

Technical specifications

(Supply voltage = ± 70 V; quiescent current = 200–400 mA)

Input sensitivity	1.1 V r.m.s.		
Input impedance	47.5 k Ω		
Sine-wave power output (0.1% THD)	280 W into 8 Ω ; 500 W into 4 Ω ; 800 W into 2 Ω		
Music power* (1% THD)	300 W into 8 Ω ; 550 W into 4 Ω ; 1000 W into 2 Ω		
Slew limiting	85 V μ s ⁻¹		
Open-loop bandwidth	53 kHz		
Open-loop amplification	$\times 8600$		
Power bandwidth	1.5 Hz – 220 kHz		
Signal-to-noise ratio (1 W into 8 Ω)	101 dB (A-weighted); 97 dB (B = 22 kHz)		
Damping factor (at 8 Ω)	> 700 (1 kHz); > 300 (20 kHz)		
Output impedance	1.6 Ω		
Harmonic distortion (THD) (B = 80 kHz)	8 Ω	4 Ω	2 Ω
at 1 kHz	0.003% (1 W) 0.005% (200 W)	0.0046% (1 W) 0.0084% (400 W)	0.01% (1 W) 0.02% (700 W)
at 20 kHz	0.009% (200 W)	0.018% (400 W)	0.07% (700 W)
Intermodulation distortion (IM)			
(50 Hz: 7 kHz = 4:1)	0.004% (1 W) 0.016% (150 W)	0.01% (1 W) 0.025% (300 W)	0.034% (1 W) 0.07% (500 W)
Dynamic IM			
(square wave 3.15 kHz with sine wave 15 kHz)	0.003% (1 W) 0.003% (200 W)	0.0036% (1 W) 0.005% (400 W)	0.0055% (1 W) 0.0085% (700 W)

*See Part 1 about the validity of this meaningless quantity.

The specified figures were measured after the amplifier had been switched on for two hours. The figure show that the Titan 2000 compares favourably with most amplifiers. The slew limiting is a measure of the speed of the amplifier, which is exceptionally good in the Titan 2000.

Figure A shows the total harmonic distortion plus noise (THD+N) for an output of 1 W into 8 Ω (lower curve) and for 200 W into 8 Ω . The latter figure corresponds with 70% of the peak sine wave power and the curve shows that the distortion increases clearly only above 10 kHz.

Figure B shows the THD+N at 1 kHz as a function of the drive with an output impedance of 8 Ω . The curve is pur-

posely drawn for a bandwidth of 22 kHz so that the noise above 20 kHz does not degrade the performance of the amplifier. From about 2 W, the distortion increases slightly with increasing drive, which is normal in most amplifiers. Figure C shows the peak output of the amplifier at a constant distortion of 0.1% and a load of 4 Ω (upper curve) and 8 Ω . The bandwidth was 80 kHz.

Figure D shows a Fourier analysis of a reproduced 1 kHz signal at a level of 1 W into 8 Ω . It will be seen that the 2nd harmonics are down just about 100 dB, while the 3rd harmonics are down to -114 dB. Higher harmonics lie below the noise floor of -130 dB.

