



M.S. Kennedy Product Selector Guide

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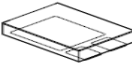


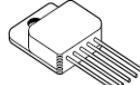



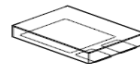
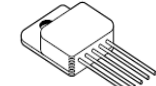
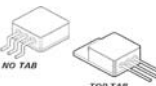
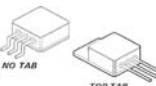
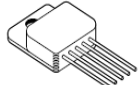
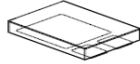
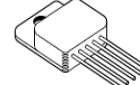
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Hermetic Linear Voltage Regulators

Industrial & MIL-PRF-38534 Class H, Tc= -55 to +125°C

Single Low Dropout Positive

Part Number	Vin Range*	Vout V	Vdo V	Iout A	Package	Additional Features	
MSK5215	Up to 26V (60V)	1.5, 1.7, 1.9, 2.5, 3.3, 5, 12	0.6	1.5	3 PIN CERAMIC POWER SURFACE MOUNT		
MSK5101	Up to 26V (60V)	ADJ , 3.3, 5, 12	0.6	1.5	10 PIN POWER FLATPACK		Powergood Flag output
MSK5102	Up to 26V (60V)	1.5, 1.7, 1.9, 2.5, 3.3, 5, 12	0.6	1.5	10 PIN POWER FLATPACK		No Powergood flag output
MSK5115	Up to 26V (60V)	adj, 3.3, 5, 12	0.6	1.5	5 PIN POWER, TOP OR Z-TAB		Powergood Flag output
MSK5116	Up to 26V (60V)	1.5, 1.7, 1.9, 2.5, 3.3, 5, 12	0.6	1.5	5 PIN POWER, TOP OR Z-TAB		No Powergood flag output
MSK5140	2.7-20V	1.5, 1.7, 1.8, 1.9, 2.0, 2.5, 3.3	0.45	1.5	3 Pin Isolated TO-257		Fast, low noise
MSK5141	2.7-20V	Adj	0.45	1.5	10 PIN POWER FLATPACK		Fast, low noise
MSK5230	Up to 26V (60V)	1.5, 1.7, 1.9, 2.5, 3.3, 5, 12	0.6	3	3 PIN CERAMIC POWER SMD		
MSK5231	Up to 26V (60V)	ADJ	1.5	3			
MSK5144	2.7-20V	1.5, 1.7, 1.8, 1.9, 2.0, 2.5, 3.3	0.45	3	5 PIN POWER, TOP OR Z-TAB		Fast, low noise
MSK5143	2.7-20V	Adj	0.45	3			
MSK5142	2.7-20V	1.5, 1.7, 1.8, 1.9, 2.0, 2.5, 3.3	0.45	3	3 Pin Isolated TO-257		Fast, low noise
MSK5232	Up to 26V (60V)	1.5, 1.7, 1.8, 1.9, 2.5, 3.3, 5, 12	0.6	3	3 PIN TO-257 WITH 4 LEAD FORM OPTIONS		
MSK5130	Up to 26V (60V)	adj, 3.3	0.6	3	5 PIN POWER, TOP OR Z-TAB		Powergood Flag output No Powergood flag output
MSK5131	Up to 26V (60V)	1.5, 1.7, 1.8, 1.9, 2.5, 3.3, 5, 12	0.6	3	5 PIN POWER, TOP OR Z-TAB		
MSK5250	Up to 26V (60V)	1.5, 1.7, 1.9, 2.5, 3.3, 5, 12	0.6	5	3 PIN CERAMIC POWER SMD		
MSK5251	3 - 6.5V	0.8, 0.9, 1, 1.2, 1.3, 1.5	2.1	5	3 PIN CERAMIC POWER SMD		
MSK5450	1.65-5.5V	0.7, 0.9, 1.0, 1.2, 1.3, 1.5	0.5	5	3 PIN CERAMIC POWER SMD		Powergood Flag output No Powergood flag output
MSK5150	Up to 26V (60V)	adj, 3.3, 5, 12	0.6	5	5 PIN POWER, TOP OR Z-TAB		
MSK 5151	Up to 26V (60V)	1.5, 1.7, 1.9, 2.5, 3.3, 5, 12	0.6	5	5 PIN POWER, TOP OR Z-TAB		

* Most regulators minimum input voltage is slightly over output voltage plus dropout voltage (Vdo)



Hermetic Linear Voltage Regulators

Industrial & MIL-PRF-38534 Class H, Tc= -55 to +125°C

Single Low Dropout Positive							
Part Number	Vin Range*	Vout V	Vdo V	Iout A	Package		Additional Features
MSK5175	Up to 26V (60V)	ADJ, 3.3, 5, 12	0.6	7.5	5 PIN POWER, TOP OR Z-TAB		Powergood Flag output
MSK5176	Up to 26V (60V)	1.5, 1.7, 1.9, 2.5, 3.3, 5,	0.6	7.5	5 PIN POWER, TOP OR Z-TAB		No Powergood flag output
MSK5275	Up to 26V (60V)	1.5, 1.7, 1.9, 2.0, 2.5, 3.3, 5.0, 12	0.6	7.5	3 PIN CERAMIC POWER SMD		
MSK5010	3-36V	3.3, 5, 12	0.45	10	5 PIN POWER, TOP OR Z-TAB		MOSFET Based VLDO
MSK5012	3-36V	ADJ	0.45	10	5 PIN POWER, TOP OR Z-TAB		MOSFET Based VLDO
MSK5020	3-36V	3.3, 5, 12	0.5	20	12 PIN POWER DIP		MOSFET Based VLDO
MSK5021	3-36V	ADJ	0.5	20	12 PIN POWER DIP		MOSFET Based VLDO

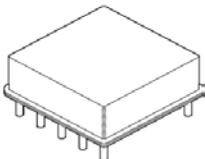
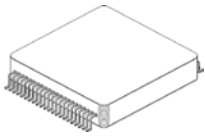
Single Low Dropout Negative Output							
Part Number	Vin range	Vout V	Vdo V	Iout A	Package Style		Additional Features
MSK5330	up to -30V	5, 5.2, 10, 12, 15, 5, 5.2	-1.2	-3	3 PIN CERAMIC POWER SURFACE MOUNT		
MSK5332	up to -30V	5, 5.2, 10, 12, 15	-1.2	-3	3 PIN T0-257 W/4 LEAD FORM OPTIONS		

Dual Low Dropout Positive & Negative							
Part Number	Vin range	Vout V+/-V combinations	Vdo V+/-V	Iout A	Package		Additional Features
MSK5000...9	up to +-30V	+3.3/- 5.2, 5/-5.2, 5/-5, 12/-5, 12/-12, 15,-15, 15/-5, 5/-12, 5/-15, 10/-10	1.5/1.2	3	5 PIN POWER, TOP OR Z-TAB		20-65db PSRR
MSK5200...5210	up to +-26V	+3.3/- 5.2, 5/-5.2, 5/-5, 12/-5, 12/-12, 15,-15, 15/-5, 5/-12, 5/-15, 10/-10, 5.2/5.2,	0.6/1.2	3	5 PIN POWER, TOP OR Z-TAB		25-75db PSRR
MSK5211...5214	up to +-40V	5,10, 12, 15	3.0/3.0	1.5			25-75db PSRR

