Cloud Electronics Ltd. - Power Consumption Heat Loss

TN-011 V2.0

Product	Standby				Quiescent				1/8th Power (W) Pink noise					1/3rd Power (W) Pink noise				
Note: Mains voltage 230 VAC 50 Hz (±1%) unless otherwise stated.	Measurement taken when the product has entered a standby state.				Measurement taken when no audio is being delivered to the load and the product has not entered a standby state.				Constant sound level at 1/8th the rated output power (W). Simulates use where audio is clean with only occasional clipping.					Constant sound level at 1/3rd the rated output power (W). Simulates use where audio begins to become compressed, limited or heavily clipped.				
	Power		Heat Loss		Power		Heat Loss		Power			Heat Loss		Power			Heat Loss	
	Watts	VA	KJ/Hour	BTU/Hour	Watts	VA	KJ/Hour	BTU/Hour	Watts	VA	Efficiency	KJ/Hour	BTU/Hour	Watts	VA	Efficiency	KJ/Hour	BTU/Hour
CV SERIES																		
CV2500 into 2x 10Ω loads	2.34	23.4	8.4	8.0	27.1	46.7	97.6	92.5	164.2	201.3	69.7%	179.0	169.7	380.7	421.1	78.6%	293.9	278.7
CV4250 into 4X 40Ω loads	2.43	24.0	8.7	8.3	38.9	60.0	140.1	132.9	187.4	227.2	67.7%	217.9	206.7	330.1	368.8	77.8%	263.5	249.9
CV8125 into 8x 80Ω loads	2.54	24.4	9.1	8.7	59.7	89.3	215.0	203.9	207.0	248.8	62.6%	278.7	264.3	352.6	387.5	73.7%	334.4	317.1
MA40 SERIES																		
MA40 into 1x 4Ω load	0.90	4.84	3.24	3.08	3.9	10.5	13.9	13.2	9.8	21.5	48.7%	18.1	17.2	19.0	35.6	63.7%	24.9	23.6
MA40F into 1x 4Ω load	0.78	4.68	2.79	2.65	4.0	10.7	14.4	13.6	9.6	21.0	48.4%	17.9	17.0	18.8	36.1	62.8%	25.2	23.9
MA40T into 1x 4Ω load	0.80	4.68	2.86	2.72	4.5	11.6	16.2	15.3	11.0	23.5	41.7%	23.2	22.0	19.6	36.3	51.9%	34.0	32.3
MA40E into 1x 4Ω load	2.45	7.65	8.82	8.36	4.6	11.8	16.6	15.7	10.6	22.2	45.1%	20.9	19.8	15.5	30.0	54.3%	25.4	24.1
MA80 SERIES																		
MA80 into 1x 4Ω load	0.88	7.1	3.2	3.0	5.4	13.6	19.4	18.4	17.4	32.4	54.8%	28.4	26.9	27.8	47.2	64.1%	36.0	34.1
MA80E into 1x 4Ω load	2.88	9.7	10.4	9.8	5.0	12.9	18.2	17.2	17.6	31.8	56.2%	27.7	26.3	26.3	44.7	64.8%	33.3	31.6
MA80FT into 1x 4Ω load (Low-Z)	0.94	7.5	3.4	3.2	6.1	14.8	22.0	20.8	16.2	30.6	51.0%	28.6	27.1	32.9	54.6	64.8%	41.6	39.5
MA80FT into 1x 125Ω load (High-Z)	0.94	7.5	3.4	3.2	6.1	14.8	22.0	20.8	17.9	33.4	49.7%	32.3	30.7	36.4	60.0	59.5%	53.1	50.4
46-80																		
46-80 into 4x 4Ω loads (Low-Z)	8.54	27.5	30.7	29.2	20.1	38.2	72.4	68.6	64.9	85.3	56.0%	102.8	97.5	126.0	143.5	71.5%	129.5	122.8
46-80T into 4x 125Ω loads (High-Z)	8.56	27.3	30.8	29.2	20.3	38.6	73.1	69.3	91.1	109.7	42.9%	187.3	177.6	175.6	198.4	54.5%	287.6	272.7

Note: Amplifier heat loss calculations do not include any power losses dissipated in the loads (speakers).

