THAT CORPORATION Analog ICs

THAT Corporation

RoHS Compliant **This product is RoHS compliant.**

INGENIUS® BALANCED LINE RECEIVERS

The 1200-series balanced line receivers overcome a serious limitation of conventional balanced input stages: poor common mode rejection. While conventional input stages measure well in the lab and perform well on paper, they fail to live up to their CMRR specs when fed from even slightly unbalanced source impedances — a common situation in pro sound environments. This is because conventional stages have low common-mode input impedance, which interacts with imbalances in source impedance to unbalance common-mode signals, making them indistinguishable from desired, balanced signals.

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	THAT Part No.	Package	No. of Channels	Supply Voltage (Max.)	Common Mode Rejection Ratio (Mn)	Available Set Gain	Bandwidth (MHz)	Slew Rate (Min.)	THD+ Noise	Fully Differential	Price Each 1	25	100
887-1200P08-U	1200P08-U	DIP-8	1	±18V	70dB	0dB	22	7V/us	0.0005%	Yes	5.55	4.66	4.22
887-1203P08-U	1203P08-U	DIP-8	1	±18V	70dB	-3dB	27	7V/us	0.0005%	Yes	5.55	4.66	4.22
887-1206P08-U	1206P08-U	DIP-8	1	±18V	70dB	-6dB	34	7V/us	0.0005%	Yes	5.55	4.66	4.22
887-1200S08-U	1200S08-U	SOIC-8	1	±18V	70dB	0dB	22	7V/us	0.0005%	Yes	5.65	4.75	4.29
887-1206S08-U	1206S08-U	SOIC-8	1	±18V	70dB	-6dB	34	7V/us	0.0005%	Yes	5.65	4.75	4.29

BALANCED LINE RECEIVERS

THAT Corporation offers a family of self-contained differential amplifiers preconfigured for gains of 0, ±3, and ±6dB, intended primarily for use as audio balanced line receivers. These parts offer great audio performance with decent common-mode rejection, at a price that makes them an attractive, space-saving alternative to conventional op-amps.

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	THAT Part No.	Package	No. of Channels	Supply Voltage (Max.)	Common Mode Rejection Ratio (Mn)	Available Set Gain	Bandwidth (MHz)	Slew Rate (Min.)	THD+ Noise	Fully Differential	Price Each 1	25	100
887-1240P08-U	1240P08-U	DIP-8	1	±18V	70dB	0dB	8	7V/us	0.0006%	Yes	3.15	2.84	2.39
887-1243P08-U	1243P08-U	DIP-8	1	±18V	70dB	±3dB	12.2	7V/us	0.0006%	Yes	3.47	2.84	2.39
887-1246P08-U	1246P08-U	DIP-8	1	±18V	70dB	±6dB	18	7V/us	0.0006%	Yes	3.47	2.84	2.39
887-1240S08-U	1240S08-U	SOIC-8	1	±18V	70dB	0dB	8	7V/us	0.0006%	Yes	2.88	2.56	2.37
887-1246S08-U	1246S08-U	SOIC-8	1	±18V	70dB	±6dB	18	7V/us	0.0006%	Yes	3.52	2.88	2.43
887-1250P08-U	1250P08-U	DIP-8	1	±18V	40dB	0dB	22	7V/us	0.0006%	Yes	1.05	.86	.80
887-1256P08-U	1256P08-U	DIP-8	1	±18V	40dB	±6dB	22	7V/us	0.0006%	Yes	1.05	.86	.80
887-1250S08-U	1250S08-U	SOIC-8	1	±18V	40dB	0dB	22	7V/us	0.0006%	Yes	1.09	.89	.83
887-1256S08-U	1256S08-U	SOIC-8	1	±18V	40dB	±6dB	22	7V/us	0.0006%	Yes	1.09	.89	.83
887-1286S14-U	1286S14-U	SOIC-14	2	±18V	85dB	-	7.6	15V/us	0.0006%	Yes	3.90	3.12	2.81
887-1290Q16-U	1290Q16-U	QSOP-16	2	36	40dB	0dB	7.6	14V/us	0.0006%	Yes	1.98	1.58	1.42
887-1293Q16-U	1293Q16-U	QSOP-16	2	36	40dB	±3dB	9.6	14V/us	0.0006%	Yes	1.98	1.58	1.42
887-1296Q16-U	1296Q16-U	QSOP-16	2	36	40dB	±6dB	11.6	14V/us	0.0006%	Yes	1.98	1.58	1.42

PREAMPLIFIER CONTROLLERS

Low-Noise, Differential Audio Preamplifier IC

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	THAT Part No.	Package	Supply Voltage (Max.)	Input Supply Current	Available Set Gain	Slew Rate (typ)	Bandwidth @40dB	THD+Noise	Price Each 1	25	100
887-1570N16-U	1570N16-U	QFN 16	40V	10mA	0 to >60dB	53 V/us	4.2MHz	0.0008% @ 40dB	6.28	4.77	4.39