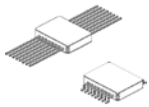
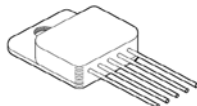
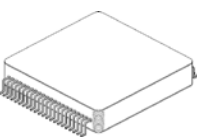
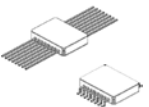
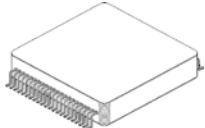


Switching Regulators and POL Modules

Hermetic MIL-PRF-38534 Class H Tc= -55 to +125°C

Part Number	Vout VDC	Vin Max VDC	Eff typ. %	Iout A	Features	Package Style		Dimensions in inches
MSK 5030-X.X	2.5, 3.3, 5	36	80	4	Mosfet Based POL	8 PIN METAL PLATFORM DIP		1x1x0.4"
MSK 5040-X.X	1.9, 2.5, 3.3, 5	36	70	4	300kHz Mosfet Based POL	44 PIN SMT		1.25x1.55x0.29
MSK 5041-X.X	1.9, 2.5, 3.3, 5	36	70	8	300kHz Mosfet Based POL			
MSK 5042	ADJ	36	95	4	Synchronous 300kHz MOS Based POL			
MSK 5043	ADJ	36	92	8	300kHz Mosfet Based POL			
MSK 5045-X.X	2.5, 3.3, 5	80	83	4	300kHz Mosfet Based POL			

Rad Hard MIL-PRF-38534 Cl. K Tc= -55 to +125°C, Tj to 150°C

Part Number	Vout Volts	Vin Max V	Eff %	Iout A	Features	Package Style		Dimensions in inches
MSK5058RH	0.8-20V	36 (60)	85%	2	2Mhz, feature rich	Flatpak16		0.38x0.5x0.12
MSK 5044RH	ADJ	16	80	3.5	Bipolar POL 500kHz, current mode	5 PIN POWER TOP TAB		0.8 x 1.3 x 0.25
MSK 5048RH	ADJ	16	80	3.5	Bipolar POL 500kHz, current mode	5 PIN POWER TOP TAB		0.8 x 1.3 x 0.25
MSK5052RH	adj	16	80	4.5	Bipolar POL 500kHz, current mode	40-PIN FLATPAK		0.9x1.1x0.28
MSK 5059RH	1.2V-90% vin	16	85	4.5	Bipolar 500Khz switching Regulator, current mode	Flatpak16		0.38x0.5x0.12
MSK5046RH	1.5, 1.7, 1.8, 1.9, 2.0, 2.5, 3.0, 3.3, 3.4, 5	20	75	5	MOSFET based POL module	44 PIN SURFACE MOUNT FLATPACK		1.25x1.55x0.28



Plastic Encapsulated Motorcontrol- and smart MOSFET and IGBT Modules

H-Bridges with Gate Drive and Motor Controllers Industrial Tc = -40 to + 85°C

Part Number	Voltage (V)	Current (A)	Features	Package Style	Dimensions in inches
MSK 4251	75	10	COMPLETE CONTROLLER, LOW COST PEM	20 PIN, POWER PACK	2.6 x 1.9 x 0.48
MSK 4225	75	20	INTERNAL PWM, LOW COST PEM		
MSK 4226	75	20	LOGIC LEVEL INPUT, LOW COST PEM		
MSK 4227	200	20	HIGH VOLTAGE, LOW COST PEM		

3-Phase Bridges with Gate Drivers and Motor Controllers Tc = -40 to + 85°C

Part Number	Voltage (V)	Current (A)	Features	Package Style	Dimensions in inches
MSK 4410	55	10	COMPLETE TACH CLOSED LOOP SPEED CONTROLLER	20 PIN, PLASTIC, POWER PACK	2.6 x 1.9 x 0.48
MSK 4460	55	10	CONTROLLER , INTERNAL +/- 15V SUPPLIES	20 PIN, PLASTIC, POWER PACK	2.6 x 1.9 x 0.48
MSK 4400	75	10	CONTINUOUS HIGH SIDE DRIVE CAPABLE, LOW COST	28 PIN POWER DIP	2.1 x 1.35 x 0.35
MSK 4401	75	29	CONTINUOUS HIGH SIDE DRIVE CAPABLE, LOW COST	20 PIN, PLASTIC, POWER PACK	2.6 x 1.9 x 0.48
MSK 4462	75	30	CONTROLLER , INTERNAL +/- 15 VOLT SUPPLIES-UNDER DEVELOPMENT	40 PIN, PLASTIC, POWER PACK	TBD
MSK 4422	200	20	BOOT STRAP HIGH SIDE SUPPLY, LOW COST PEM	20 PIN, PLASTIC, POWER PACK	2.6 x 1.9 x 0.48
MSK 4470	500	10	CONTROLLER , LOW COST-CURRENTLY UNDER DEVELOPMENT	40 PIN, PLASTIC, POWER PACK	TBD
MSK 4454	600	10	BOOT STRAP HIGH SIDE SUPPLY, LOW COST PEM	20 PIN, PLASTIC, POWER PACK	2.6 x 1.9 x 0.48

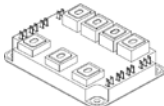
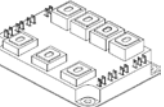

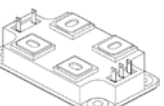
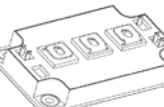
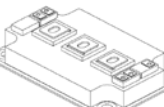
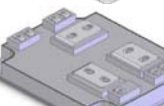

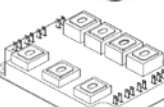
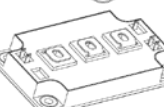

SIP MOSFET BRIDGES , Tc = -55 to +125°C

Part Number	Voltage (V)	Current (A)	Features	Package Style	Dimensions in inches
MSK 3003	55	10	3 PHASE MOSFET BRIDGE	12 PIN CERAMIC SIP	1.3 x 0.75 x 0.2
MSK 3004	55	10	H-BRIDGE MOSFET		
MSK 3018	55	10	3 PHASE MOSFET BRIDGE, BRAKING MOSFETS	10 PIN CERAMIC SIP	1.33 x 1 x 0.26
MKS4223	75	6	H-BRIDGE INTERNAL PWM 250kHz, ULTRA COMPACT		
MKS 3001	100	5	3 PHASE MOSFET BRIDGE	11 PIN CERAMIC SIP	1.36x0.52x0.15
MSK 3014	100	10	H-BRIDGE MOSFET	12 PIN CERAMIC SIP	1.3 x 0.75 x 0.2
MSK 3020	100	10	H-BRIDGE CURRENT SENSING MOSFETS		
MSK 3013	55	25	QUAD INDEPENDENT N-CHANNEL MOSFET ARRAY	21 PIN CERAMIC SIP	2.8 x 1.2 x 0.2
MSK 3015	100	23			
MSK 3016	200	20	3 PHASE MOSFET BRIDGE		
MSK 3017	200	30			