Cloud Electronics Ltd. - Power Consumption Heat Loss

TN-011 V1.1

Product	Quiescent				1/8th Power (W) Pink noise				1/3rd Power (W) Pink noise			
Note: Mains voltage 240 VAC 50 Hz (±1%) unless otherwise stated.	Measurement taken when no audio is being delivered to the load, but the product has not entered a standby state.				Constant sound level at 1/8th the rated output power (W). Simulates use where audio is clean with only occasional clipping.				Constant sound level at 1/3rd the rated output power (W). Simulates use where audio begins to become compressed, limited or heavily clipped.			
	Power		Heat Loss		Power		Heat Loss		Power		Heat Loss	
	Watts	VA	KJ/Hour	BTU/Hour	Watts	VA	KJ/Hour	BTU/Hour	Watts	VA	KJ/Hour	BTU/Hour
DCM Series												
DCM1e	13.3	24.8	48.0	45.5	13.4	24.6	48.1	45.6	13.3	24.6	48.0	45.4
DCM1	13.1	24.4	47.2	44.7	13.7	24.4	49.3	46.7	13.5	23.5	48.6	46.1
CX Series												
CX163	9.2	10.0	33.1	31.4	9.2	10.3	33.1	31.4	9.2	10.2	33.1	31.4
CX163 (Serial Number 212993 onwards)	4.0	8.7	14.2	13.5	3.9	8.7	14.1	13.4	3.9	8.7	14.2	13.5
CX261	10.1	11.2	36.3	34.4	10.1	11.2	36.2	34.3	10.1	11.2	36.3	34.4
CX261 (Serial Number 203728 onwards)	4.8	10.2	17.3	16.4	4.8	10.2	17.3	16.4	4.8	10.2	17.3	16.4
CX263	9.3	10.4	33.5	31.7	9.2	10.4	33.1	31.4	9.3	10.4	33.5	31.7
CX263 (Serial Number 212251 onwards)	4.1	9.1	14.6	13.8	4.0	9.1	14.5	13.8	4.0	9.0	14.5	13.8
CX462	9.0	10.3	32.4	30.7	8.9	10.1	32.0	30.4	8.9	10.2	32.0	30.4
CX335	8.5	10.4	30.7	29.1	8.7	10.6	31.2	29.5	8.7	10.6	31.3	29.7
Z Series												
Z4 MK3	11.5	12.2	41.1	39.0	11.5	12.2	41.1	39.0	11.5	12.2	41.1	39.0
Z4 MK4	6.2	12.4	22.2	21.1	6.2	12.4	22.2	21.1	6.2	12.4	22.2	21.1
Z8 MK3	17.2	24.3	61.9	59.0	17.2	24.3	61.9	59.0	17.2	24.3	61.9	59.0
Z8 MK4	9.6	17.5	34.6	32.8	9.6	17.5	34.6	32.8	9.6	17.5	34.6	32.8
36-50												
36-50 into 3x 4Ω loads	17.3	24.8	62.3	59.0	57.9	77.0	140.9	133.6	82.5	112.0	117.0	110.9
36-50 into 3x 8Ω loads	-	-	-	-	42.8	58.8	120.3	114.0	60.8	81.2	128.9	122.1
