

GTA

High Performance
Monoblock Amplifiers



 **Boston**
mobile audio

Service Manual for new GTA1000M (redesign of GTA800M)

1000M

 **Boston**[®]
mobile audio

Technical Specifications:

GTA-500m

GTA-1000m

Rated Power (CEA-2006-A):

@ 2-Ohm (Mono)

@ 4-Ohm (Mono)

500 Watts x 1

300 Watts x 1

1000 Watts x 1

600 Watts x 1

Impedance Stability:

2Ω

2Ω

Frequency Response (-3dB):

10Hz–150Hz

10Hz–150Hz

*Signal-to-Noise Ratio:
(A Weighted)*

>90dB

>90dB

THD+N:

1%

1%

Lowpass Crossover:

Frequency Range:

Slope (dB Per Octave):

50Hz - 150Hz

12dB

50Hz - 150Hz

12dB

Subsonic Filter (Highpass):

Frequency Range:

Slope (dB Per Octave):

10Hz - 50Hz

12dB

10Hz - 50Hz

12dB

Signal Voltage Input Range:

Low Level (RCA) Input:

Speaker Level Input:

200mv - 5v

400mv - 10v

200mv - 5v

400mv - 10v

Fuse Amp Rating (ATC):

2 x 25 Amp

3 x 35 Amp

Dimensions:

Width:

Height:

Depth:

10 ⁵/₈" (268mm)

2 ³/₈" (60mm)

8 ³/₈" (211mm)

12 ¹/₂" (318mm)

2 ³/₈" (60mm)

8 ³/₈" (211mm)

Amplifier Troubleshooting Guide

Status LEDs on Amplifier not Lit—Head Unit (Source) Turned “ON”

- | | |
|--------|--|
| Verify | Remote turn-on wire from source to amplifier has proper voltage |
| | Power (B+) connections at amplifier, terminal blocks, and battery are secure |
| | Ground (GND) connections at amplifier and vehicle chassis are secure |
| | Battery B+ fuse and amplifier fuse are OK |
| | B+ at battery and B+ at amplifier have proper voltage |

Status LEDs Lit, no Output from Speakers—Speakers in Normal Operating Condition

- | | |
|--------|--|
| Verify | High-level cables from speaker(s) to amplifier are securely connected |
| | RCA or Speaker Level Input from amplifier to source are securely connected |
| | Sensitivity adjustment on amplifier is correctly adjusted |

Engine Noise from Speaker(s)

- | | |
|--------|---|
| | Turn source “OFF” and disconnect RCA cables at amplifier |
| | If noise stops, check equipment and cables leading to amplifier |
| Verify | RCA cables are of good quality with no breakage to internal shields |
| | RCA cables from source to amplifier are not run alongside power |

Amplifier Output Distorted—Music not Recorded with Intentional Distortion

- | | |
|--------|---|
| Verify | Source output to amplifier is not distorted |
| | Amplifier input sensitivity is correctly adjusted |

Amplifier Shutting Down, RED LED Lit—Amplifier in Thermal Protection Mode

- | | |
|--------|---|
| Verify | Amplifier is mounted with adequate space around heatsink |
| | Amplifier is not mounted under carpet |
| | Speakers meet correct impedance for application (mono or stereo hookup) |

Amplifier not Turning “ON”, RED LED Lit—Amplifier not Connected to a Shorted Speaker

- | | |
|--------|---|
| Verify | Speaker crossover is not defective |
| | High-level cables from speaker to amplifier are not shorted |

Amplifier not Turning “ON”, RED LED Lit—Speakers, Crossovers, and Cable OK

- | | |
|--------|--------------------------------------|
| | Internal fuse needs to be replaced |
| Verify | Replace fuse with fuse of same value |

Amplifier not Turning “ON”, RED LED Lit—Speakers, Crossovers, and Cable OK

- | | |
|--|----------------------------|
| | Amplifier requires service |
|--|----------------------------|

GTA1000M Service Parts List (new items highlighted in yellow)

