

ECG[®]

Semiconductors

ECG1351

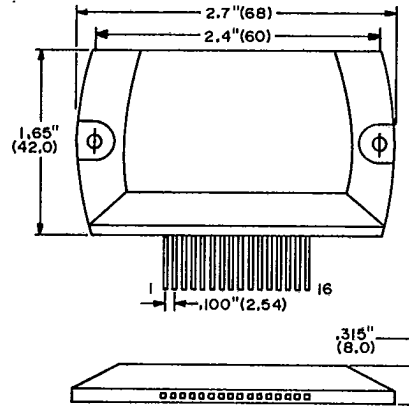
25 W Dual AF PO

T-74-05-01

Features

- Designed for hi-fi stereo amplifiers
- Less than 0.2% harmonic distortion at full power level

The ECG1351 is a self-contained high power amplifier with quasi-complementary class B output. The plastic package with a substrate of low thermal conduction is electrically isolated from the inside circuit and can be directly mounted on silicone-greased heat sink.



1. 16. Ripple Filter Capacitor (+)
2. 15. Input Capacitor (-)
3. 14. Ripple Filter Capacitor (-)
4. 13. Power Supply (-V_{ee})
5. 12. Feedback Resistor
6. 11. Bootstrap Capacitor (+)
7. Power Supply (-V_{ee})
8. CH-2 Output
9. Power Supply (+V_{cc})
10. CH-1 Output

Absolute Maximum Ratings (T_A=25°C)

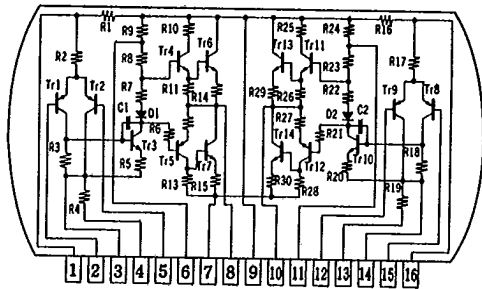
Characteristic	Symbol	Test Condition	Rating	Unit
Supply Voltage	V _{cc}		±35	V
Operating Temperature	T _{opg}	Heat sink temperature	-30 to 100	°C
Storage Temperature	T _{stg}		-30 to 120	°C
Allowable Output Short Time	t _s	V _{cc} = ±35 V, f = 1 kHz, P _o = 25 W Specified Power Supply	2.0	sec
Junction Temperature	T _j	Junction temperature of power transistor	150	°C
Thermal Resistance	θ _j	Between junction of power transistor and heat sink	3.3 max	°C/W

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise specified)

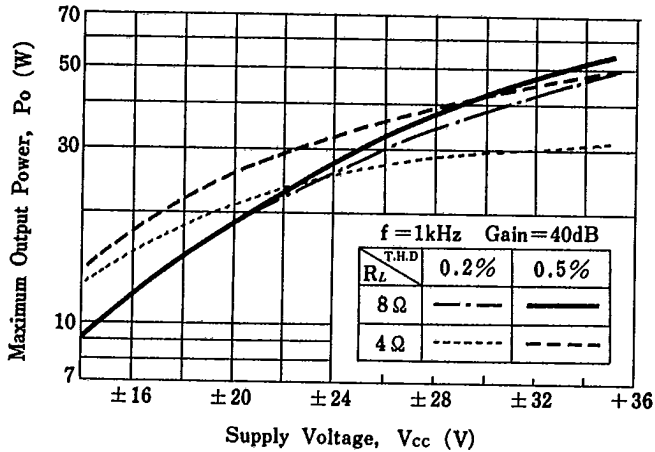
Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Supply Voltage	V_{CC}	8 Ω Load		± 25		V
		4 Ω Load		± 22.5		
Supply Current	I_{CC}	8 Ω Load		0.8		A
		4 Ω Load		1.15		
Output Power	P_O	1 kHz, THD=0.2%		25		W
Power Bandwidth	PBW	THD=0.2%, -1 dB	10 to 20 k			Hz
Frequency Response	f	$P_O = 1\text{ W}$, -1 dB	10 to 100 k			Hz
Voltage Gain	G_V	$R_1 = R_3 = 56\text{ k}\Omega$, $R_2 = 560\ \Omega$	--	40	--	dB
Input Impedance	Z_{in}	$R_1 = R_3 = 56\text{ k}\Omega$	56	--	--	$\text{k}\Omega$
Idling Current	I_d	$V_{CC} = \pm 32\text{ V}$	30	50	80	mA
Output Noise Voltage	V_N	$R_g = 10\text{ k}\Omega$, Specified Power Supply	--	1.0	2.0	mV
Output Quiescent Point Voltage	V_O	$V_{CC} = \pm 20\text{ to } \pm 35\text{ V}$	--	--	± 100	mV