36-50 into 3x16Ω loads	-	-	-	-	31.3	43.8	95.8	90.8	41.0	55.5	102.6	97.2
46-50												
46-50 into 4x 4Ω loads	32.0	45.0	115.2	109.2	139.0	181.0	410.4	389.0	190.0	249.0	444.0	420.8
46-50 into 4x 8Ω loads	-	-	-	-	96.7	126.8	303.1	287.3	125.0	165.0	330.0	312.7
46-50 into 4x 16Ω loads	-	-	-	-	79.7	107.0	264.4	250.6	89.0	119.0	260.4	246.8
46-120												
46-120 into 4x 4Ω Loads	31.0	40.8	111.6	105.8	327.0	401.0	961.2	911.0	502.0	605.0	1231.2	1166.9
46-120 into 4x 8Ω Loads	-	-	-	-	195.0	289.0	594.0	563.0	315.0	410.0	846.0	801.8
46-120 into 4x 16Ω Loads	-	-	-	-	129.0	175.0	410.4	389.0	182.0	241.0	511.2	484.5
46-120Media												
46-120media into 4x 4Ω Loads	33.0	40.8	118.8	112.6	332.0	415.0	979.2	928.1	504.0	608.0	1238.4	1173.7
46-120media into 4x 8Ω Loads	-	-	-	-	217.0	291.0	673.2	638.0	335.0	421.0	918.0	870.1
46-120media into 4x 16Ω Loads	-	-	-	-	135.0	177.0	432.0	409.4	194.0	251.0	554.4	525.4
CXV Series												
CXV225 (100v, Into 2x 40Ω load)	36.2	59.2	130.3	123.5	267.1	352.0	736.6	698.1	376.8	499.0	756.7	717.2
CXV425 (100v, Into 4x 40Ω load)	82.0	118.2	295.2	279.8	591.0	687.0	1677.6	1590.0	724.0	909.0	1406.5	1333.1
VTX4120												
VTX4120 into 4x 4Ω Loads	36.9	51.6	132.8	125.9	260.0	350.5	720.0	682.4	384.0	506.0	806.4	764.3
VTX4120 into 4x 8Ω Loads	-	-	-	-	150.1	209.0	432.4	409.8	219.0	299.0	500.4	474.3
VTX4120 into 4x 16Ω Loads	-	-	-	-	96.5	136.5	293.4	278.1	134.5	191.0	340.2	322.4
VTX4240												
VTX4240 into 4x 4Ω Loads	56.6	83.1	203.8	193.1	528.0	735.0	1468.8	1392.1	783.0	1031.0	1666.8	1579.8
VTX4240 into 4x 8Ω Loads	-	-	-	-	375.0	530.0	1134.0	1074.8	490.0	660.0	1188.0	1126.0
VTX4240 into 4x 16Ω Loads	-	-	-	-	215.2	298.0	666.7	631.9	276.1	382.0	706.0	669.1
VTX4400												
VTX4400 into 4x 4Ω Loads	86.0	124.0	309.6	293.4	882.0	1169.0	2455.2	2327.0	1292.0	1725.0	2731.3	2588.7
VTX4400 into 4x 8Ω Loads	-	-	-	-	556.0	786.0	1641.6	1555.9	766.0	1051.0	1797.6	1703.7
VTX4400 into 4x 16Ω Loads	-	-	-	-	334.0	460.0	1022.4	969.0	432.0	612.0	1075.3	1019.2

