



# 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.

Model	Idle		1/8 Power								1/3 Power								Full Power									
	Thermal loss at idle or with very low signal level. Not all models were tested.		Thermal loss at 1/8 of full power is measured with pink noise. It approximates operating with music or voice with light clipping and represents the amplifier's typical "clean" maximum level, without audible clipping. Use these figures for typical maximum level operation.								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.								Thermal loss at full power is measured with a 1 kHz sine wave. However, it does not represent any real-world operating condition.									
	Load per channel ->		8Ω		4Ω		2Ω		25V-70V-100V		8Ω		4Ω		2Ω		25V-70V-100V		8Ω		4Ω		2Ω		25V-70V-100V			
	BTU/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	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr	kcal/hr		
<b>Current models</b>																												
<b>GX3</b>	44	11	904	228	1515	382	nr	nr			1160	292	2105	530	nr	nr			1109	279	2297	579	nr	nr				
<b>GX5</b>	60	15	734	185	1160	292	nr	nr			1456	367	2162	545	nr	nr			1891	477	3754	946	nr	nr				
<b>GX7</b>	82	21	1169	295	1963	495	nr	nr			1807	455	2612	658	nr	nr			2167	546	4478	1128	nr	nr				
<b>PL325</b>	143	36	785	198	1382	348	2184	550			1109	279	1980	499	3328	839			1195	301	2474	623	4949	1247				
<b>PL340</b>	195	49	1229	310	2150	542	3550	895			1911	482	3242	817	4522	1140			2082	525	4253	1072	8601	2167				
<b>PL380</b>	488	123	683	172	1242	313	1413	356			1195	301	1782	449	2809	708			1768	446	4113	1036	10611	2674				
<b>PLX1104</b>	85	21	785	198	1502	379	nr	nr			1058	267	1911	482	nr	nr			990	249	1997	503	nr	nr				
<b>PLX1804</b>	99	25	768	194	1365	344	nr	nr			1229	310	1843	464	nr	nr			1519	383	3259	821	nr	nr				
<b>PLX1802</b>	109	27	939	237	1570	396	2645	667			1109	279	1569	395	3328	839			1024	258	2014	508	4096	1032				
<b>PLX2502</b>	143	36	768	194	1365	344	2389	602			1109	279	1962	494	3276	826			1280	323	2389	602	4778	1204				
<b>PLX3102</b>	171	43	922	232	1570	396	3157	796			1451	366	2645	667	4437	1118			1792	452	3242	817	5973	1505				
<b>PLX3602</b>	195	49	1229	310	2184	550	4096	1032			1792	452	2491	628	4676	1178			2150	542	3925	989	8703	2193				
<b>CX302</b>	109	27	567	143	993	250	1741	439	na	na	724	182	1246	314	2253	568	na	na	717	181	1296	327	2423	611	na	na		
<b>CX502</b>	109	27	928	234	1536	387	2560	645	na	na	1113	280	1911	482	3314	835	na	na	1031	260	2014	508	4096	1032	na	na		
<b>CX702</b>	143	36	676	170	1311	330	2253	568	na	na	1085	273	1911	482	3191	804	na	na	1246	314	2321	585	4608	1161	na	na		
<b>CX902</b>	171	43	901	227	1529	385	2986	752	na	na	1410	355	2560	645	4266	1075	na	na	1707	430	3072	774	5836	1471	na	na		
<b>CX1102</b>	195	49	1195	301	2133	538	3976	1002	na	na	1765	445	2331	587	4584	1155	na	na	2048	516	3891	981	8533	2150	na	na		
<b>CX302V</b>	201	51	nr	nr	nr	nr	nr	nr	nr	nr	nr	nr	nr	nr	nr	nr	1294	326	nr	nr	nr	nr	nr	nr	nr	nr	1079	272