Plastic Encapsulated Motorcontrol- and smart MOSFET and IGBT Modules

**Near Hermetic High Power Tc -55 to
+125°C and -40 to +85°C**

Part Number	Voltage V	Current A	Features	Package Style	Dimensions in inches
MSK4853	600	200	3-PHASE BRIDGE PEM WITH SCR/REGEN W. 150A Diodes	PEM STYLE WITH LUGS	 5 x 2.85 x 1.0
MSK 4854	600	200	3-PHASE BRIDGE PEM WITH SCR/REGEN	PEM STYLE WITH LUGS	 4.6 x 3.4 x 1.2 "
MSK 4891	600	300	SCR/DIODE PEM	PEM STYLE WITH LUGS	 3.5x2x1"
MSK 4890	600	300	SCR/REGEN IGBT PEM	PEM STYLE WITH LUGS	 3.5x2x1"
MSK 4800	600	450	HALF BRIDGE PEM	PEM STYLE WITH LUGS	 4x2.5x1"
MSK 4803	600	600	HALF BRIDGE PEM	PEM STYLE WITH LUGS	 4x2.5x1"
MSK 4802	600	800	HALF BRIDGE PEM	PEM STYLE WITH LUGS	 4.5x3.6x1"
MSK 4804	1200	100	SILICON CARBIDE HALF BRIDGE MOSFET PEM UNDER DEVELOPMENT	PEM STYLE WITH LUGS	 3.5x2x1"
MSK 4852	1200	150	3-PHASE BRIDGE PEM WITH SCR/REGEN	PEM STYLE WITH LUGS	 4.6 x 3.4 x 1.2 "
MSK 4810	1200	450	HALF BRIDGE PEM- CURRENTLY UNDER DEVELOPMENT	PEM STYLE WITH LUGS	 4x2.5x1"
MSK 4895	1700	400	QUAD IGBT PEM WITH SERIES DIODES- CURRENTLY UNDER DEVELOPMENT	PEM STYLE WITH LUGS	 4x2.5x1"

Proprietary Severe Environment Encapsulant System
-55 to +125°C Temperature Cycling and 96H HAST
Modified MIL-PRF-38534 Production and Screening Plan

High Speed Low Vce(on) IGBTs
Light Weight Domed ALSIC Baseplate



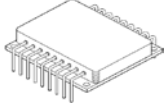
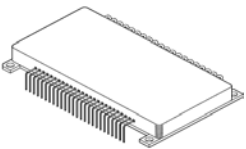
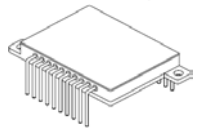
Hermetic Motorcontrol- and smart MOSFET and IGBT Modules


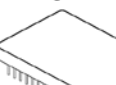
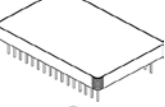
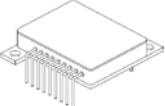
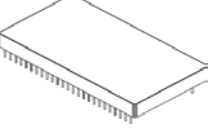
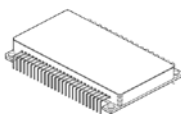
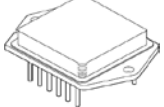
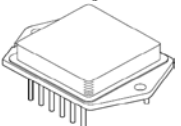
Industrial and MIL-PRF-38534 Class H, Tc= -55 to +125°C

			3-Phase			
Part Number	(V)	(A)	Features	Package Style		Dimensions in inches
MSK 4364	55	5	3 PHASE CONTROLLER , SMALL DIP	32 PIN DIP		1.74x1.14 x0.3
MSK 4310	55	10	3 PHASE BRIDGE COMPLETE TACH CLOSED LOOP SPEED CONTROLLER,	20 PIN POWER PACK W/ Z TABS		2.2x1.55 x0.3
MSK 4360	55	10	3 PHASE CONTROLLER , INTERNAL ± 15 VOLT SUPPLIES	20 PIN POWER PACK W/ Z TABS		2.2x1.55 x0.3
MSK 4300	75	10	3 PHASE BRIDGE CONTINUOUS HIGH SIDE DRIVE CAPABLE,	18 PIN POWER PACK W/ Z TABS		1.3x1.5 x0.31
MSK 4303	75	10	3 PHASE BRIDGE BOOTSTRAP SUPPLY,	20 PIN POWER PACK W/ Z TABS		2.2x1.55 x0.3
MSK 4363	75	10	3 PHASE CONTROLLER, LOWER COST	41 PIN DIP		2.6x1.4 x0.25
MSK 4301	75	29	3 PHASE BRIDGE CONTINUOUS HIGH SIDE DRIVE CAPABLE,	20 PIN POWER PACK W/ Z TABS		2.2x1.55 x0.3
MSK 4361	75	30	3 PHASE CONTROLLER	43 PIN, POWER PACK		3.1x2.08 x0.4
MSK 4362	75	30	3 PHASE CONTROLLER INTERNAL ± 15 VOLT SUPPLIES			
MSK 4365	75	30	3 PHASE DC BRUSHLESS DIGITAL CONTROLLER, UNDER DEVELOPMENT			
MSK 4324	200	10	3 PHASE CONTROLLER	20 PIN POWER PACK W/ Z TABS		2.2x1.55 x0.3
MSK 4322	200	20	3 PHASE BRIDGE BOOTSTRAP HIGH SIDE SUPPLY, LOWER COST,			
MSK 4370	500	10	3 PHASE CONTROLLER	43 PIN, POWER PACK		3.1x2.08 x0.4
MSK 4358	500	25	3 PHASE BRIDGE TOTALLY ISOLATED, CONTINUOUS HIGH SIDE DRIVE CAPABLE,	43PIN POWER PACK		



Hermetic Motorcontrol- and smart MOSFET and IGBT Modules

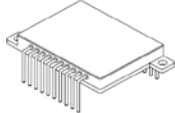
3-Phase (continued)						
Part Number	(V)	(A)	Features	Package Style		Dimensions in inches
MSK 4357	500	28	3 PHASE BRIDGE CONTINUOUS HIGH SIDE DRIVE CAPABLE,	18 PIN POWER PACK		2.25x2.3 x0.39
MSK 4351	500	50	3 PHASE BRIDGE TOTALLY ISOLATED, CONTINUOUS HIGH SIDE DRIVE CAPABLE,	48 PIN, POWER PACK		3.8x2.26 x0.41
MSK 4354	600	10	3 PHASE BRIDGE BOOTSTRAP HIGH SIDE SUPPLY, LOWER COST,	20 PIN POWER PACK W/ Z TABS		2.2x1.55 x0.3

H- Bridges						
Part Number	(V)	(A)	Features	Package Style		Dimensions in inches
MSK 4200	75	5	H-BRIDGE INTERNAL PWM/45KHz	8 PIN TO-3,CAN		1x1.53 x0.3
MSK 4201	75	5	H-BRIDGE LOGIC LEVEL INPUT, NO PWM	8 PIN TO-3, CAN		1x1.53 x0.3
MSK 4253	55	5	COMPLETE BRUSHED CONTROLLER	32 PIN DIP		1.74x1.14 x0.3
MSK 4203	75	10	H-BRIDGE INTERNAL PWM/45KHz	18 PIN POWER PACK W/ Z TABS		1.3x 1.5 x0.31
MSK 4250	75	10	COMPLETE BRUSHED CONTROLLER	41 PIN DIP		2.6x1.4 x0.25
MSK 4252	75	30	COMPLETE BRUSHED CONTROLLER	28 PIN POWER PACK W/TABS		2.25x2.08 x0.4
MSK 4206	100	20	H-BRIDGE PWM MOTOR DRIVER/AMPLIFIER, APEX SA01 DROP IN REPLACEMENT	10 PIN POWER PACK		2 x 1.3 x 0.8
MSK 4205	100	30	H-BRIDGE PWM MOTOR DRIVER/AMPLIFIER, APEX SA03 DROP IN REPLACEMENT	12 PIN POWER PACK		2.3x1.6 x0.28

