



A passion for performance.

Analog Multiplexers

D-to-A Converters

OpAmps & Comparators

Precision Current Sources

Pulse Width Modulators

R-to-D Converters

RS485 Transceivers

Voltage Regulators



**HiRel Off-The-Shelf
Microelectronics**

At Your Fingertips:

HiRel Off-the-Shelf Microelectronics from Aeroflex Plainview



Aeroflex Plainview designs and manufactures proven aerospace and avionic microelectronics. Now in our fifth decade of putting the fundamental components you need into the palm of your hand, we continue to deliver the parts that get your missions off the ground.

Like the universe, our line of HiRel Standard Products continues to expand. We now offer a wide variety of HiRel off-the-shelf voltage regulators, analog multiplexers, and special function products with quick delivery of non-flight parts for your engineering models and reduced lead times for your flight hardware.

Our new RadHard-by-Design (RHD) Analog Function Series offers 3.3V to 5V Quad OpAmps, Quad Comparators, Analog Multiplexers, and D-to-A Converters that are 1 Mrad(Si) and CMOS ELDRS immune.

HiRel SPECIAL FUNCTION PRODUCTS

PCS5035 Quintet Precision Current Source

- Total dose ≥ 100 krad(Si)
- Five high-precision 80 μ A current sources
- Single 5V supply
- Thermistor temperature monitoring
- SMD 5962-09234

www.aeroflex.com/HiRel

DRS4485 RS485 Dual Transceiver

- Total dose ≥ 100 krad(Si)
- RS485 interface with single 5V supply
- Driver maintains high impedance in three-state or with power off
- SMD 5962-09226

www.aeroflex.com/HiRel

PWM5032 Pulse Width Modulator

- Total dose ≥ 1 Mrad(Si)
- Low-power, high-speed design
- Current mode or voltage mode operation
- Optimized for power supply applications
- SMD 5962-06251

www.aeroflex.com/PWM

RDC5028 16-Bit Resolver-to-Digital Converter

- Total dose ≥ 1 Mrad(Si)
- Low power +5V @20mA typical
- Supports differential or single-ended inputs
- 3.3V to 5V digital interface logic voltage
- SMD 5962-04235

www.aeroflex.com/RDC

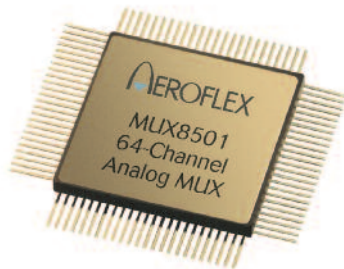
ANALOG MULTIPLEXER MODULES

www.aeroflex.com/MUX

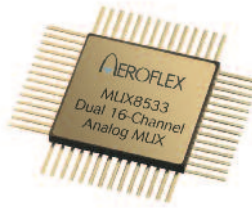
Aeroflex Plainview offers the most extensive line of HiRel analog multiplexers. Built-in decoupling capacitors, current limiting resistors, and ESD protection simplify sensor telemetry design while saving power, space, and weight.

PART NUMBER	Total Channels		Output Channels		Kelvin Channels		Transorb Input Protection		Address Busses		Enable Lines		V_+		V_-		V_{REF}		RDson (Ω) @ 25°C		Access Time(ns) @ 25°C		Input Range Min(V)		Input Range Max(V)		Total Dose krad(Si)		SEU Immune up to MeV - cm ² /mg		Package Leads		SMD #	
MUX8520	16	16		■	1	1	+15V	-15V	+5V	<2000	<1500	-5V	+15V	300	120	56	5962-0922901KXC																	
MUX8530	16	16		■	1	1	+15V	-15V	+5V	<1200	<600	-5V	+15V	150	90	56	5962-0923001KXC																	
MUX8521	16		16	■	1	1	+15V	-15V	+5V	<2000	<1500	-5V	+15V	300	120	56	5962-0922902KXC																	
MUX8531	16		16	■	1	1	+15V	-15V	+5V	<1200	<600	-5V	+15V	150	90	56	5962-0923002KXC																	
MUX8522	32	32			2	2	+15V	-15V	+5V	<2000	<1500	-5V	+15V	300	120	56	5962-0923101KXC																	
MUX8523	32	32		■	2	2	+15V	-15V	+5V	<2000	<1500	-5V	+15V	300	120	56	5962-0923102KXC																	
MUX8532	32	32			2	2	+15V	-15V	+5V	<1200	<600	-5V	+15V	150	90	56	5962-0923201KXC																	
MUX8533	32	32		■	2	2	+15V	-15V	+5V	<1200	<600	-5V	+15V	150	90	56	5962-0923202KXC																	
MUX8503	48	48		■	1	3	+15V	-15V	+5V	<2000	<1500	-5V	+15V	300	120	96	5962-0323403KXC																	
MUX8513	48	48		■	1	3	+15V	-15V	+5V	<1200	<600	-5V	+15V	150	90	96	5962-0920302KXC																	
MUX8502	48		48	■	1	3	+15V	-15V	+5V	<2000	<1500	-5V	+15V	300	120	96	5962-0323401KXC																	
MUX8506	48		48		1	3	+15V	-15V	+5V	<2000	<1500	-5V	+15V	300	120	96	5962-0323402KXC																	
MUX8512	48		48	■	1	3	+15V	-15V	+5V	<1200	<600	-5V	+15V	150	90	96	5962-0920301KXC																	
MUX8501	64	64		■	2	4	+15V	-15V	+5V	<2000	<1500	-5V	+15V	300	120	96	5962-0050202KXC																	
MUX8509	64	64			2	4	+15V	-15V	+5V	<2000	<1500	-5V	+15V	300	120	96	5962-1021202KXC																	
MUX8511	64	64		■	2	4	+15V	-15V	+5V	<1200	<600	-5V	+15V	150	90	96	5962-0920202KXC																	
MUX8500	64	32	32	■	2	4	+15V	-15V	+5V	<2000	<1500	-5V	+15V	300	120	96	5962-0050201KXC																	
MUX8507	64	32	32		2	4	+15V	-15V	+5V	<2000	<1500	-5V	+15V	300	120	96	5962-1021201KXC																	
MUX8510	64	32	32	■	2	4	+15V	-15V	+5V	<1200	<600	-5V	+15V	150	90	96	5962-0920201KXC																	
SINGLE +5V SUPPLY																																		
MUX8560	16	16			1	1	+5V	GND	+5V	<600	<400	0V	+5V	150	90	56	5962-1021001KXC																	
MUX8561	16		16		1	1	+5V	GND	+5V	<600	<400	0V	+5V	150	90	56	5962-1021002KXC																	
MUX8562	32	32			2	2	+5V	GND	+5V	<600	<400	0V	+5V	150	90	56	5962-1020901KXC																	