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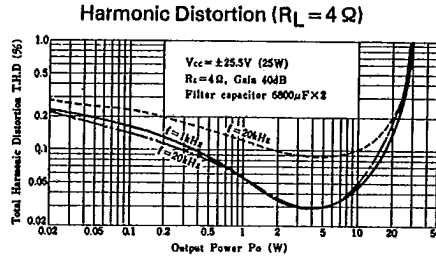
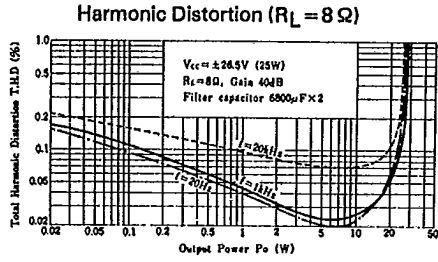
Schematic Circuit



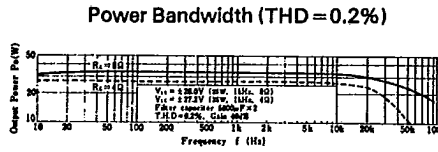
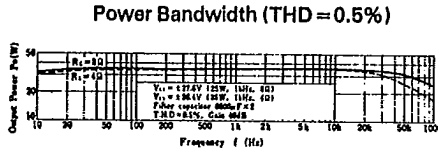
Supply Voltage - Maximum Output Power



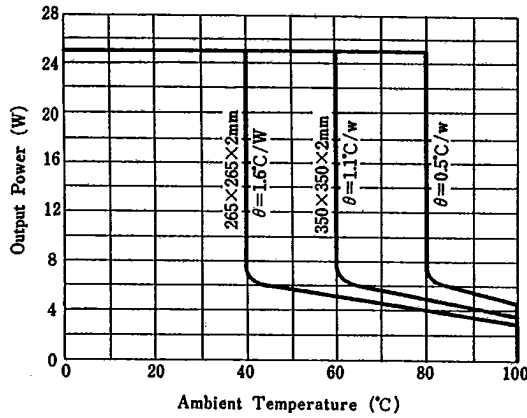
Typical Characteristics



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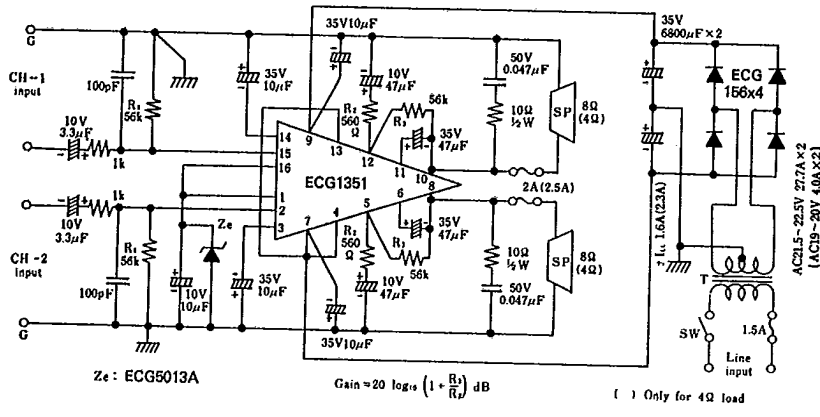


Power Derating with Aluminum Heat Sink



Application Circuit

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