BA P/N	BA PART DESCRIPTION	Vendor P/N	GTA-800m	GTA-1000m
111-001708	GTA800M HEAT SINK	262-41.1.GTA800M70	X	X
111-001710	END CAP LEFT	262-46.14.GTA50270	X	X
111-001711	END CAP RIGHT	262-46.14.GTA50271	X	X
111-001712	END CAP SCREW	019-31.13.1524R02000	X	X
111-001717	BOTTOM COVER GTA800M	262-42.1.GTA800M70	X	
111-001733	BOTTOM COVER GTA1000M	262-42.1.GTA1000M70		X
120-003321	MAIN PCB ASSEMBLY GTA800M	529-36.1.GTA800MM20930	X	
120-003322	SUB PCB ASSEMBLY GTA800M	529-36.1.GTA800MM20931	X	X
120-003431	MAIN PCB ASSEMBLY GTA1000M	525-99.1GTA1000M1		X
125-000607	CAPACITOR	017-03.8106.082513032100220119	X	X
125-000609	CAPACITOR	017-03.8106.082013033200330127	X	X
125-000611	CAPACITOR	017-03.8103.082518042025332102	X	X
125-000612	CAPACITOR	017-03.1103.0830300610803321	X	X
126-000143	XFMR GTA800M	524-07.12.GTA800MM0	X	X
126-000148	INDUCTOR	048-08.12.RAB14500	X	X
126-000149	INDUCTOR	048-08.12.GTA800M0	X	X
126-000150	INDUCTOR	048-08.12.GTO301R10	X	X
126-000151	INDUCTOR	048-08.12.ZX500R10	X	X
126-000152	INDUCTOR	048-08.12.ZX2500R10	X	X
126-000164	XFMR GTA1000M	524-07.12.GTA1000M0		X
132-000139	OP AMP DUAL	501-06.82.203NJM2068M	X	X
132-000140	OP AMP QUAD	501-06.82.203NJM2058M	X	X
132-000141	PWM CONTROLLER	501-06.12.203TL494	X	X
132-000142	POWER AMP CONTROLLER 2CH	501-06.82.227F111	X	X
132-000143	VOLTAGE REGULATOR	501-06.82.111KIA7809AF	X	X
132-000144	VOLTAGE REGULATOR	501-06.82.111KIA7909AF	X	X
132-000145	DIODE FAST RECOVERY 200V 10A	464-04.815.33YG225D2	X	X
132-000149	PWM MOSFET	500-05.114.01IRF3205	X	
132-000152	POWER FET	500-05.114.01IRF9640	X	
132-000153	POWER FET	500-05.114.01IRF640	X	
132-000171	POWER FET	500-05.114.01FQP12P20		X
132-000172	POWER FET	500-05.114.01FQP19N20		X
132-000173	PWM MOSFET	500-05.114.01FDP30N06		X
137-001617	GTA800M LOGO NAMEPLATE	270-56.17.GTA800M100	X	
137-001651	GTA1000M LOGO NAMEPLATE	270-56.17.GTA1000M100		X
141-002775	EPS GTA	242-57.12.GTA5020	X	X
141-002750	GTA800M GIFT BOX	241-59.11.GTA800M	X	
141-002764	GTA800M Master Pack Carton	240-58.11.GTA800M0	X	
141-002835	GTA1000M GIFT BOX	241-59.11.GTA1000M0		X
141-002836	GTA1000M Master Pack Carton	240-58.11.GTA1000M0		X

