

Audio Line Driver Comparison

OutSmarts® vs the competition

THAT1646

THAT1606

SSM2142

DRV134

DRV135

Output Noise	600Ω Bal. load	-101	-101	-93.4	-97*	-97*	dBu
Tames clipping into single-ended loads		Yes	Yes	No	No	No	
THD + N Balanced 1 kHz, Typical 20 kHz, Typical 20 kHz, Max.	10 V _{RMS} 600Ω	0.0007	0.0007	0.0008	0.0005	0.0005	%
		0.002	0.002	0.004	0.0014	0.0014	
Single-ended 20 kHz, Typical 20 kHz, Max.		0.005	0.005	No Spec	No Spec	No Spec	
		0.003	0.003	0.008**	0.01**	0.01**	
		0.006	0.006	No Spec	No Spec	No Spec	
Slew Rate		15	15	15	15	15	V/μs
Gain	R _L = 100kΩ	+6.0	+6.0	+6.7	+6.7	+6.7	dB
	R _L = 600Ω	+5.3	+5.3	+6.0	+6.0	+6.0	
Packaging Options	DIP-8	✓	—	✓	✓	—	
	SO-16 wide	✓	—	✓	✓	—	
	SO-8	✓	—	—	—	✓	
	Low θ _{JA} QSOP-16	—	✓	—	—	—	

*datasheet says -98 dBu; **Not specified by TI or ADI, figures based on THAT measurements

THAT Corporation

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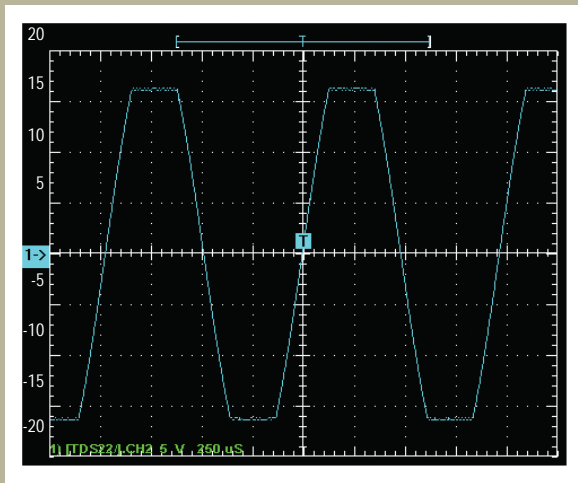
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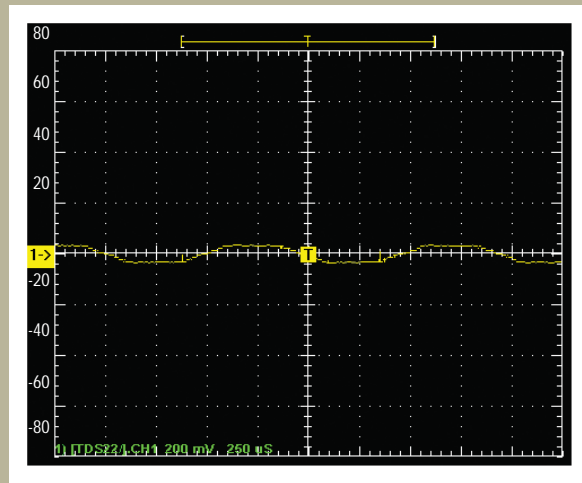
OutSmarts Clipping Behavior