Multiplexers shown actual size



1.320" square
96-lead CQFP



0.800" square
56-lead CQFP

ADJUSTABLE VOLTAGE REGULATORS

www.aeroflex.com/VoltReg

Aeroflex Plainview's radiation-tolerant single- and dual-adjustable voltage regulators for military, aerospace, and high-reliability space applications are exceptionally easy to set up. We have optimized the design for excellent regulation and low thermal transients.

PART NUMBER	Total # Regulators	Low Dropout Regulators	# Positive Regulators	Positive Voltage Range (V)	# Negative Regulators	Negative Voltage Range (V)	Positive Output Current (A)	Negative Output Current (A)	Total Dose krads(Si)	Package Style	Package Size (inches)	Thru-Hole	Surface Mount	# Leads	SMD #
VRG8601	2		1	1.2 to 37	1	-1.2 to -27	1.5	1.5	100	TO-257	0.65x0.42x0.220	■		6	5962-0521901KXX
VRG8602	2		1	1.2 to 37	1	-1.2 to -27	1.5	1.5	100	TO-257	0.65x0.42x0.220		■	6	5962-0521901KYX
VRG8607	2		2	1.2 to 37			1.5	1.5	100	TO-257	0.65x0.42x0.220	■		6	5962-0521903KXX
VRG8608	2		2	1.2 to 37			1.5	1.5	100	TO-257	0.65x0.42x 0.220		■	6	5962-0521903KYX
VRG8609	2				2	-1.2 to -27	1.5	1.5	100	TO-257	0.65x0.42x0.220	■		6	5962-0521904KXX
VRG8610	2				2	-1.2 to -27	1.5	1.5	100	TO-257	0.65x0.42x 0.220		■	6	5962-0521904KYX
VRG8651	2	■	1	1.3 to 23	1	-2.5 to -25	1.0	3.0	100	TO-257	0.75x0.42x0.220	■		8	5962-0920101KUX
VRG8652	2	■	1	1.3 to 23	1	-2.5 to -25	1.0	3.0	100	TO-257	0.75x0.42x0.220		■	8	5962-0920101KZX
VRG8653	2	■	1	1.3 to 30	1	-2.5 to -25	3.0	3.0	100	TO-257	0.75x0.42x0.220	■		8	5962-1021301KUX
VRG8654	2	■	1	1.3 to 30	1	-2.5 to -25	3.0	3.0	100	TO-257	0.75x0.42x0.220		■	8	5962-1021301KZX
VRG8657	2	■	2	1.3 to 23			1.0		100	TO-257	0.65x0.42x0.220	■		6	5962-0920102KXX
VRG8658	2	■	2	1.3 to 23			1.0		100	TO-257	0.65x0.42x0.220		■	6	5962-0920102KYX
VRG8660	1		1	1.2 to 37			1.5		100	SMD-0.5	0.40x0.30x0.130		■	3	5962-0920601KXX
VRG8661	1				1	-1.2 to -27		1.5	100	SMD-0.5	0.40x0.30x0.130		■	3	5962-0920602KXX
VRG8662	1	■	1	1.3 to 23			1.0		100	SMD-0.5	0.40x0.30x0.130		■	3	5962-0920701KXX
VRG8663	1	■			1	-2.5 to -25		3.0	100	SMD	0.55x0.30x0.130		■	5	5962-0920702KYX
VRG8665	1	■	1	0.1 to 34			1.0		100	SMD-0.5	0.40x0.30x0.130		■	3	5962-1120501KXX
VRG8666 Dropout <0.5V	1	■	1	0.1 to 34			1.0		100	SMD	0.40x0.30x0.130		■	5	5962-1120502KXX
VRG8684	1	■	1	1.3 to 30			3.0		100	SMD-0.5	0.40x0.30x0.130		■	3	5962-0924501KXX
VRG8687	2	■	2	1.3 to 30			3.0		100	TO-257	0.75x0.42x0.220	■		8	5962-1021302KUX
VRG8688	2	■	2	1.3 to 30			3.0		100	TO-257	0.75x0.42x0.220		■	8	5962-1021302KZX
VRG8691 Dropout < 0.5V	1	■	1	1.0 to 3.3			7.5		100	Power	1.00x0.90x0.220	■		12	5962-0923701KXX
VRG8692 Dropout < 0.5V	1	■	1	1.0 to 3.3			7.5		100	Power	1.00x0.90x0.220		■	12	5962-0923701KYX