T1

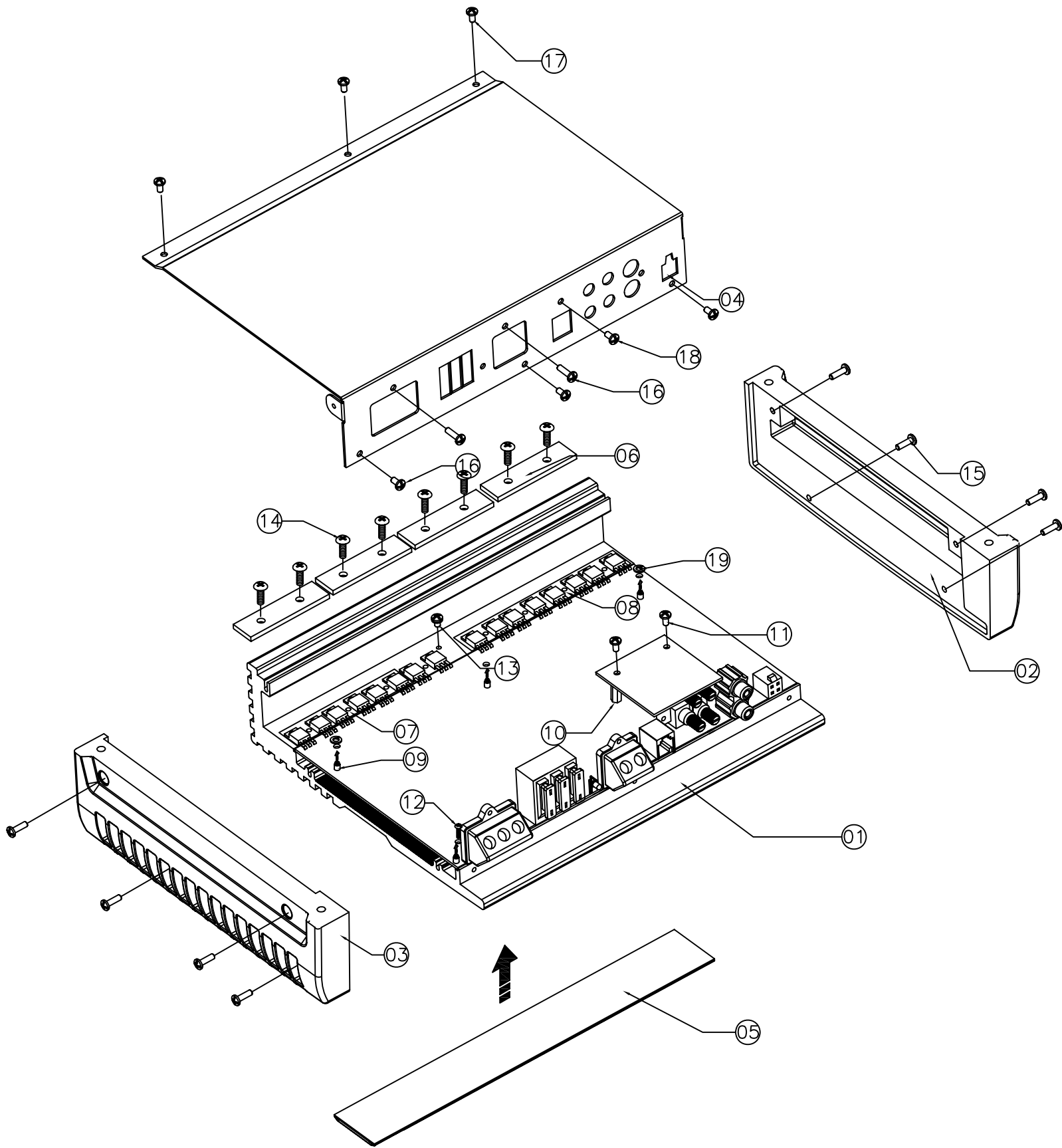
Q107, Q109, Q115, Q117, Q119

Q108, Q110, Q116

Q16,Q18, Q19, Q21, Q22, Q23

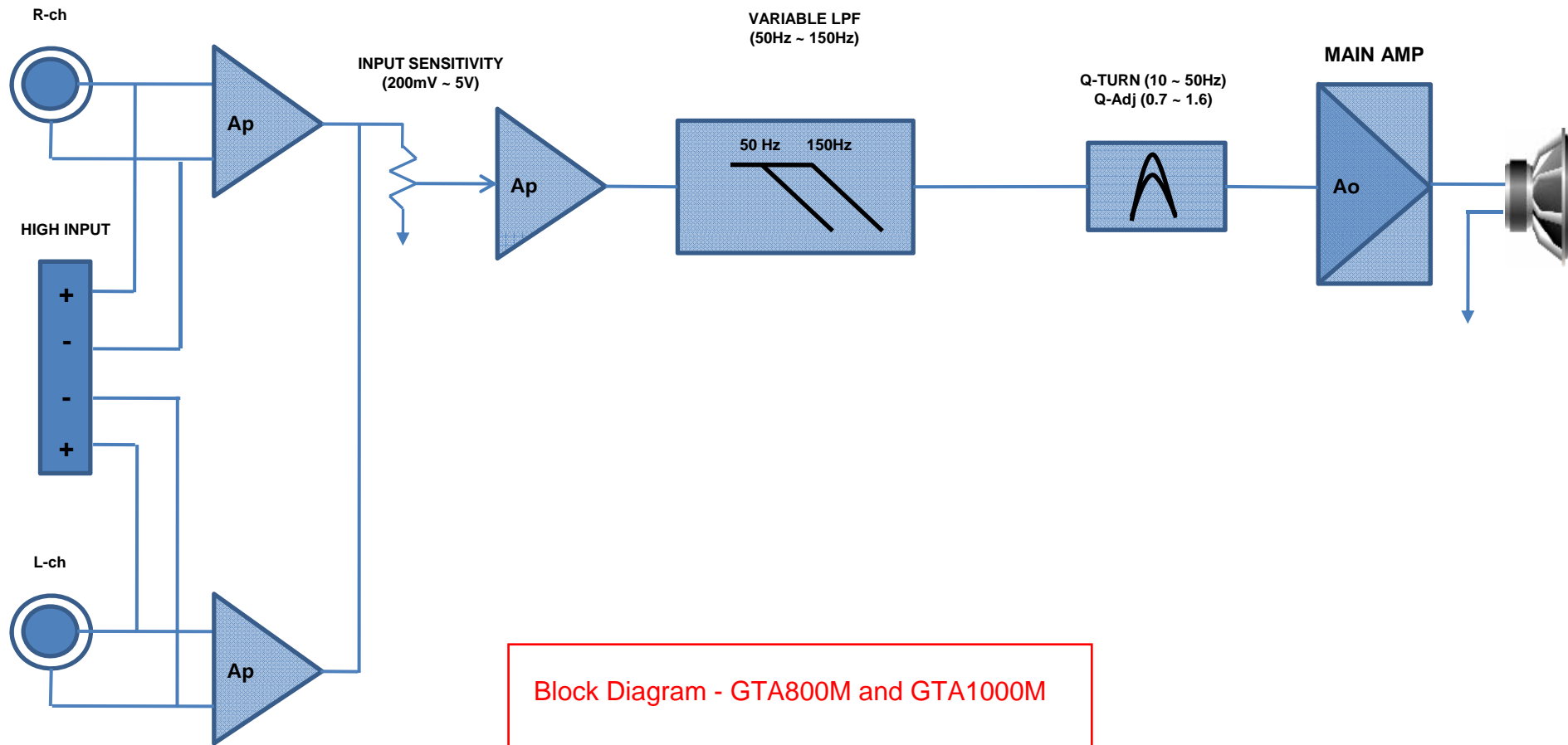