Clipping into single-ended loads

THAT 1606/1646 Behavior

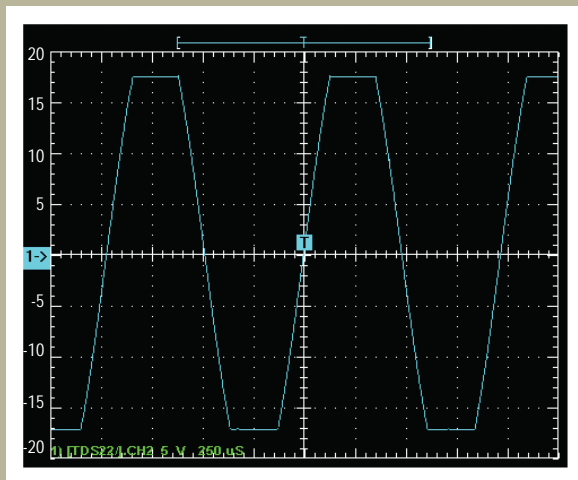


Active Output Voltage (5 V/DIV)

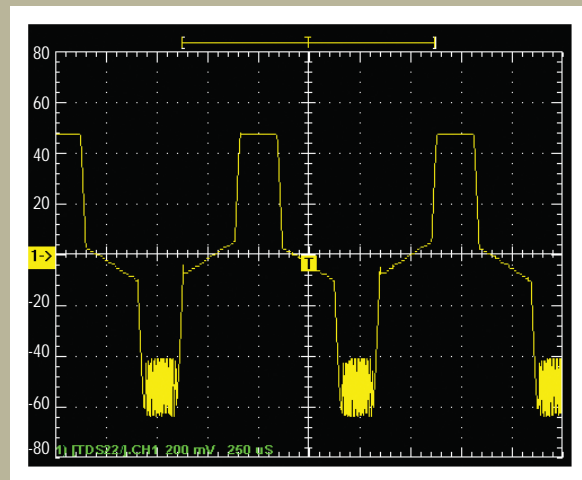


Grounded Output Current (20 mA/DIV)

SSM2142 Misbehavior

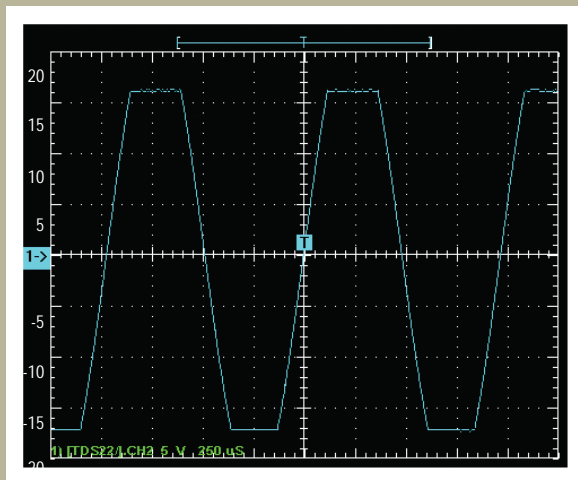


Active Output Voltage (5 V/DIV)

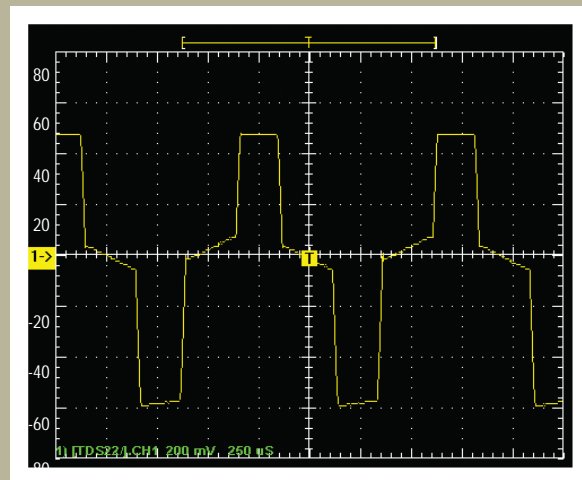


Grounded Output Current (20 mA/DIV)

DRV134/135 Misbehavior



Active Output Voltage (5 V/DIV)



Grounded Output Current (20 mA/DIV)

Note: $f_{IN} = 1 \text{ kHz}$, $Z_{LOAD(+)} = 10 \text{ k}\Omega$, $Z_{LOAD(-)} = 0 \Omega$