High Performance Digital Preamplifier Controller IC

PRODUCT NEW

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	THAT Part No.	Package	Supply Voltage	Input Supply Current	Wide Output Swing	Wide Input Swing	Gain Range	THD+Noise	Price Each 1	25	100
887-5171N32-U	5171N32-U	QFN 32	±5V to ±17V	11mA	+27dBu	22dBu	13.6dB - 68.6 dB	0.0003% @ 22dB	10.52	9.21	8.68
887-5173N24-U	5173N24-U	QFN-24	±5V to ±17V	7.6 mA	+27dBu	+27dBu	0dB - 60dB	<0.001% @42dB	7.75	6.51	5.85
Demonstration Boards		Description							Price Each		
887-5173-DEMO	5173-DEMO	THAT 5173 Digitally-Controlled Mic Preamp Demonstration Board							210.00		

AUDIO AMPLIFIERS

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	THAT Part No.	Package	No. of Channels	Supply Voltage (Max.)	Input Bias Current (Max.)	Available Set Gain	Bandwidth (MHz)	Slew Rate (Min.)	THD+ Noise (ødB gain)	Fully Differential	Price Each 1	25	100
887-1510P08-U	1510P08-U	DIP-8	1	±20V	14uA	0-70dB	>3	13V/us	0.0005%	Yes	4.03	3.38	3.06
887-1510S08-U	1510S08-U	SOIC-8	1	±20V	14uA	0-70dB	>3	13V/us	0.0005%	Yes	4.03	3.22	3.06
887-1510S14-U	1510S14-U	SOIC-14	1	±20V	14uA	0-70dB	>3	13V/us	0.0005%	Yes	4.28	3.59	3.25
887-1512P08-U	1512P08-U	DIP-8	1	±20V	14uA	0-70dB	>1.6	13V/us	0.0010%	Yes	5.31	4.34	3.86
887-1512S08-U	1512S08-U	SOIC-8	1	±20V	14uA	0-70dB	>1.6	13V/us	0.0010%	Yes	5.31	4.34	3.86
887-1512S14-U	1512S14-U	SOIC-14	1	±20V	14uA	0-70dB	>1.6	13V/us	0.0010%	Yes	5.47	4.48	3.98

BLACKMER® VOLTAGE CONTROLLED AMPLIFIERS

THAT Corporation Blackmer VCAs are characterized by an exponential control characteristic (gain varies directly in decibels -- dBs -- with control voltage), extremely wide dynamic range, and low signal distortion. Our latest designs are particularly neutral in sound, imparting little or no coloration to audio signals in and of themselves.

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	THAT Part No.	Package	No. of Channels	Supply Voltage (Max.)	Supply Current Total (Max.)	Input Bias Current	Available Set Gain	Slew Rate (Min.)	THD+ Noise	Price Each 1	25	100
887-2180AL08-U	2180AL08-U	SIP-8	1	±18V	4mA	10mA	-100-30dB	12V/us	0.005	8.48	7.12	6.44
887-2180BL08-U	2180BL08-U	SIP-8	1	±18V	4mA	12mA	-100-30dB	12V/us	0.008	5.55	4.66	4.22
887-2180CL08-U	2180CL08-U	SIP-8	1	±18V	4mA	15mA	-100-30dB	12V/us	0.2	4.55	3.82	3.46
887-2181AL08-U	2181AL08-U	SIP-8	1	±18V	4mA	10mA	-100-30dB	12V/us	-	8.23	6.91	6.25
887-2181BL08-U	2181BL08-U	SIP-8	1	±18V	4mA	12mA	-100-30dB	12V/us	-	5.18	4.35	3.93
887-2181CL08-U	2181CL08-U	SIP-8	1	±18V	4mA	15mA	-100-30dB	12V/us	-	4.28	3.59	3.25
887-2181AS08-U	2181AS08-U	SOIC-8	1	±18V	4mA	10mA	-100-30dB	12V/us	0.005	9.53	8.00	7.24
887-2181BS08-U	2181BS08-U	SOIC-8	1	±18V	4mA	12mA	-100-30dB	12V/us	0.008	6.05	5.08	4.60
887-2181CS08-U	2181CS08-U	SOIC-8	1	±18V	4mA	15mA	-100-30dB	12V/us	0.2	5.18	4.35	3.93
887-2162Q16-U	2162Q16-U	QSOP-16	2	±16V	7mA	-	-70-60dB	6.5V/us	0.04	4.67	3.74	3.29

MATCHED TRANSISTOR ARRAYS

The THAT 300 series are large-geometry, 4-transistor, monolithic NPN and/or PNP arrays exhibiting both high speed and low noise, with excellent parameter matching between transistors of the same gender. With typical base-spreading resistances of 25ohms for the PNP devices (30ohms for the NPNs), their low voltage noise of under 1 nV/Hz1/2, the 300 series are ideally suited for low-noise amplifier input stages.