internal fuse change from (1) @ 40 amps to (2) @ 35 amps each

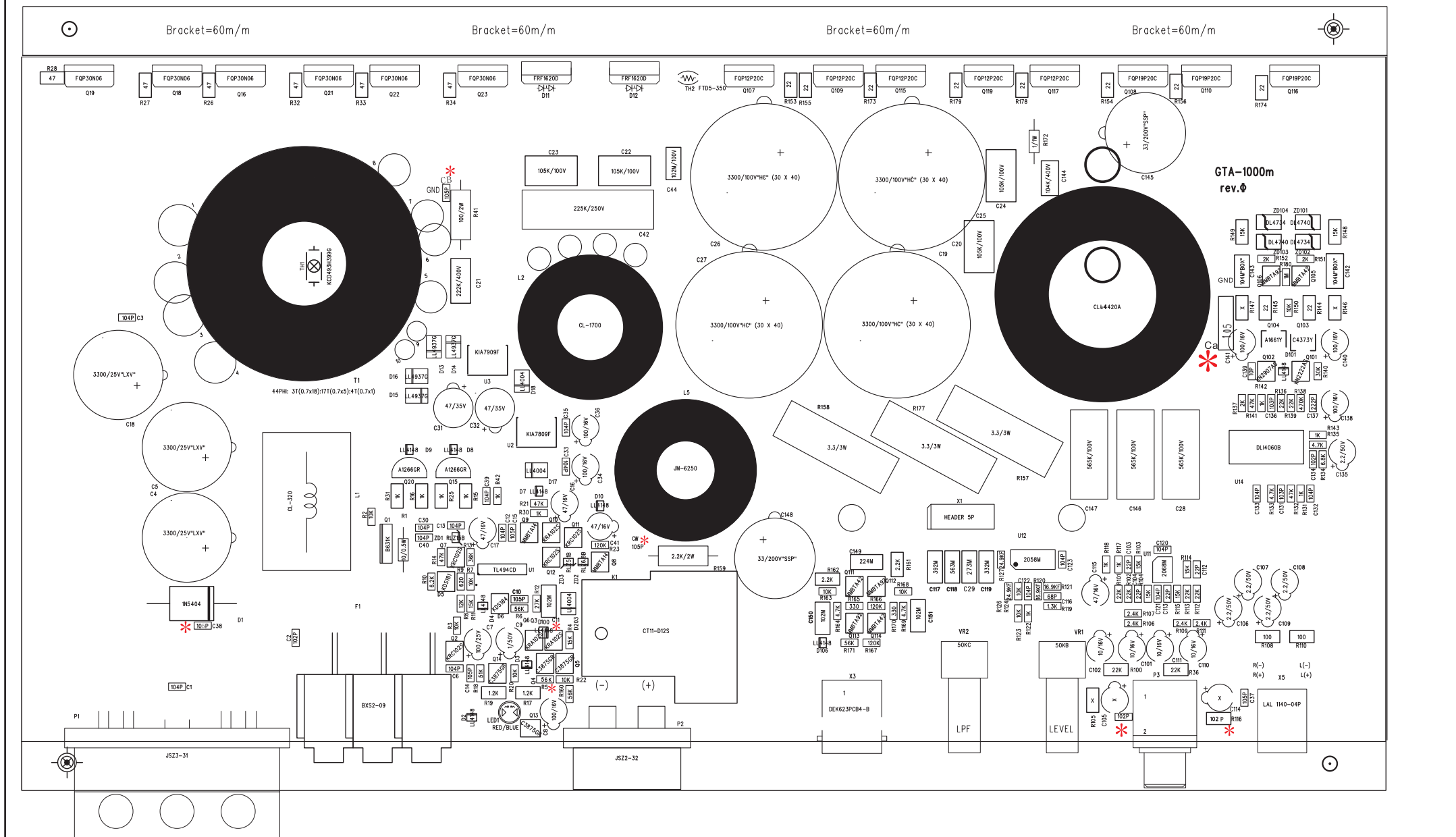
图 纸 属 性
正式 <input checked="" type="checkbox"/> 临时



