b>	<b>Dual 1A Single Resistor LDO Regulator</b>	-	<b>TAB-PP</b>	
VRG8667 / VRG8668	5962R13203	-	TAB-PP	5, 7
<b>VRG8669 (RH3083DICE)</b>	<b>2.5A Single Resistor LDO Regulator</b>	-	<b>SMD</b>	
VRG8669	5962R14201	-	SMD	5
<b>VRG8697 / VRG8698 (2 x RH3080DICE)</b>	<b>Dual 2.5A Single Resistor LDO Regulators</b>	-	<b>TAB-PP</b>	
VRG8697 / VRG8698	5962R14202	-	TAB-PP	5, 7

## SWITCHING REGULATORS

Product/Description	Part Number <sup>3</sup>	Electrical Grade	Package <sup>1</sup>	Note
<b>MSK5044 (RH1959DICE)</b>	<b>3.5A Switching Regulator (Isolated Case)</b>	-	<b>TAB-PP</b>	
MSK5044KRHx	5962R11231	-	TAB-PP	6, 7
<b>MSK5048 (RH1959DICE)</b>	<b>3.5A Switching Regulator (Grounded Case)</b>	-	<b>TAB-PP</b>	
MSK5048KRHx	5962R11232	-	TAB-PP	6, 7
<b>MSK5055 (RH3845DICE)</b>	<b>60Vin Synchronous Switching Controller</b>	-	<b>FP-16</b>	
MSK5055-xKRHx	5962F14223	-	FP-16	6, 7
<b>MSK5059 (RH1959DICE)</b>	<b>4.5A Switching Regulator</b>	-	<b>FP-16</b>	
MSK5059KRHx	5962R11234	-	FP-16	6, 7
<b>MSK5063 (RHK3845DICE)</b>	<b>10A 60Vin Synchronous Switching Regulator Module (External Inductor)</b>	-	<b>FP-46</b>	
	MSK5063KRHx	-	FP-46	6, 7

## Notes

<sup>1</sup> See package descriptions on last page.



- <sup>2</sup> Not available with wafer lot acceptance. Available as MIL-STD 883 Class B Dice plus SEM and Test Method 2010 Condition A Visual only.
- <sup>3</sup> Part Numbers in this column containing “-“may utilize a “-“or “0” in product documentation, shipping and/or purchasing documents.
- <sup>4</sup> Not available with wafer lot acceptance. SEM inspection per MIL-STD-883, Test Method 2018 is not applicable to this product as the wafer fabrication is manufactured using planarized metallization process.
- <sup>5</sup> Cobham (Aeroflex) product built using LTC space qualified DICE
- <sup>6</sup> Anaren (MSK) product built using LTC space qualified DICE
- <sup>7</sup> For lead form options please refer to SMD or data sheet
- <sup>8</sup> RH1814MDICE is a dual op amp (2 per RH1814MW packaged part)
- <sup>9</sup> LTC control drawing alternative to SMD in parenthesis

## Product Prefix Guide

AD	Analog Devices
ADCLK	Analog Devices Clock Generation / Distribution
ADA	Analog Devices Amplifiers
ADH	Hittite Microwave
ADF	Analog Devices Frequency Synthesis
ADL	Analog Devices RF
ADuM	Analog Devices Micro-machined
AMP	Analog Devices Instrumentation Amplifier
DAC	Analog Devices Digital to Analog Converter
LTC	Linear Technology
MAT	Analog Devices Matched Transistor
MSK	Anaran-MSK (built with Linear Technology die)
MUX	Analog Devices Multiplexer
OP	Analog Devices Proprietary Operational Amplifier
PM	Analog Devices Second Source
RAD	Cobham-Aeroflex (built with Linear Technology die)
REF	Analog Devices Voltage Reference
RH	Linear Technology (Radiation Hardened)
RT	Linear Technology (Radiation Tolerant)
SMP	Analog Devices Sample and Hold Amplifier
SW	Analog Devices Switch
VRG	Cobham-Aeroflex (built with Linear Technology die)

## Space Products Package Information

**PRODUCT PACKAGE OPTION KEY\***

	<b>ADI Package Description</b>	<b>LTC Package Description</b>
C	Dice	
D-xx	Side Brazed Hermetic DIP	
DICE		Dice
E-xx	Ceramic Leadless Chip Carrier	
F-xx	Bottom Brazed Ceramic Dual Flat Pack (2, 10, 14, 16, & 28 Lead)	
F-xx	Ceramic Quad Flat Pack (48, 52 Lead)	
FP		Hermetic Flatpack
G		SSOP Plastic Package
H <sup>1</sup>	6 lead TO-99 Can (Santa Clara Based Product)	
H <sup>2</sup>		TO-5, TO-39 Can (refer to SCD/SMD for details)
H-xx	Hermetic Metal Can (Other Analog Divisions)	
J <sup>1</sup>	8-Lead TO-99 Can	
J <sup>2</sup>		14-Lead Ceramic Glass Seal DIP
J8		8-Lead Ceramic Glass Seal DIP
K		TO-3 Can
L	10-Lead Glass Seal Ceramic Dual Flat Pack	
M	14-Lead Glass Seal Ceramic Dual Flat Pack	
MS		MSOP Plastic Package
N	24-Lead Glass Seal Ceramic Dual Flat Pack	
Q	16-Lead Cerdip (Santa Clara Based Product)	
Q-xx	Cerdip (Other Analog Divisions)	
QS-xx	Quad Flat Pack (48, 52-Lead)	
R	20-Lead Ceramic Dip	
RC	20-Lead Leadless Chip Carrier	
SMD		SMD Format Ceramic Chip Carrier Surface Mount
T	28-Lead Ceramic Glass Seal Dip	
TAB-PP		Metal Tab Power Package
TC	28-Lead Leadless Chip Carrier	
TO-8		Metal Can TO-8, 12 lead
W		Glass Seal Flatpack (10 or 14-Lead, refer to SCD/SMD)
X	18-Lead Ceramic Glass Seal Dip	
Y	14 Lead Ceramic Glass Seal Dip	
Z	8-Lead Ceramic Glass Seal Dip	

\*Call factory for availability of products / packages not in this parts list.