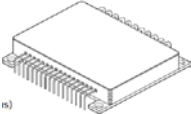
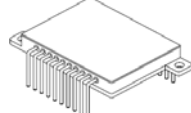


Hermetic Motorcontrol- and smart MOSFET and IGBT Modules

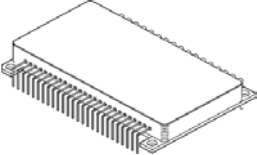
High Temperature 3 Phase Bridges Tc= -55 to 175°C, Tj to 200°C

Part Number	(V)	(A)	Features	Package Style	Dimensions in inches
MSK 4323	100	20	HIGH TEMP 3 PHASE BRIDGE WITH GATE DRIVE	20 PIN POWER PACK W/Z TABS	 2.2x1.55 x0.3

RAD HARD BRIDGES MIL PRF-38534 Class K Tc= -55 to 125°C, Tj to 150°C

Part Number	(V)	(A)	Features	Package Style	Dimensions in inches
MSK 4204RH	100	10	H-BRIDGE RAD HARD PWM AMP- CURRENTLY UNDER DEVELOPMENT	28 PIN POWER PACK W/ Z TABS	 2.25x2.08 x0.4
MSK 4304RH	100	10	RAD HARD 3 PHASE BRIDGE BOOTSTRAP SUPPLY	20 PIN POWER PACK W/ Z TABS	 2.2x1.55 x0.3




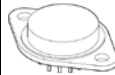












High Power Gate Drivers Tc= -55 to 125°C. Tj to 150°C

Part Number	(V)	(A)	Features	Package	Dimensions
MSK 4900	600	8	FULLY ISOLATED 1/2 BRIDGE GATE DRIVER - CURRENTLY UNDER DEVELOPMENT	43 PIN POWER PACK W/TABS	 3.1x2.08 x0.4



Amplifiers

Industry Standard and High Power Hermetic Amplifiers Industrial and MIL-PRF-38534 Class H Tc= -55 to +125°C


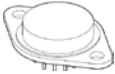






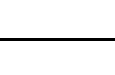
Amplifier Part Number	Vcc max	Vo Swing	Output Current	Total Iq	Slew Rate	Amplifier Features	Package Style	Dimensions in inches
	V	V	A MIN.	mA MAX.	V/μs typ			
MSK 0004	50/-50	45/-45	0.01	4.5	5	REPLACEMENT FOR LH0004	TO-5, CAN 	Φ 0.35 x 0.18
MSK 0032	18/-18	13/-13	0.01	20	650	REPLACEMENT FOR LH0032	12 Pin TO-8	Φ 0.6 x 0.185
MSK 032	18/-18	13/-13	0.02	20	600	FET INPUT DIFF OP-AMP	12 Pin TO-8	Φ 0.6 x 0.25
MSK 0024	18/-18	15/-15	0.03	15	400	REPLACEMENT FOR LH0024	8-pin TO-8 	Φ 0.38 x 0.2
MSK 0033	20/-20	17/-17	0.09	22	1500	REPLACEMENT FOR LH0033/EL2005	12 Pin TO-8	Φ 0.6 x 0.185
MSK 0002	22/-22	20/-20	0.1	10	250	BUFFER AMPLIFIER, REPLACES LH0002	TO-5, CAN 	Φ 0.35 x 0.18
MSK 3554	18/-18	13/-13	0.1	20	1200	DIRECT REPLACEMENT FOR OPA3554	TO-3, CAN 	1.55x1x0.34
MSK 0041/FP	18/-18	16/-16	0.2	3.5	3	REPLACEMENT FOR LH0041	TO-8, FLATPACK 	0.62x0.82x0.18
MSK 111	16/-16	11/-11	0.4	30	3000	REPLACES WA-01 HIGH POWER, HIGH SPEED OP-AMP	TO-3, CAN 	1.55x1x0.34
MSK 0006	45	43	0.4	2		HIGH PWR DRIVER, REPLACES DH0006	TO-5, CAN 	Φ 0.35 x 0.18
MSK 1461	45/-45	39/-39	0.6	25	500	VERY HIGH SPEED HIGH POWER AMP	14 PIN POWER DIP 	1.18x0.46x0.22
MSK 0008	45	43	1.6	8		HIGH PWR DRIVER, REPLACES DH0008	TO-5, CAN 	Φ 0.35 x 0.18
MSK 0021	18/-18	16.5/-16.5	2	3.5	3	REPLACEMENT FOR LH0021	TO-3, CAN 	1.55x1x0.34
MSK 0021FP	18/-18	16.5/-16.5	2	3.5	3	REPLACEMENT FOR LH0021 (FLATPACK VERSION)	FLATPACK 	0.83x0.63x0.16
MSK 181	30/-30	27/-27	3	20	10	RAIL TO RAIL HIGH POWER AMP	8 PIN POWER DIP 	0.9x0.54x0.27
MSK 181Z	30/-30	27/-27	3	20	10	RAIL TO RAIL HIGH POWER AMP	8 PIN POWER DIP, Z TABS 	0.9x1.04x0.27
MSK 182	30/-30	27/-27	3	40	10	RAIL TO RAIL HIGH POWER DUAL & HERMETIC	14 PIN POWER DIP 	1.18x0.46x0.22
MSK 183	30/-30	27/-27	3	40	10	RAIL TO RAIL HIGH POWER DUAL-LOW COST	10 PIN CERAMIC DIP (NON HERMETIC) 	1.33x1x0.26
MSK 184	30/-30	27/-27	3	40	10	REPLACEMENT FOR PA21	TO-3, CAN 	1.55x1x0.34

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Amplifiers

Industry Standard and High Power Hermetic Amplifiers MIL-PRF-38534 Class H and Industrial Tc= -55 to +125°C

Amplifier Part Number	Vcc max	Output Voltage Swing	Output Current	Total Iq	Slew Rate	Amplifier Features	Package Style		Dimensions in inches
	V	V	A MIN.	mA MAX.	V/μs typ				
MSK 155	40/-40	36/-36	5	60	10	DUAL HIGH PWR AMP	14 PIN POWER DIP		1.18x0.46x0.22
MSK 2541	40/-40	36/-36	5	60	10	DIRECT REPLACEMENT FOR OPA2541	TO-3, CAN		1.55x1x0.34
MSK 541	40/-40	36/-36	5	30	10	DIRECT REPLACEMENT FOR OPA541	TO-3, CAN		1.55x1x0.34
MSK 186	30/-30	27/-27	8	70	9	HIGH POWER DUAL AMPLIFIER	18 PIN POWER PACK		1.5x1.3x0.31
MSK 161	45/-45	40/-40	9	10	2.5	HIGH POWER AMP W/PROGRAMMABLE CURRENT LIMIT	TO-3, CAN		1.55x1x0.34
MSK 145	40/-40	36/-36	10	30	10	COPPER BASED SIP POWER AMP	6 PIN SIP		1.38x0.75x0.26
MSK 146	40/-40	36/-36	10	30	10	SMALL OUTLINE VERSION OF MSK 541	8 PIN POWER DIP		0.9x0.54x0.27
MSK 147	40/-40	36/-36	10	30	10	SAME AS MSK 146 WITH HEAT SINK TABS	8 PIN POWER DIP w/ Z TABS		0.9x1.04x0.27
MSK 115	50/-50	45/-45	15	35	5	IMPROVED OPA512 IN A POWER DIP	12 PIN POWER DIP		1.87x1.24x0.31

