



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 of 250 and up, 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	7 V/us	0.0005%	Yes	5.55	4.66	4.22
887-1203P08-U	1203P08-U	DIP 8	1	±18V	70dB	-3dB	27	7 V/us	0.0005%	Yes	5.55	4.66	4.22
887-1206P08-U	1206P08-U	DIP 8	1	±18V	70dB	-6dB	34	7 V/us	0.0005%	Yes	5.55	4.66	4.22
887-1200S08-U	1200S08-U	SOIC 8	1	±18V	70dB	0dB	22	7 V/us	0.0005%	Yes	5.65	4.75	4.29
887-1203S08-U	1203S08-U	SOIC 8	1	±18V	70dB	-3dB	27	7 V/us	0.0005%	Yes	5.65	4.75	4.29
887-1206S08-U	1206S08-U	SOIC 8	1	±18V	70dB	-6dB	34	7 V/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 of 250 and up, 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 (dB gain)	Fully Differential	Price Each		
											1	25	100
887-1240P08-U	1240P08-U	DIP 8	1	±18V	70dB	0dB	8	7 V/us	0.0006%	Yes	3.15	2.84	2.39
887-1243P08-U	1243P08-U	DIP 8	1	±18V	70dB	±3dB	12.2	7 V/us	0.0006%	Yes	3.47	2.84	2.39
887-1246P08-U	1246P08-U	DIP 8	1	±18V	70dB	±6dB	18	7 V/us	0.0006%	Yes	3.47	2.84	2.39
887-1240S08-U	1240S08-U	SOIC 8	1	±18V	70dB	0dB	8	7 V/us	0.0006%	Yes	2.88	2.56	2.37
887-1243S08-U	1243S08-U	SOIC 8	1	±18V	70dB	±3dB	12.2	7 V/us	0.0006%	Yes	3.52	2.88	2.43
887-1246S08-U	1246S08-U	SOIC 8	1	±18V	70dB	±6dB	18	7 V/us	0.0006%	Yes	3.52	2.88	2.43
887-1250P08-U	1250P08-U	DIP 8	1	±18V	40dB	0dB	22	7 V/us	0.0006%	Yes	1.05	.86	.80
887-1253P08-U	1253P08-U	DIP 8	1	±18V	40dB	±3dB	22	7 V/us	0.0006%	Yes	1.05	.86	.80
887-1256P08-U	1256P08-U	DIP 8	1	±18V	40dB	±6dB	22	7 V/us	0.0006%	Yes	1.05	.86	.80
887-1250S08-U	1250S08-U	SOIC 8	1	±18V	40dB	0dB	22	7 V/us	0.0006%	Yes	1.09	.89	.83
887-1253S08-U	1253S08-U	SOIC 8	1	±18V	40dB	±3dB	22	7 V/us	0.0006%	Yes	1.09	.89	.83
887-1256S08-U	1256S08-U	SOIC 8	1	±18V	40dB	±6dB	22	7 V/us	0.0006%	Yes	1.09	.89	.83
887-1280S14-U	1280S14-U	SOIC 14	2	±18V	85dB	-	7.6	15 V/us	0.0006%	Yes	3.90	3.12	2.81
887-1283S14-U	1283S14-U	SOIC 14	2	±18V	85dB	-	7.6	15 V/us	0.0006%	Yes	3.90	3.12	2.81
887-1286S14-U	1286S14-U	SOIC 14	2	±18V	85dB	-	7.6	15 V/us	0.0006%	Yes	3.90	3.12	2.81
887-1290Q16-U	1290Q16-U	QSOP 16	2	±18V	40dB	0dB	7.6	14 V/us	0.0006%	Yes	1.98	1.58	1.42
887-1293Q16-U	1293Q16-U	QSOP 16	2	±18V	40dB	±3dB	9.6	14 V/us	0.0006%	Yes	1.98	1.58	1.42
887-1296Q16-U	1296Q16-U	QSOP 16	2	±18V	40dB	±6dB	11.6	14 V/us	0.0006%	Yes	1.98	1.58	1.42

AUDIO AMPLIFIERS

The THAT 1510 and 1512 are high performance audio preamplifiers suitable for microphone preamp and bus summing applications. Gain is adjustable via one external resistor, making it possible to control gain over a wide range with a single-gang potentiometer.