<b>CX602V</b>	164	41	1785	450	nr	nr	nr	nr	1785	450	2263	570	nr	nr	nr	nr	2263	570	2055	518	nr	nr	nr	nr	nr	nr	2055	518
<b>CX1202V</b>	201	51	1222	308	2177	549	nr	nr	2177	549	1468	370	2604	656	nr	nr	2604	656	1945	490	4232	1066	nr	nr	nr	nr	4232	1066
<b>CX254</b>	116	29	1137	287	1809	456	3085	777	na	na	1451	366	2379	600	4437	1118	na	na	1341	338	2236	563	5266	1327	na	na		
<b>CX404</b>	119	30	1570	396	2560	645	nr	nr	na	na	2143	540	3369	849	nr	nr	na	na	1973	497	4061	1023	nr	nr	nr	na	na	
<b>CX204V</b>	140	35	nr	nr	nr	nr	nr	nr	1741	439	nr	nr	nr	nr	nr	nr	2321	585	nr	nr	nr	nr	nr	nr	nr	nr	1980	499
<b>CX168</b>	102	26	1126	284	2014	508	nr	nr	na	na	1526	385	2512	633	nr	nr	na	na	1491	376	3328	839	nr	nr	nr	na	na	
<b>CX108V</b>	89	22	nr	nr	nr	nr	nr	nr	1150	290	nr	nr	nr	nr	nr	nr	1601	403	nr	nr	nr	nr	nr	nr	nr	nr	1160	292
<b>ISA280</b>	85	21	556	140	942	237	1570	396	na	na	655	165	1215	306	2171	547	na	na	785	198	1502	379	2901	731	na	na		
<b>ISA450</b>	85	21	768	194	1331	335	2259	569	na	na	922	232	1696	427	3096	780	na	na	1007	254	1980	499	3959	998	na	na		
<b>ISA750</b>	273	69	819	206	1365	344	2218	559	na	na	1345	339	2355	593	3959	998	na	na	1570	396	3236	815	6314	1591	na	na		
<b>ISA1350</b>	297	75	952	240	1662	419	2679	675	*	*	1491	376	2877	725	4754	1198	*	*	2075	523	4290	1081	8819	2222	*	*		
<b>ISA300Ti</b>	85	21	556	140	942	237	1570	396	1505	379	655	165	1215	306	2171	547	1993	502	785	198	1502	379	2901	731	2423	611		
<b>ISA500Ti</b>	85	21	768	194	1331	335	2259	569	1638	413	922	232	1696	427	3096	780	2925	737	1007	254	1980	499	3959	998	2696	679		
<b>ISA800Ti</b>	273	69	819	206	1365	344	2218	559	1713	432	1345	339	2355	593	3959	998	3143	792	1570	396	3236	815	6314	1591	4778	1204		
<b>DCA1222</b>	109	27	669	169	1116	281	1877	473			860	217	1621	408	2253	568			788	199	1406	354	2389	602				
<b>DCA1622</b>	109	27	928	234	1536	387	2560	645			1113	280	1911	482	3314	835			1031	260	2014	508	4096	1032				
<b>DCA2422</b>	143	36	676	170	1311	330	2253	568			1085	273	1911	482	3191	804			1246	314	2321	585	4608	1161				
<b>DCA3022</b>	171	43	901	227	1529	385	2986	752			1410	355	2560	645	4266	1075			1707	430	3072	774	5836	1471				
<b>DCA3422</b>	195	49	1195	301	2133	538	3976	1002			1765	445	2331	587	4584	1155			2048	516	3891	981	8533	2150				
<b>DCA1824</b>	116	29	1137	287	1809	456	3085	777			1451	366	2379	600	4437	1118			1341	338	2236	563	5266	1327				
<b>DCA1644</b>	119	30	1570	396	1560	393	nr	nr			2143	540	3369	849	nr	nr			1973	497	4061	1023	nr	nr				

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	Load per channel ->		8Ω		4Ω		2Ω		25V-70V-100V		8Ω		4Ω		2Ω		25V-70V-100V		8Ω		4Ω		2Ω		25V-70V-100V	
BTU/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	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr	kcal/hr	
<b>Current models (continued)</b>																										
RMX850	85	21	577	145	1068	269	1669	421			696	175	1355	341	2157	544			799	201	1509	380	2853	719		
RMX1450	78	20	887	224	1454	366	2597	654			1061	267	1969	496	3734	941			1007	254	1870	471	3734	941		