High Voltage/High Power Ceramic SIP Amplifiers Tc=-40°C to +125°C

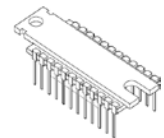
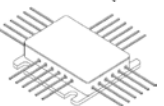
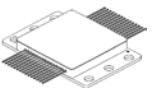
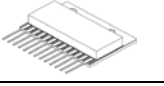
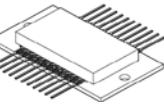
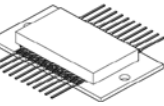
Amplifier Part Number	Supply Voltage	Output Voltage Swing	Output Current	Total Iq	Slew Rate	Amplifier Features	Package Style		Dimensions in inches
MSK 130	200/-200	190/-190	0.2	8	300	HIGH SPEED HIGH VOLTAGE AMP	10 PIN CERAMIC SIP, Non-hermetic		1.33x1x0.26
MSK 131	200/-200	190/-190	0.15	15	500	HIGHER SPEED VERSION OF MSK 130			1.33x1x0.26
MSK 183	30/-30	27/-27	3	40	10	RAIL TO RAIL HIGH POWER DUAL-LOW COST			1.33x1x0.26



High Speed Amplifiers

Industrial and MIL-PRF-38534 Class H Tc= -55 to +125°C

Pre Amplifiers for CRT

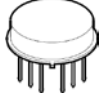

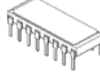
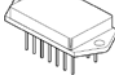
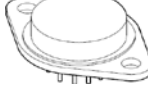
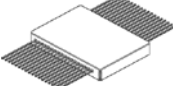

Part Number	+VHV (V)	-VHV (V)	VCC (V)	VEE (V)	VOUT (V)	Rise Time (nS)	Device Type	Package Style	Dimensions in inches
MSK 1900	65		12	-12	50	2.8	PRE-AMP, REPLACES MAX445 and TP1900	24 PIN POWER DIP	 1.6x0.6x0.25
MSK 1901	65		12	-12	50	2.8	PRE-AMP, HIGH VOLTAGE	24 PIN QUAD FLATPACK	 1x1x0.21
MSK 1902-4	75		17	-12	50	2.3	PRE-AMP, OUTPUT STAGE	 1.5x1x0.2	
MSK 1902-0	110		17	-12	85	4	PRE-AMP, OUTPUT STAGE external Lp/Rp		
MSK 1902-2	110		17	-12	85	3.4	PRE-AMP, OUTPUT STAGE		
MSK 1902-6	130		17	-12	105	6.5	PRE-AMP, OUTPUT STAGE		
MSK 1903-4		-75	22	-12	65	2.9	PRE-AMP, OUTPUT STAGE		
MSK 1903-0		-95	22	-12	85	4.2	PRE-AMP, OUTPUT STAGE external Lp/Rp		
MSK 1903-2		-95	22	-12	85	3.8	PRE-AMP, OUTPUT STAGE	 1.33x1x0.26	
MSK 1903-6		-120	22	-12	110	6.5	PRE-AMP, OUTPUT STAGE		
MSK 1922	75		17	-12	50	1.5	PRE-AMP, OUTPUT STAGE		
MSK 1932-4	75		17	-12	50	2.3	PRE-AMP, OUTPUT STAGE	 1.85x1.05x0.28	
MSK 1932-0	110		17	-12	85	4	PRE-AMP, OUTPUT STAGE external Lp/Rp		
MSK 1932-2	110		17	-12	85	3.4	PRE-AMP, OUTPUT STAGE		
MSK 1932-6	130		17	-12	105	6.5	PRE-AMP, OUTPUT STAGE		
MSK 1933-4		-75	22	-12	65	2.9	PRE-AMP, OUTPUT STAGE		
MSK 1933-0		-95	22	-12	85	4.2	PRE-AMP, OUTPUT STAGE external Lp/Rp		
MSK 1933-2		-95	22	-12	85	3.8	PRE-AMP, OUTPUT STAGE	 1.85x1.05x0.28	
MSK 1933-6		-120	22	-12	110	6.5	PRE-AMP, OUTPUT STAGE		

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High Speed Amplifiers

High Speed Power Amplifiers

Part Number	Sort		VCC V	VEE V	VOUT V	Rise Time ns	Device Type	Package Style	Dimensions in inches
	+VHV V	-VHV V							
MSK 739			18	-18	+13	2.9	OP-AMP	12 PIN TO-8	 $\Phi 0.52 \times 0.18$
MSK 738			18	-18	+13	4.6	OP-AMP	12 PIN TO-8	 $\Phi 0.52 \times 0.18$
MSK 450			18	-18	+13	8	DUAL OP-AMP	16 PIN DIP/28 PIN SOIC	 0.77x0.3x0.13
MSK 1461			45	-45	+38	64	OP-AMP DEFLECTION	14 PIN POWER DIP	 1,18x0.56x0.22
MSK 690	75			-20	55	20	OP- AMP	8 PIN TO-3	 1.55x1x0.34
MSK 613	65	-65	18	-18	+50	18	OP-AMP Low Iq	36 PIN FLATPACK	 1x0.75x0.16
MSK 611	130	-18	18	-18	110	12	OP-AMP	12 Pin Power Dip	 1.87x1.24x0.31
MSK 610	130	-18	18	-18	110	16	OP-AMP Low Iq		
MSK 612	80	-80	18	-18	+65	16	OP-AMP		
MSK 604	20	-120	18	-18	+5/-110	21	OP-AMP		
MSK 600	90	-90	18	-18	+80	26	OP-AMP		
MSK 601	150	-150	18	-18	+140	48	OP-AMP		

SELECTOR GUIDE

March 2011



RADHARD PRODUCTS WITH LTC RH DICE INSIDE

SINGLE AMPLIFIERS

Part type	RH DICE InsideTM	Description	SCD or SMD# reference	Typical GBW (MHz)	Max Vos @ 25 °C (uV)	Max Ios @ 25 °C (nA)	Package style	Base PN status	TID (1)	ELDRS (2)	SEE (3)
MSK0041RH	RH101ADICE	General Purpose Class C Op Amp (0.5A peak output)		0.1	3000	100	TO-8 (12)	In Qualification	100K		
MSK106RH	RH101ADICE	General Purpose Class C Op Amp (2A peak output)		0.1	3000	100	MFP-20	Released	100K		

DUAL AMPLIFIERS

Part type	RH DICE InsideTM	Description	SCD or SMD# reference	Typical GBW (MHz)	Max Vos @ 25 °C (uV)	Max Ios @ 25 °C (nA)	Package style	Base PN status	TID (1)	ELDRS (2)	SEE (3)
MSK198RH	RH1498DICE	Dual 6V/μs Rail-to-Rail Input/Output Precision C-Load		10.0	800	70	FP-10	In Qualification			
MSK198RHL	RH1498DICE	Dual 6V/μs Rail-to-Rail Input/Output Precision C-Load		10.0	800	70	LCC-16	In Qualification			

