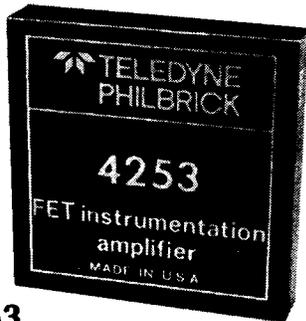
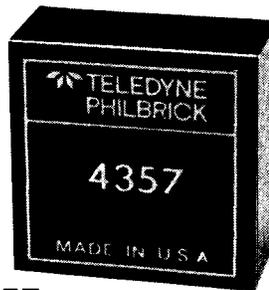


Logarithmic and Instrumentation Amplifiers



4253
Instrumentation Amplifier
 $\pm 1\text{mV}$ Offset, $\pm 10\mu\text{V}/^\circ\text{C}$ Drift



4357
Positive Input
Logarithmic Operator



4363
Negative Input
Logarithmic Amplifier

Logarithmic Amplifier Selection Guide

Part No.	Description	Dynamic Range (dB)		Log Conformity (1)			Frequency Response (Hz)	Specified Temperature Range ($^\circ\text{C}$)	Pkg.	Page No.	
		Current	Voltage	Input Current	% Max	Input Voltage					(% Typ)
4357	Positive Input Logarithmic Operator	120	80	1nA to 10nA 10nA to 100 μA 100 μA to 1mA	± 1 ± 1 ± 1	(2)	(2)	80 (3)	+ 10 to + 60	A	3-7
4358	Negative Input Logarithmic Operator	120	80	1nA to 10nA 10nA to 100 μA 100 μA to 1mA	± 1 ± 1 ± 1	(2)	(2)	80 (3)	+ 10 to + 60	A	3-7
4362	Positive Input Logarithmic Amplifier	120	80	1nA to 10nA 10nA to 100 μA 100 μA to 1mA	± 1 ± 0.5 ± 1	1mV to 1V 1V to 10V	± 0.5 ± 1	80k	0 to + 70	B	3-9
4363	Negative Input Logarithmic Amplifier	120	80	1nA to 10nA 10nA to 100 μA 100 μA to 1mA	± 1 ± 0.5 ± 1	1mV to 1V 1V to 10V	± 0.5 ± 1	80k	0 to + 70	B	3-9

- Notes:** 1. Log Conformity is the deviation from a straight line (ideal logarithmic behavior) on a semi-log plot over the specified range. Three input ranges with associated errors are listed since error is not constant over 1nA to 1mA input range.
2. 4357/4358 require external operational amplifiers and passive components which will determine log conformity.
3. Specified for 1nA input current. Frequency Response depends on external amplifiers for input currents from 1 μA to 1mA.

Packages: A. Module, 1.0" \times 1.0" \times 0.52"
B. Module, 1.5" \times 1.5" \times 0.4"

Instrumentation Amplifier

Part No.	Description	Output Range (V/mA)	Unity Gain Bandwidth (KHz Typ)	Settling to $\pm 0.1\%$ (μsec)	Offset Voltage (mV, Max)	Input Bias Current (1) (pA, Max)	Specified Temperature Range ($^\circ\text{C}$)	Pkg.	Page No.
4253	High Performance FET Input	$\pm 10/\pm 5$	75	5	± 1	- 10	0 to + 50	A	3-3

Notes: 1. Input Bias Current doubles every 10 $^\circ\text{C}$.

Packages: A. Module, 2.0" \times 2.0" \times 0.4"



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