Voltage Regulators shown actual size



RadHard-By-Design ANALOG FUNCTION SERIES

www.aeroflex.com/RHDSeries

Aeroflex Plainview produced the RHD Series specifically for spacecraft designers working on LEO, MEO, GEO, and Deep Space missions. Engineered for Deep Space yet priced for all orbits, the RHD Series provides analog function building blocks to support rapid development of HiRel space application circuits.

- Single power supply operation: 3.3V to 5V
- Very low power
- Full military temperature range -55°C to +125°C
- Hermetic ceramic SOIC packaging
- Radiation performance:
 - CMOS ELDRS immune
 - Total dose ≥ 1 Mrad(Si)
 - SEL immune $\geq 100\text{MeV}\cdot\text{cm}^2/\text{mg}$
 - Displacement damage $\geq 10^{14}$ neutrons/cm²

PART NUMBER	Description	Ceramic SOIC Package	SMD #
QUAD OP AMPS			
RHD5900	General purpose operational amplifier with rail-to-rail input and outputs.	16 Pin	5962-1024101KXC
RHD5901	General purpose operational amplifier configured with enable/disable control. Pairs of amplifiers are put in a power-down condition with their outputs in a high-impedance state	16 Pin	5962-1024102KXC
RHD5902†	Higher-speed version of RHD5901 providing wider bandwidth and faster slew rate .	16 Pin	Pending
RHD5903†	Differential output operational amplifier. Outputs are centered at VDD/2.	16 Pin	Pending
RHD5904†	Quad version of the standard instrumentation configuration. Gain 1, output centered at VDD/2.	20 Pin	Pending
RHD5905†	Differential output version of RHD5904.	20 Pin	Pending
QUAD COMPARATORS			
RHD5910	Operates with dynamic signals on either or both inputs. Comparison is continuous as the circuit functions as high-gain, open-loop amplifier with a digital output.	16 Pin	5962-1024201KXC
RHD5911	Clocked comparator pairs to access and hold data until needed.	16 Pin	5962-1024202KXC
RHD5912†	Open drain outputs version of RHD5910.	16 Pin	5962-1024203KXC
ANALOG MULTIPLEXERS			
RHD5920	16:1 analog multiplexer. Channel selection controlled by 4-bit binary addressing and active low enable.	24 Pin	5962-1024301KXC
RHD5921	16:1 buffered output voltage multiplexer. Channel selection controlled by 4-bit binary addressing and active low enable. Multiplexed voltages are buffered by a unity gain rail-to-rail amplifier.	24 Pin	5962-1024302KXC
RHD5922	16:1 sample-and-hold multiplexer. Channel selection is controlled by a 4-bit address bus. Signal acquisition is controlled by internal low leakage sample-and-hold circuitry.	24 Pin	5962-1024303KXC
RHD8541	64-channels provided by four 16:1 multiplexers. Two address busses A(3:0) & B(3:0) and four enable lines afford flexible organization.	24 Pin	Pending
D-TO-A CONVERTERS			
RHD5930†	Digital-to-analog converter, 11-bit, ladder output	16 Pin	5962-1120801KXC
RHD5931†	Digital-to-analog converter, 11-bit, buffered output	16 Pin	5962-1120802KXC

† Product in development.

RHD Series shown actual size



Op Amps



Comparators



Multiplexers



Digital-to-Analog Converters



Aeroflex Plainview
provides HiRel for
LEO, MEO, GEO and
Deep Space missions
that meet your
RadHard requirements:
100 krad(Si) to 1 Mrad(Si)



Aeroflex Plainview

WEB SITE www.aeroflex.com/HiRel

TELEPHONE 800-843-1553



Our passion for performance is defined by three
attributes represented by these three icons:
solution-minded, performance-driven and customer-focused.