QUAD AMPLIFIERS

Part type	RH DICE InsideTM	Description	SCD or SMD# reference	Typical GBW (MHz)	Max Vos @ 25 °C (uV)	Max Ios @ 25 °C (nA)	Package style	Base PN status	TID (1)	ELDRS (2)	SEE (3)
MSK114RH	RH1013DICE x 2	Quad Precision Operational Amplifier		0.5	300	10	FP-14	In Qualification			

SINGLE COMPARATORS

Part type	RH DICE InsideTM	Description	SCD or SMD# reference	Typical tPD (nS)	Max Vos @ 25 °C (mV)	Max Ios @ 25 °C (nA)	Package style	Base PN status	TID (1)	ELDRS (2)	SEE (3)
MSK120RH	RH1011DICE	Precision Voltage Comparator		150	1.5	4	FP-10	Released*	100K		

DUAL COMPARATORS

Part type	RH DICE InsideTM	Description	SCD or SMD# reference	Typical tPD (nS)	Max Vos @ 25 °C (mV)	Max Ios @ 25 °C (nA)	Package style	Base PN status	TID (1)	ELDRS (2)	SEE (3)
MSK119RH	RH119DICE	Dual High Performance Comparator		80	4	75	FP-10	Released*	100K		

2.5V REFERENCES

Part type	RH DICE InsideTM	Description	SCD or SMD# reference	Max PPM/°C @ -55/125°C	Initial Accuracy %	Typical PPM/kHr	Package style	Base PN status	TID (1)	ELDRS (2)	SEE (3)
MSK109RH	RH1009MDICE	Precision 2.5V Reference		35	0.2	20	FP-10	Released*	100K		
MSK110RH	RH1009MDICE	Dual Precision 2.5V Reference		35	0.2	20	FP-10	In Qualification	100K		

POSITIVE VOLTAGE REGULATORS

Part type	RH DICE InsideTM	Description	SCD or SMD# reference	Pos. Reg. Iout (A)	Vout	Drop Out V @ 25°C	Package style	Base PN status	TID (1)	ELDRS (2)	SEE (3)
MSK5978RH	RH3080MKDICE	0.7A Adjustable, LDO, split bias		0.7	Adjustable to zero	0.5V @ 0.7A	MFP-10	Released	300K		
MSK5977RH	RH3080MKDICE	0.9A Adjustable, LDO, split bias		0.9	Adjustable to zero	0.32V @ 0.9A	TO-257	In Qualification	300K		
MSK5976RH	RH3080MKDICE	1A Adjustable, LDO, isolated tab		1.0	Adjustable to zero	1.4V @ 1A	TO-257	In Development	300K		
MSK5970RH	RH1086BKKDICE	1.5A Positive adjustable voltage LDO regulator	5962R0921101KXX	1.5	Adjustable	1.3V @ 1.5A	TO-257	Released	100K		
MSK5970RHL	RH1086BKKDICE	1.5A Positive adjustable voltage LDO regulator	5962R0921101KUX	1.5	Adjustable	1.3V @ 1.5A	SMD-1.0	Released	100K		
MSK5972RH	RH117KDICE	1.5A Positive adjustable voltage LDO regulator	5962R0921301KXX	1.5	Adjustable	2.2V @ 1.5A	TO-257	Released	100K		
MSK5972RHL	RH117KDICE	1.5A Positive adjustable voltage LDO regulator	5962R0921301KUX	1.5	Adjustable	2.2V @ 1.5A	SMD-1.0	Released	100K		
MSK5953RH	RH3080MKDICE x 2	1A+1A Adjustable, dual LDO		2.0	Adjustable to zero	TBD	MFP-12	In Qualification			
MSK5823-1.8RH	RH1573KDICE	3A Ultra low drop out fixed voltage regulator	5962F0824601	3.0	1.8V	2.9 Min Vin	MFP-8	Released	300K	Report (4)	
MSK5823-2.5RH	RH1573KDICE	3A Ultra low drop out fixed voltage regulator	5962F0824602	3.0	2.5V	2.9 Min Vin	MFP-8	Released	300K	Report (4)	
MSK5824RH	RH1573KDICE	3A Ultra low drop out adjustable regulator	5962F0920801	3.0	Adjustable	0.3V @ 3A	MFP-8	Released	300K	Report (4)	Note (5)
MSK5825-2.5RH	RH1573KDICE	3A Ultra low drop out fixed voltage regulator	5962F0920901	3.0	2.5V	0.3V @ 3A	MFP-8	Released	300K	Report (4)	Note (5)
MSK5825-3.3RH	RH1573KDICE	3A Ultra low drop out fixed voltage regulator	5962F0920902	3.0	3.3V	0.3V @ 3A	MFP-8	Released	300K	Report (4)	Note (5)
MSK5826RH	RH1573KDICE	3A Ultra low drop out adjustable regulator	5962F0921001	3.0	Adjustable	0.3V @ 3A	MFP-8	Released	300K	Report (4)	Note (5)
MSK5971RH	RH1085MKDICE	3A Positive adjustable voltage LDO regulator	5962R0921201KXX	3.0	Adjustable	1.3V @ 3A	TO-257	Released	100K		
MSK5971RHL	RH1085MKDICE	3A Positive adjustable voltage LDO regulator	5962R0921201KUX	3.0	Adjustable	1.3V @ 3A	SMD-1.0	Released	100K		
MSK5800RH	RH1573KDICE	4A Ultra low drop out adjustable regulator	5962F0921601	4.0	Adjustable	0.22V @ 1A	MFP-12	Released	300K	Report	
MSK5810RH	RH1573KDICE	5A Ultra low drop out adjustable regulator, split bias	5962F0921602	5.0	Adjustable	0.11V @ 1A	MFP-20	Released	300K	Report	
MSK5820-1.5RH	RH1573KDICE	5A Ultra low drop out fixed voltage regulator	5962F0921604	5.0	1.5V	2.9 Min Vin	TOPTAB-5	Released	300K	Report	

*Screened to MIL-PRF-38535 class V or 38534 class K. QML V certification is pending.
Note: Parts in qual are now available as industrial grade for EM's.

