

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 Thermal loss at idle or with very low signal level.		Standby Thermal loss with the amplifier in standby.		1/8 Power Thermal loss at 1/8 of full power is measured with pink noise and/or a sine wave. 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.								1/3 Power Thermal loss at 1/3 of full power is measured with pink noise and/or a sine wave. 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.							
	Load per channel ->				8Ω		4Ω		70V		100V		8Ω		4Ω		70V		100V		8Ω		4Ω		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	BTU/hr	kcal/hr
SPA2-60	35	9	27	7	54	14	67	17	60	15	54	14	74	19	93	23	107	27	98	25	131	33	174	44	311	78	214	54
SPA4-60	35	9	27	7	83	21	112	28	94	24			132	33	141	36	125	31	128	32	288	73	382	96	281	71	284	72
SPA2-200	24	6	32	8	51	13	62	15	31	8	28	7	88	22	49	12	63	16	55	14	236	59	383	96	369	93	302	76
SPA4-100	33	8	48	12	99	25	117	29	60	15			139	35	173	44	94	24	78	20	414	104	559	141	383	96	358	90

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SPA2-60	41	10	32	8	49	12	66	17	43	11	57	14	66	17	92	23	70	18	51	13	104	26	147	37	202	51	134	34
SPA4-60	41	10	32	8	69	17	100	25	72	18			107	27	155	39	89	23	91	23	216	54	314	79	230	58	218	55
SPA2-200	25	6	39	10	78	20	90	23	35	9	29	7	102	26	123	31	66	17	52	13	85	21	306	77	231	58	291	73
SPA4-100	39	10	53	13	102	26	129	32	58	15	60	15	129	32	165	42	83	21	74	19	257	65	428	108	238	60	209	53



SPA Series Amplifier Heat Loss—100 V

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.

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	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	BTU/hr	kcal/hr
SPA2-60	33	8	26	7	53	13	59	15	56	14	61	15	71	18	89	22	103	26	79	20	134	34	177	44	200	50	182	46
SPA4-60	33	8	26	7	83	21	99	25	98	25			132	33	167	42	93	23	128	32	303	76	312	79	249	63	230	58
SPA2-200	23	6	31	8	41	10	67	17	32	8	30	7	44	11	99	25	74	19	54	14	247	62	353	89	252	63	228	57
SPA4-100	32	8	47	12	85	21	101	25	61	15			124	31	152	38	105	26	82	21	313	79	393	99	337	85	300	76