19	SPRING WASHER	190-79.1.ZX550R30	2PCS
18	SCREW"H"	019-31.11.0513R00600	1PCS
17	SCREW"G"	019-31.13.0563R00600	3PCS
16	SCREW"F"	019-31.13.0263R00800	6PCS
15	SCREW"E"	019-31.13.0563R00800	8PCS
14	SCREW"D"	019-31.11.0564R01411	8PCS
13	SCREW"C"	020-32.13.0563R005271	1PCS
12	SCREW"B"	019-31.13.0563R01210	6PCS
11	SCREW"A"	019-31.11.0513R00610	4PCS
10	AL STANDOFF	020-34.19.28R2R40054	2PCS
09	PCB STANDOFF	404-50.12.V350R610	6PCS
08	SILICON PAD"B"	142-48.142.130023R201	1PCS
07	SILICON PAD"A"	142-8.142.100023R201	1PCS
06	CLIP	461-53.14.061001500321	4PCS
05	BADGE LOGO	270-56.17.GTA1000M100	1PCS
04	BOTTOM COVER	262-42.1.GTA1000M70	1PCS
03	END CAP"R"	262-46.14.GTA50271	1PCS
02	END CAP"L"	262-46.14.GTA50270	1PCS
01	HEATSINK	262-41.1.GTA800M70	1PCS
MARK NO.	DESCRIPTION	PART NO.	Q'TY

日 期	版次	变更内容及号码	签 名	未注尺寸公差：(L为基本尺寸)			名称	Exploded view drawing			<div>SONAUVOX</div>			
				L≤6 ±0.10	180<L≤315 ±1.05									
				6<L≤18 ±0.18	315<L≤500 ±1.25						始 用	客户代码	BOSTON	
				18<L≤30 ±0.26	500<L ±1.50							机 种	GTA1000M	
				30<L≤80 ±0.37	ANGLE角度 ±0.5°	绘 图	审 图	复 检	核 准	材质		环保标准	RoHS&CARB	
				80<L≤180 ±0.80		JAMES. CHEN				比例		投影视角		单位 mm
						11.08.19				版次	1	发行日期	序号	
										页数	1-1			





日期	版次	变更内容及号	签名	尺寸公差: (L为基本尺寸)				名称	GTA1000M TOP VIEW	始 客户代码		BOSTON	
				尺寸	A	B	C						
				1<L<10	0.05	0.1	0.2			用 机 种		GTA1000M	
				10<L<100	0.1	0.2	0.3						
				100<L<500	0.2	0.3	0.5			环保标准		RoHS 图号	
				500<L<1000	0.3	0.5	1.5						
				绘图	审图	复检	核准	材质	名称	投影标准		MP-11D8-0021	
								比例	名称				
								版次	2	发行日期		2011.08.18	
								页数	1-1				