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SELECTOR GUIDE

March 2011



RADHARD PRODUCTS WITH LTC RH DICE INSIDE

POSITIVE VOLTAGE REGULATORS (Continued)

Part type	RH DICE InsideTM	Description	SCD or SMD# reference	Pos. Reg. Iout (A)	Vout	Drop Out V @ 25°C	Package style	Base PN status	TID (1)	ELDRS (2)	SEE (3)
MSK5820-1.8RH	RH1573KDICE	5A Ultra low drop out fixed voltage regulator	5962F0921610	5.0	1.8V	2.9 Min Vin	TOPTAB-5	Released	300K	Report	
MSK5820-1.9RH	RH1573KDICE	5A Ultra low drop out fixed voltage regulator	5962F0921605	5.0	1.9V	2.9 Min Vin	TOPTAB-5	Released	300K	Report	
MSK5820-2.5RH	RH1573KDICE	5A Ultra low drop out fixed voltage regulator	5962F0921606	5.0	2.5V	2.9 Min Vin	TOPTAB-5	Released	300K	Report	
MSK5820-2.8RH	RH1573KDICE	5A Ultra low drop out fixed voltage regulator	5962F0921607	5.0	2.8V	0.22V @ 2.5A	TOPTAB-5	Released	300K	Report	
MSK5820-3.3RH	RH1573KDICE	5A Ultra low drop out fixed voltage regulator	5962F0921608	5.0	3.3V	0.22V @ 2.5A	TOPTAB-5	Released	300K	Report	
MSK5820-5.0RH	RH1573KDICE	5A Ultra low drop out fixed voltage regulator	5962F0921609	5.0	5.0V	0.22V @ 2.5A	TOPTAB-5	Released	300K	Report	
MSK5821RH	RH1573KDICE	5A Ultra low drop out adjustable regulator	5962F0921603	5.0	Adjustable	0.22V @ 2.5A	TOPTAB-5	Released	300K	Report	
MSK5822-1.5RH	RH1573KDICE	5A Ultra low drop out fixed voltage regulator	5962F0823601	5.0	1.5V	0.35V @ 2.5A	TOPTAB-5	Released	300K	Report	
MSK5822-1.9RH	RH1573KDICE	5A Ultra low drop out fixed voltage regulator	5962F0823602	5.0	1.9V	0.35V @ 2.5A	TOPTAB-5	Released	300K	Report	
MSK5822-2.5RH	RH1573KDICE	5A Ultra low drop out fixed voltage regulator	5962F0823603	5.0	2.5V	0.35V @ 2.5A	TOPTAB-5	Released	300K	Report	
MSK5822-2.8RH	RH1573KDICE	5A Ultra low drop out fixed voltage regulator	5962F0823604	5.0	2.8V	0.35V @ 2.5A	TOPTAB-5	Released	300K	Report	
MSK5822-3.3RH	RH1573KDICE	5A Ultra low drop out fixed voltage regulator	5962F0823605	5.0	3.3V	0.35V @ 2.5A	TOPTAB-5	Released	300K	Report	
MSK5822-5.0RH	RH1573KDICE	5A Ultra low drop out fixed voltage regulator	5962F0823606	5.0	5.0V	0.35V @ 2.5A	TOPTAB-5	Released	300K	Report	
MSK5827RH	RH1573KDICE	5A Ultra low drop out fixed voltage regulator		5.0	Adjustable	0.22V @ 2.5A	TOPTAB-5	Released			
MSK5950RH	RH1009M+RH1573K	5A Ultra low voltage adjustable regulator, split bias	5962F0921501	5.0	Adjustable to zero	0.15V @ 1A	MFP-20	Released	300K		
MSK5951-1RH	RH1573KDICE	10A Adjustable, ultra low dropout regulator, split bias		10.0	Adjustable	0.3V @ 4A	TABPKG-12	In Qualification			
MSK5951-2RH	RH1573KDICE	10A Adjustable, ultra low dropout regulator, split bias		10.0	Adjustable	0.35V @ 4A	TABPKG-12	In Qualification			
MSK5951-3RH	RH1573KDICE	10A Adjustable, ultra low dropout regulator, split bias		10.0	Adjustable	0.4V @ 4A	TABPKG-12	In Qualification			

NEGATIVE VOLTAGE REGULATORS

Part type	RH DICE InsideTM	Description	SCD or SMD# reference	Neg. Reg. Iout (A)	Vout	Drop Out V @ 25°C	Package style	Base PN status	TID (1)	ELDRS (2)	SEE (3)
MSK5973RH	RH137KDICE	1.5A Negative adjustable voltage LDO regulator	5962R0921401KXX	1.5	Adjustable	2.2V @ 1.5A	TO-257	Released	100K		
MSK5973RHL	RH137KDICE	1.5A Negative adjustable voltage LDO regulator	5962R0921401KUX	1.5	Adjustable	2.2V @ 1.5A	SMD-1.0	Released	100K		
MSK5940-5.0RH	RH1185MKDICE	3A Negative fixed voltage LDO regulator		3.0	-5.0V	0.7V @ 3.0A	TO-257	In Qualification	100K		
MSK5940-5.2RH	RH1185MKDICE	3A Negative fixed voltage LDO regulator		3.0	-5.2V	0.7V @ 3.0A	TO-257	In Qualification	100K		
MSK5940-10RH	RH1185MKDICE	3A Negative fixed voltage LDO regulator		3.0	-10V	0.7V @ 3.0A	TO-257	In Qualification	100K		
MSK5940-12RH	RH1185MKDICE	3A Negative fixed voltage LDO regulator		3.0	-12V	0.7V @ 3.0A	TO-257	In Qualification	100K		
MSK5940-15RH	RH1185MKDICE	3A Negative fixed voltage LDO regulator		3.0	-15V	0.7V @ 3.0A	TO-257	In Qualification	100K		

DUAL POSITIVE & NEGATIVE VOLTAGE REGULATORS

Part type	RH DICE InsideTM	Description	SCD or SMD# reference	Pos. / Neg. Reg. Iout (A)	Vout	Drop Out V @ 25°C	Package style	Base PN status	TID (1)	ELDRS (2)	SEE (3)
MSK5930RH	RH1085MK+RH1185MK	3A Dual Positive/Negative fixed voltage LDO regulator		3.0 / 3.0	+3.3 / -5.2 V	1.3 & -0.8V @ 3A	TOPTAB-5	In Qualification	100K		
MSK5931RH	RH1085MK+RH1185MK	3A Dual Positive/Negative fixed voltage LDO regulator		3.0 / 3.0	+5.0 / -5.0 V	1.3 & -0.8V @ 3A	TOPTAB-5	In Qualification	100K		
MSK5932RH	RH1085MK+RH1185MK	3A Dual Positive/Negative fixed voltage LDO regulator		3.0 / 3.0	+5.0 / -5.2 V	1.3 & -0.8V @ 3A	TOPTAB-5	In Qualification	100K		
MSK5933RH	RH1085MK+RH1185MK	3A Dual Positive/Negative fixed voltage LDO regulator		3.0 / 3.0	+12.0 / -5.0 V	1.3 & -0.8V @ 3A	TOPTAB-5	In Qualification	100K		
MSK5934RH	RH1085MK+RH1185MK	3A Dual Positive/Negative fixed voltage LDO regulator		3.0 / 3.0	+12.0 / -12.0V	1.3 & -0.8V @ 3A	TOPTAB-5	In Qualification	100K		
MSK5935RH	RH1085MK+RH1185MK	3A Dual Positive/Negative fixed voltage LDO regulator		3.0 / 3.0	+15.0 / -15.0 V	1.3 & -0.8V @ 3A	TOPTAB-5	In Qualification	100K		
MSK5936RH	RH1085MK+RH1185MK	3A Dual Positive/Negative fixed voltage LDO regulator		3.0 / 3.0	+15.0 / -5.0V	1.3 & -0.8V @ 3A	TOPTAB-5	In Qualification	100K		
MSK5937RH	RH1085MK+RH1185MK	3A Dual Positive/Negative fixed voltage LDO regulator		3.0 / 3.0	+5.0 / -12.0 V	1.3 & -0.8V @ 3A	TOPTAB-5	In Qualification	100K		
MSK5938RH	RH1085MK+RH1185MK	3A Dual Positive/Negative fixed voltage LDO regulator		3.0 / 3.0	+5.0 / -15.0 V	1.3 & -0.8V @ 3A	TOPTAB-5	In Qualification	100K		
MSK5939RH	RH1085MK+RH1185MK	3A Dual Positive/Negative fixed voltage LDO regulator		3.0 / 3.0	+10.0 / -10.0 V	1.3 & -0.8V @ 3A	TOPTAB-5	In Qualification	100K		