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	THAT Part No.	Package	Configuration	Supply Voltage (Max.) (V)	Offset Voltage (Max.) (mV)	Output Current (Typ.) (mA)	Gain Bandwidth	Supply Current Total	Price Each 1	25	100
887-300AS14-U	300AS14-U	SOIC-14	4NPN	36	±3	30	350	10mA	7.18	6.03	5.42
887-300BS14-U	300BS14-U	SOIC-14	4NPN	36	±3	30	350	10mA	8.13	6.83	6.14
887-300P14-U	300P14-U	DIP-14	4 Matching NPN	36	±3	30	350	10mA	6.40	5.38	4.86
887-300S14-U	300S14-U	SOIC-14	4NPN	36	±3	30	350	10mA	6.28	5.27	4.77
887-320P14-U	320P14-U	DIP-14	4 Matching PNP	36	±3	30	325	10mA	6.40	5.38	4.86
887-320S14-U	320S14-U	SOIC-14	4PNP	36	±3	30	325	10mA	6.28	5.27	4.77
887-340P14-U	340P14-U	DIP-14	2NPN/2 PNP	36	±3	30	350/325	10mA	6.40	5.38	4.86
887-340S14-U	340S14-U	SOIC-14	2NPN/2 PNP	36	±3	30	350/325	10mA	6.28	5.27	4.77

OUTSMARTS™ BALANCED LINE DRIVERS

The THAT 1606 and 1646 are a new generation of monolithic audio differential line drivers offering improved performance over conventional cross-coupled designs. Based on a high-performance, fully differential opamp and laser-trimmed thin-film resistors, both families exhibit low noise and distortion, high slew rate, and wide output swing. The parts are stable when driving difficult loads, and have short-circuit protected outputs.

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	THAT Part No.	Package	No. of Channels	Supply Voltage (Max.)	Output Common Mode Rejection	Available Set gain	Bandwidth	Slew Rate (Mn)	THD+ Noise	Fully Differential Input	Price Each 1	25	100
887-1646P08-U	1646P08-U	DIP-8	1	±18V	46db	5.80-6.20 db	10MHz typ	15V/us typ	0.0007%	No	4.43	3.72	3.19
887-1646S08-U	1646S08-U	SOIC-8	1	±18V	46db	5.80-6.20 db	10MHz typ	15V/us typ	0.0007%	No	4.43	3.72	3.19
887-1606Q16-U	1606Q16-U	QSOP-16	1	±18V	46db	5.80-6.20 db	10MHz typ	15V/us typ	0.0007%	Yes	4.65	3.91	3.35

ANALOG ENGINE® DYNAMICS PROCESSORS

These single-chip audio dynamics processors combine all the active circuitry needed to construct a wide range of dynamics processors. The 43xx series includes a high-performance, exponentially-controlled Blackmer® VCA and a log-responding rms-level sensor. The 4301 and 4320 include three general-purpose opamps allowing more complex signal processing.

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	THAT Part No.	Package	Supply Voltage (Max.)	Supply Type	Supply Current	OP Amps Included	VCA THD	Adjust Symmetry	VCA Control Pods	VCA Gain Range	Price Each 1	25	100
887-4301AP20-I	4301AP20-I	DIP-20	±7 ~ ±15	Dual	~12mA	Yes	<0.03%	Yes	2 (±)	-100 ~ +40	10.98	9.22	8.34
887-4301M30-I	4301M30-I	DMP-30	±7 ~ ±15	Dual	~12mA	Yes	<0.03%	Yes	2 (±)	-100 ~ +40	9.28	7.79	7.05
887-4301P20-I	4301P20-I	DIP-20	±7 ~ ±15	Dual	~12mA	Yes	<0.03%	Yes	2 (±)	-100 ~ +40	8.48	7.12	6.44
887-4305Q16-U	4305Q16-U	QSOP-16	4.5 ~ 16	Dual	3.5mA	No	~0.07 %	No	2 (±)	±60	4.90	4.12	3.72
887-4315Q16-U	4315Q16-U	QSOP-16	4.5 ~ 16	Single	1.6mA	No	~0.07 %	No	2 (±)	±60	4.20	3.53	3.19
887-4320Q28-U	4320Q28-U	QSOP-28	4.5 ~ 16	Single	3.7mA	Yes	~0.05 %	No	1 (+)	-100 ~ +40	10.63	8.93	8.08

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