Cloud Electronics Ltd. - Power Consumption Heat Loss

TN-011 V1.1

Product	Quiescent				1/8th Power (W) Pink noise				1/3rd Power (W) Pink noise			
Note: Mains voltage 240 VAC 50 Hz (±1%) unless otherwise stated.	Measurement taken when no audio is being delivered to the load and the product has not entered a standby state.				Constant sound level at 1/8th the rated output power (W). Simulates use where audio is clean with only occasional clipping.				Constant sound level at 1/3rd the rated output power (W). Simulates use where audio begins to become compressed, limited or heavily clipped.			
	Power		Heat Loss		Power		Heat Loss		Power		Heat Loss	
	Watts	VA	KJ/Hour	BTU/Hour	Watts	VA	KJ/Hour	BTU/Hour	Watts	VA	KJ/Hour	BTU/Hour
CX-A450												
CX-A450 into 4x 4Ω Loads	29.5	41.5	106.2	100.7	124.0	163.0	356.4	337.8	186.0	244.2	429.6	407.2
CX-A450 into 4x 8Ω Loads	-	-	-	-	208.0	276.0	658.8	624.4	123.5	158.9	324.6	307.7
CX-A450 into 4x 16Ω Loads	-	-	-	-	138.0	188.0	451.8	428.2	78.5	104.8	222.6	211.0
CX-A850												
CX-A850 into 8x 4Ω Loads	54.6	76.0	196.6	186.3	220.0	293.0	612.0	580.0	331.0	435.0	711.6	674.5
CX-A850 into 8x 8Ω Loads	-	-	-	-	208.0	276.0	658.8	624.4	293.0	383.0	814.8	772.3
CX-A850 into 8x 16Ω Loads	-	-	-	-	138.0	188.0	451.8	428.2	194.6	263.0	580.6	550.3
CX-A6												
CX-A6 (3 VCA Fitted), into 6x 4Ω loads	35.0	52.4	126.0	119.4	589.0	750.0	1796.4	1702.6	600.0	795.0	1296.0	1228.3
CX-A6 (3 VCA Fitted), into 6x 8Ω loads	-	-	-	-	229.0	213.0	662.4	627.8	358.0	463.0	856.8	812.1
CX-A6 (3 VCA Fitted), into 6x 16Ω loads	-	-	-	-	135.0	198.0	405.0	383.9	215.0	298.0	558.0	528.9
MA60												
MA60(Bose DS16 EQ fitted), into 1x 4Ω load	12.5	17.2	44.9	42.5	45.5	57.4	136.8	129.7	68.1	70.2	173.2	164.1
MP60(Bose DS16 EQ fitted), into 1x 8Ω load	-	-	-	-	30.5	39.8	96.3	91.3	44.2	56.7	123.1	116.7
MA60(Bose DS16 EQ fitted), into 1x 16Ω load	-	-	-	-	21.3	28.5	69.9	66.3	29.2	38.3	87.1	82.6
MA60Media												
MA60Media(Bose DS16 EQ fitted) - 1x 4Ω load	13.4	18.5	48.1	45.6	45.4	59.1	136.4	129.3	65.8	82.5	164.9	156.3
MA60(Bose DS16 EQ fitted), into 1x 8Ω load	-	-	-	-	32.0	42.6	101.7	96.4	44.5	56.5	124.2	117.7
MA60(Bose DS16 EQ fitted), into 1x 16Ω load	-	-	-	-	23.6	31.3	78.2	74.1	30.3	40.4	91.1	86.3
MPA60												
MPA60(Bose DS16 EQ fitted), into 1x 4Ω load	16.0	20.2	57.7	54.7	57.3	70.9	179.3	169.9	80.5	95.0	217.8	206.4
MPA60(Bose DS16 EQ fitted), into 1x 8Ω load	-	-	-	-	37.6	47.3	121.9	115.5	48.6	59.7	139.0	131.7
MPA60(Bose DS16 EQ fitted), into 1x 16Ω load	-	-	-	-	26.6	33.0	89.0	84.4	40.5	40.7	127.8	121.1
MPA120												
MPA120(Bose DS16 EQ fitted), into 1x 4Ω load	16.2	21.6	58.3	55.3	99.1	126.0	302.8	286.9	135.2	186.0	342.7	324.8
MPA120(Bose DS16 EQ fitted), into 1x 8Ω load	-	-	-	-	57.5	74.1	180.0	170.6	77.6	97.7	207.4	196.5
MPA120(Bose DS16 EQ fitted), into 1x 16Ω load	-	-	-	-	39.0	50.8	126.9	120.3	48.2	62.8	137.5	130.3
MPA240												
MPA240(Bose DS16 EQ fitted), into 1x 4Ω load	21.4	29.0	77.1	73.1	152.2	194.0	439.9	416.9	218.0	275.0	496.8	470.9
MPA240(Bose DS16 EQ fitted), into 1x 8Ω load	-	-	-	-	83.2	110.5	245.5	232.7	119.5	153.0	286.2	271.3
MPA240(Bose DS16 EQ fitted), into 1x 16Ω load	-	-	-	-	54.5	73.0	169.2	160.4	71.5	94.0	185.4	175.7

Note: Amplifier heat loss calculations are based on measured current consumption at mains inlet, and therefore include any power losses dissipated in the loads (speakers).
BTU/H or KJ/H of the amplifier alone may actually be lower than stated above, depending on mode of operation. This should be considered during ventilation design.