SWITCHING REGULATORS

Part type	RH DICE InsideTM	Description	SCD or SMD# reference	Pos. Reg. Iout (A)	Vin Range	Vout Range	Package style	Base PN status	TID (1)	ELDRS (2)	SEE (3)
MSK5058RH	RH3480MILDICE	2A, 36V Step-Down Switch Regulator, 0.2-2.4MHz		2.0	3.6V to 36V	0.79V to 20V	FP-16	Development			
MSK5044RH	RH1959MILDICE	Step-Down Switching Reg.module,500kHz fixed frequency		3.5	4.3V to 16.0V	1.21V to 5.0V	TO-258 (5)	In Qualification	100k		
MSK5048RH	RH1959MILDICE	Step-Down Switching Reg.module,500kHz with ext sync opt		3.5	4.3V to 16.0V	1.21V to 5.0V	TO-258 (5)	In Qualification	100k		
MSK5059RH	RH1959MILDICE	Step-Down Switching Reg.,monolithic (RH1959 IC only)		4.5	4.3V to 16.0V	1.21V to 0.86VIN	FP-16	In Qualification	100k		
MSK5052RH	RH1959MILDICE	Complete Step-Down Switching Regulator		4.5	4.3V to 16.0V	1.21V to 0.86VIN	MFP-40	In Qualification			

NOTES (1-5) See TID Radiation report next to datasheet at our website or Contact Factory for information on e.g. SEE results.

For datasheets visit www.mskennedy.com and click on "Radhard Products"

*Screened to MIL-PRF-38535 class V or 38534 class K. QML V certification is pending.
Note: Parts in qual are now available as industrial grade for EM's.


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Other Radhard and Rad Tolerant Product

Industrial and MIL-PRF-38534 Class H and K


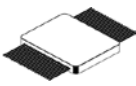
Dual Voltage Regulators

Part Number	Vin Max V	Vout V	Vdo V	Iout A	Description	Package	Dimensions in inches
MSK5901-MSK5914RH	+40	5 /-5, 5/-5.2, 12/-5, +12, +15, 15/-5, 5/-12, 5/-15, +10	3V Max	3	30KRAD tolerant dual LDO's	20 pin Flatpak 	0.625x0.625x0.16




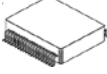
Multiplexers

	Vcc	transition time	Contact factory for datasheet and details
MSK1670	+12 to +18		128 Channel Mux
MSK1683	+12 to +18	3us	128 Channel Mux

High Side Drivers

	Vcc	Io		Package		Dimensions
MSK1755	100V	2A	Radhard Quad High Side Driver P- Channel FETs+Series diodes	26 Pin Flatpak 		0.75x0.75x0.11
MSK1756	100V	0.5A	Radhard 16 Channel Driver P- Channel FETs+Series Diodes	46 pin Flatpak 		1.1x1.4x0.19

Switching Regulators

Part Number	Vout Volts	Vin Range V	Eff typ. %	Iout A	Description	Package Style	Dimensions in inches
MSK5058RH	0.8Vmin, ADJ	3.6-36 (60)	85%	2	0.2-2.4Mhz, softstart, low Iq, flexible, feature	Flatpak16 	0.38x0.5x0.12
MSK 5059RH	1.23V min, ADJ	4.5-16	85	4.5	Bipolar 500Khz, current mode,	Flatpak16	0.38x0.5x0.12
MSK 5044RH	1.23V min, ADJ	4.5-16	80	3.5	Bipolar POL 500kHz, current mode	5 PIN POWER TOP TAB 	0.8 x 1.3 x 0.25
MSK 5048RH	1.23V min, ADJ	4.5-16	80	3.5	Bipolar POL 500kHz, current mode	5 PIN POWER TOP TAB	0.8 x 1.3 x 0.25
MSK5052RH	1.23V min, ADJ	4.5-16	80	4.5	Bipolar POL 500kHz, current mode	40-PIN FLATPAK 	0.9x1.1x0.28
MSK5046RH	1.5, 1.7, 1.8, 1.9, 2.0, 2.5, 3.0, 3.3, 3.4, 5	Vo+Vdo to 20V +12-16V Bias	75	5	MOSFET based POL, Adj Current limit, Vo Trimable, customizable	44 PIN SURFACE MOUNT FLATPACK 	1.25x1.55x0.28



Cross-Reference

Industry Part	Manufacturer	Nearest MSK Part	Notes/differences
DH0006		MSK 0006	
DH0008		MSK 0008	
EL2005	Elantec/Intersil	MSK 0002	
IRUH33PA13A	IR	MSK5824RH	
IRUH50PA23A	IR	MSK5826RH	
IRUH50PXX3A	IR	MSK5825RH	
LH0004	National	MSK 0004	
LH0021	National	MSK 0021	
LH0024	National	MSK 0024	compare slew rate in circuit
LH0032	National	MSK 0032	
LH0033	National	MSK 0033	compare slew rate in circuit
LH0041	National	MSK 0041/FP	
MAX445	Maxim	MSK1900	
OMA 541SDB	IR/Omnirel	MSK146	
OMA 541SKB	IR/Omnirel	MSK541SKB	
OMA 541SZB	IR/Omnirel	MSK147	
OMR9604	IR/Omnirel	MSK5824RH	
OMR9605	IR/Omnirel	MSK5826RH	
OMR9607	IR/Omnirel	MSK5825RH	
OMR9608	IR/Omnirel	MSK5825RH	
OM183SC	IR/Omnirel	contact factory	
OM183ST	IR/Omnirel	contact factory	
OM184SC	IR/Omnirel	contact factory	
OM184ST	IR/Omnirel	contact factory	
OM185SC	IR/Omnirel	contact factory	
OM185ST	IR/Omnirel	contact factory	
OM185...NM	IR/Omnirel	MSK5231	adjustable instead of fixed output
OM186SC	IR/Omnirel	contact factory	
OM186ST	IR/Omnirel	contact factory	
OM1320STM	IR/Omnirel	contact factory	
OM1320NMM	IR/Omnirel	contact factory	
OM1320NTM	IR/Omnirel	contact factory	
OM7628NM	IR/Omnirel	MSK5231	
OPA2541	TI	MSK2541	
OPA3554	TI	MSK 3554	
PA21	Cirrus/Apex	MSK184	
PA72	Cirrus/Apex	MSK184	
SA01	Cirrus/Apex	MSK4206	
SA03	Cirrus/Apex	MSK4205	
SA50	Cirrus/Apex	MSK4200	
SA50CE	Cirrus/Apex	MSK4200	
TP1900		mSK1900	
WA-01		MSK 111	

When contacting factory for advice, please provide application details
such as supply voltage, I/O voltages, Currents