RMX1850HD	290	71	703	177	1072	270	1775	447			1079	272	2017	508	3242	817			1242	313	2321	585	4608	1161		
RMX2450	273	69	819	206	1365	344	2218	559			1758	443	2881	726	4997	1259			1587	400	3294	830	6314	1591		
RMX4050HD	273	69	1031	260	1672	421	2901	731			1584	399	3331	839	5352	1349			2048	516	4754	1198	9670	2437		
RMX5050	273	69	1317	332	2485	626	3089	778			2184	550	3983	1004	5983	1508			2823	711	5529	1393	12082	3045		
CMX300V	85	21	577	145	1068	269	1669	421			696	175	1355	341	2157	544			799	201	1509	380	2853	719		
CMX500V	78	20	887	224	1454	366	2597	654			1061	267	1969	496	3734	941			1007	254	1870	471	3734	941		
CMX800V	273	69	819	206	1365	344	2218	559			1758	443	2881	726	4997	1259			1587	400	3294	830	6314	1591		
CMX2000V	273	69	1031	260	1672	421	2901	731			1584	399	3331	839	5352	1349			2048	516	4754	1198	9670	2437		
<b>Discontinued models</b>																										
PL 1.0	164	41	730	184	1055	266	1683	424			932	235	1297	327	2273	573			761	192	1444	364	2788	703		
PL 1.0HV	212	53	993	250	1522	384	nr	nr			1106	279	1898	478	nr	nr			1072	270	2065	520	nr	nr		
PL 1.4	215	54	645	163	993	250	1580	398			1041	262	1580	398	2560	645			959	242	1812	457	4126	1040		
PL 1.5X	338	85	594	150	1024	258	1744	439			952	240	1532	386	2696	679			1014	256	1962	494	3645	919		
PL 1.6HVX	369	93	990	249	1707	430	nr	nr			1621	408	2474	623	nr	nr			1553	391	3266	823	nr	nr		
PL 1.8	171	43	840	212	1249	315	1966	495			1676	422	2345	591	3563	898			1375	347	2509	632	4870	1227		
PL 2.0HV	498	125	1171	295	1816	458	nr	nr			2157	544	2928	738	nr	nr			2137	539	4314	1087	nr	nr		
PL 2.4MB	143	36	782	197	1188	299	2000	504			1130	285	1727	435	3457	871			1707	430	2710	683	5137	1295		
PL 3.4	188	47	1075	271	1925	485	2935	740			1375	347	2734	689	4809	1212			1986	500	3771	950	7765	1957		
PL 3.8X	188	47	1201	303	1812	457	2982	751			1968	496	2899	731	5239	1320			2048	516	4096	1032	8191	2064		
PL 4.0	205	52	1792	452	2645	667	3713	936			2891	729	3983	1004	6358	1602			3106	783	5939	1497	10649	2684		
PL 6.0II	815	205	1519	383	2048	516	3942	993			2331	587	3389	854	6826	1720			2765	697	6007	1514	11092	2795		
PL 6.0PFC	682	172	2048	516	2730	688	4096	1032			3072	774	5120	1290	7850	1978			4437	1118	8874	2236	11092	2795		
PL 9.0PFC	758	191	2348	592	3338	841	5038	1270			3973	1001	6147	1549	9782	2465			5604	1412	11208	2824	17399	4385		
PLX1202	109	27	567	143	993	250	1741	439			724	182	1246	314	2253	568			717	181	1297	327	2423	611		
PLX1602	109	27	928	234	1536	387	2560	645			1113	280	1911	482	3314	835			1031	260	2014	508	4096	1032		
PLX2402	143	36	676	170	1311	330	2253	568			1085	273	1911	482	3191	804			1246	314	2321	585	4608	1161		
PLX3002	171	43	901	227	1529	385	2986	752			1410	355	2560	645	4266	1075			1707	430	3072	774	5836	1471		
PLX3402	195	49	1195	301	2133	538	3976	1002			1765	445	2331	587	4584	1155			2048	516	3891	981	8533	2150		
USA 400	*	*	353	89	604	152	951	240			426	107	774	195	1256	317			448	113	924	233	1724	434		
USA 900	*	*	763	192	755	190	2093	527			921	232	964	243	2763	696			968	244	1155	291	3792	956		