For quantities of 250 and up, 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 (dB gain)	Fully Differential	Price Each		
											1	25	100
887-1510P08-U	1510P08-U	DIP 8	1	±20V	14uA	0-70dB	>3	13 V/us	0.0005%	Yes	4.03	3.38	3.06
887-1510S08-U	1510S08-U	SOIC 8	1	±20V	14uA	0-70dB	>3	13 V/us	0.0005%	Yes	4.03	3.22	3.06
887-1510S14-U	1510S14-U	SOIC 14	1	±20V	14uA	0-70dB	>3	13 V/us	0.0005%	Yes	4.28	3.59	3.25
887-1512P08-U	1512P08-U	DIP 8	1	±20V	14uA	0-70dB	>1.6	13 V/us	0.0010%	Yes	5.31	4.34	3.86
887-1512S08-U	1512S08-U	SOIC 8	1	±20V	14uA	0-70dB	>1.6	13 V/us	0.0010%	Yes	5.31	4.34	3.86
887-1512S14-U	1512S14-U	SOIC 14	1	±20V	14uA	0-70dB	>1.6	13 V/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 of 250 and up, 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	12 V/us	0.005	8.48	7.12	6.44
887-2180BL08-U	2180BL08-U	SIP 8	1	±18V	4mA	12mA	-100-30dB	12 V/us	0.008	5.55	4.66	4.22
887-2180CL08-U	2180CL08-U	SIP 8	1	±18V	4mA	15mA	-100-30dB	12 V/us	0.2	4.55	3.82	3.46
887-2181AL08-U	2181AL08-U	SIP 8	1	±18V	4mA	10mA	-100-30dB	12 V/us	-	8.23	6.91	6.25
887-2181BL08-U	2181BL08-U	SIP 8	1	±18V	4mA	12mA	-100-30dB	12 V/us	-	5.18	4.35	3.93
887-2181CL08-U	2181CL08-U	SIP 8	1	±18V	4mA	15mA	-100-30dB	12 V/us	-	4.28	3.59	3.25
887-2181AS08-U	2181AS08-U	SOIC 8	1	±18V	4mA	10mA	-100-30dB	12 V/us	0.005	9.53	8.00	7.24
887-2181BS08-U	2181BS08-U	SOIC 8	1	±18V	4mA	12mA	-100-30dB	12 V/us	0.008	6.05	5.08	4.60
887-2181CS08-U	2181CS08-U	SOIC 8	1	±18V	4mA	15mA	-100-30dB	12 V/us	0.2	5.18	4.35	3.93
887-2162Q16-U	2162Q16-U	QSOP 16	2	±16V	7mA	-	-70-60dB	6.5 V/us	0.04	5.85	4.68	4.12

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 250ohms for the PNP devices (30 ohms for the NPNs), their low voltage noise of under 1 nV/Hz^{1/2}, the 300 series are ideally suited for low-noise amplifier input stages.

For quantities of 250 and up, call for quote.

MOUSER STOCK NO.	THAT Part No.	Package	No. of Channels	Supply Voltage (Max.)	Offset Voltage (Max)	Output Current (Typ)	Bandwidth	Supply Current Total	Price Each		
									1	25	100
887-300P14-U	300P14-U	DIP 14	1	0-36V	±3mV	10mA	>300MHz ft	10mA	6.40	5.38	4.86
887-320P14-U	320P14-U	DIP 14	1	0-36V	±3mV	10mA	>300MHz ft	10mA	6.40	5.38	4.86
887-340P14-U	340P14-U	DIP 14	1	0-36V	±3mV	10mA	>300MHz ft	10mA	6.40	5.38	4.86
887-300S14-U	300S14-U	SOIC 14	1	0-36V	±3mV	10mA	>300MHz ft	10mA	6.28	5.27	4.77
887-320S14-U	320S14-U	SOIC 14	1	0-36V	±3mV	10mA	>300MHz ft	10mA	6.28	5.27	4.77
887-340S14-U	340S14-U	SOIC 14	1	0-36V	±3mV	10mA	>300MHz ft	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 of 250 and up, 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	15 V/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	15 V/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	15 V/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 of 250 and up, call for quote.

MOUSER STOCK NO.	THAT Part No.	Package	Supply Voltage (Max.)	Supply Type	Supply Current	OPamps 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