Amplifier Heat Loss

Heat losses are the thermal emissions from an amplifier while it is operating. It comes from dissipated waste power—i.e., real AC power in minus audio power out. Measurements are provided for various loads at idle, 1/8 of average full power, 1/3 of average full power, and full power, with all channels driven simultaneously. For typical usage, use the idle and 1/8 power figures. Where an asterisk (*) appears, the data was not available at press time. The designation "na" means not applicable to the particular amplifier model and "nr" means the model is not rated for the particular load. This data is measured from representative samples; due to production tolerances, actual heat emissions may vary slightly from one unit to another. Bridged mono into 8 ohms is equivalent to 4 ohms per channel; into 4 ohms is equivalent to 2 ohms per channel.

Idle — Thermal loss at idle or with very low signal level. Not all models were tested.

1/8 Power — Thermal loss at 1/8 of full power is measured with pink noise. It approximates operating with music or voice with light clipping and repesents the amplifier's typical "clean" maximum level, without audible clipping. Use these figures for typical maximum level operation.

1/3 Power — Thermal loss at 1/3 of full power is measured with pink noise. It approximates operating with music or voice with very heavy clipping and a very compressed dynamic range.

Full Power — Thermal loss at full power is measured with a 1 kHz sine wave. However, it does not represent any real-world operating condition.

Model	Idle		1/8 Power 8Ω		4Ω		2Ω		25V-70V-		1/3 Power 8Ω		4Ω		2Ω		25V-70V-		Full Power 8Ω		4Ω		2Ω		25V-70V-	
	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTUl/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr	kcal/hr
Current models																										
CMX300Va	85	21	577	145	1068	269	1669	421			696	175	1355	341	2157	544			799	201	1509	380	2853	719		
CMX500Va	78	20	887	224	1454	366	2597	654			1061	267	1969	496	3734	941			1007	254	1870	471	3734	941		
CMX800Va	273	69	819	206	1365	344	2218	559			1758	443	2881	726	4997	1259			1587	400	3294	830	6314	1591		
CMX2000Va	273	69	1031	260	1672	421	2901	731			1584	399	3331	839	5352	1349			2048	516	4754	1198	9670	2437		