USA 1310	*	*	1130	285	1978	498	3805	959			1364	344	2532	638	5023	1266			1433	361	3027	763	6894	1737		
1200	*	*	410	103	614	155	1024	258			512	129	768	194	1280	323			526	133	812	205	1195	301		
1400	*	*	763	192	1359	342	2093	527			921	232	438	110	2763	696			968	244	2080	524	3792	956		
1700	*	*	1331	335	2048	516	4096	1032			1664	419	2560	645	5120	1290			1553	391	2389	602	4778	1204		
PL218	109	27	898	226	1433	361	2611	658			1034	261	1741	439	2969	748			891	225	1843	464	4027	1015		
PL224	143	36	768	194	1256	317	2048	516			1031	260	1700	428	2901	731			1065	268	2195	553	4669	1177		
PL230	171	43	901	227	1529	385	2986	752			1410	355	2560	645	4266	1075			1707	430	3072	774	5836	1471		
PL236	195	49	1229	310	2133	538	3488	879			1898	478	3184	802	4485	1130			2034	513	4164	1049	8225	2073		



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	Load per channel ->		8Ω		4Ω		2Ω		25V-70V-100V		8Ω		4Ω		2Ω		25V-70V-100V		8Ω		4Ω		2Ω		25V-70V-100V			
	BTU/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	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr	kcal/hr		
<b>Discontinued models (continued)</b>																												
MX700	*	*	424	107	680	171	1332	336			511	129	869	219	1758	443			538	136	1040	262	2413	608				
MX1500a	*	*	687	173	943	238	1529	385			1042	263	1615	407	2983	752			1508	380	2580	650	5396	1360				
MX2000a	*	*	937	236	1287	324	2167	546			1463	369	2290	577	3841	968			2027	511	3416	861	4928	1242				
MX3000a	*	*	1863	469	3184	802	4751	1197			2764	697	6302	1588	9674	2438			1857	468	4390	1106	8737	2202				
SRA1222	109	27	669	169	1116	281	1877	473			860	217	1621	408	2150	542			788	199	1406	354	2389	602				
SRA2422	143	36	768	194	1256	317	2048	516			1031	260	1700	428	2901	731			1065	268	2195	553	4669	1177				
SRA3622	195	49	1229	310	2133	538	3488	879			1898	478	3184	802	4485	1130			2034	513	4164	1049	8225	2073				
EX800	*	*	717	181	1126	284	1638	413			896	226	1408	355	2048	516			836	211	1314	331	1911	482				
EX1250	*	*	469	118	683	172	1024	258			845	213	1229	310	1843	464			1032	260	1502	379	2253	568				
EX1600	*	*	683	172	1024	258	1365	344			1229	310	1843	464	2457	619			1502	379	2253	568	3003	757				
EX2500	*	*	853	215	1280	323	1707	430			1536	387	2304	581	3072	774			1877	473	2816	710	3754	946				
EX4000	*	*	1092	275	1638	413	2184	550			2048	516	3072	774	4096	1032			2730	688	4096	1032	5461	1376				
CX4	*	*	614	155	922	232	2457	619			768	194	1152	290	3072	774			717	181	1075	271	2867	722				
CX6	*	*	819	206	1229	310	4915	1239			1024	258	1536	387	6143	1548			956	241	1433	361	5734	1445				
CX12	*	*	683	172	1024	258	1536	387			1229	310	1843	464	2765	697			1502	379	2253	568	3379	852				
CX4T	*	*	614	155	922	232	2457	619	*	*	768	194	1152	290	3072	774	*	*	717	181	1075	271	2867	722	*	*		
CX6T	*	*	819	206	1229	310	4915	1239	*	*	1024	258	1536	387	6143	1548	*	*	956	241	1433	361	5734	1445	*	*		
CX12T	*	*	683	172	1024	258	1536	387	*	*	1229	310	1843	464	2765	697	*	*	1502	379	2253	568	3379	852	*	*		