

TMA2044F02V1-1D

TWIN TMA AWS

Designed for use in AWS networks, the Kaelus TMA2044 provides a state of the art tower mounted amplifier solution. It provides the following features and benefits:

FEATURES

- LTE ready
- Provides gain in the AWS uplink path for network balance and optimization
- Excellent noise figure performance
- AISG 2.0 compatible, fully software upgradable
- Fail safe bypass mode and full lightning protection



TECHNICAL SPECIFICATIONS

DOWNLINK AWS (TX) PATH	
Passband	2110 - 2180MHz
Insertion loss	0.25dB typical
Return loss	18dB minimum
Maximum input power	500W (average) / 5kW (PEP)
UPLINK AWS (RX) PATH	
Passband	1710 - 1780MHz
Nominal gain	12dB minimum
Noise figure	1.2dB typical
Return loss	18dB minimum operating, 15dB minimum in bypass mode
Bypass loss	2.1dB typical
Output IP3	+26dBm typical
Rejection in TX band	80dB minimum
Rejection @ 1700MHz	25dB minimum
Rejection @ 1800MHz	14dB minimum
ELECTRICAL	
Impedance	50ohms
Intermodulation products	-155dBc maximum at antenna ports with 2 x 20W carriers
GENERAL SPECIFICATIONS (MEASURED IN 180KHZ BANDWIDTH)	
Phase linearity	0.02° typical
Group delay variation	0.8ns typical
Amplitude variation	0.02dB typical
POWER SUPPLY AND ALARM (CURRENT WINDOW ALARM MODE, DEFAULT)	
CWA is the default TMA operating mode and can be configured to specific customer requirements. The TMA is configured so that each BTS port is individually powered and monitored. Each BTS port sinks additional current to indicate an alarm state in its uplink path. Normal operating and alarm current values are configured independently and are alterable via a field-loadable personality file, contact Kaelus for more information.	
DC supply voltage	+7.5V to +30V DC, case is DC ground
DC supply	Through BTS connector
DC supply current, normal mode	100 ± 20mA per port
DC supply current, alarm mode	200 ± 30mA per port
POWER CONSUMPTION	
Normal operation	0.85W @ 7.5V, 3W @ 30V typical
Alarm mode	3W @ 15V per port typical

AISG MODE OF OPERATION (AUTO SELECTED ON VALID AISG 2.0 FRAMES)

AISG signals can be applied to either BTS0 or BTS1 port. The TMA unit switches to AISG mode when valid frames are detected on one of the BTS ports. The TMA unit is DC powered (common feed for both channels) from the port supplying the AISG frames.

DC supply voltage	+7.5V to +30V DC, case is DC ground
AISG version	2.0 (1.1 optional)
Supply current, AISG mode	200mA @ 7.5V, 65mA @ 30V typical
Voltage drop, BTS to AISG port	1.5V maximum at 2A
Power consumption, AISG mode	1.5W @ 7.5V, 2W @ 30V typical
AISG connector, current rating	IEC60130-9, 8-pin female / < 4A peak, 2A continuous, pin 6

ENVIRONMENTAL

For further details of environmental compliance, please contact Kaelus.

Temperature range	-40° to +65°C -40° to +149°F
Ingress protection	IP67
Lightning protection	IEC61312-1, RF: ±5kA maximum (8/20us), AISG: ±2kA maximum (8/20us)
MTBF	>700,000 (hours)
Compliance	FCC Part 15, Ingress ETSI EN 300 019 class 4.1, EMC:EN301 489,RoHS

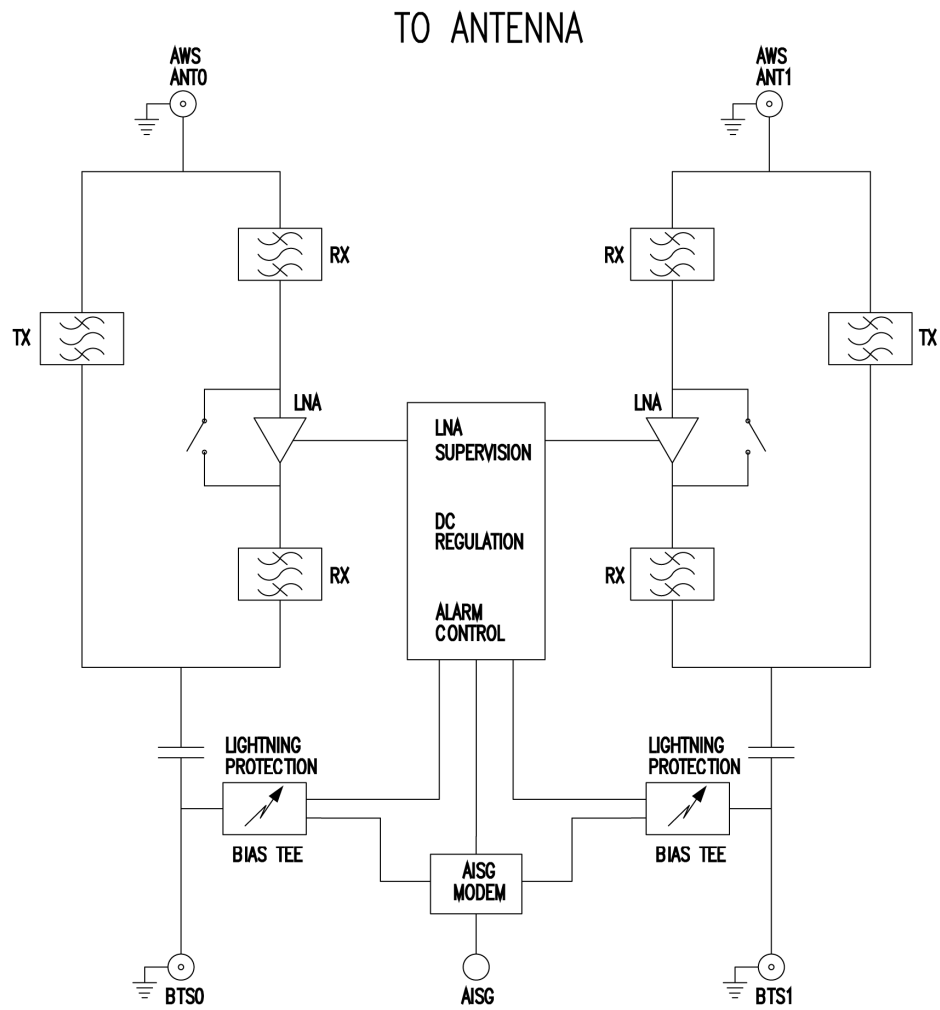
MECHANICAL

Dimensions H x D x W	284 x 181 x 89mm 11.18 x 7.14 x 3.5in (excluding brackets and connectors)
Weight	9kg 20lbs
Finish	Painted, light grey (RAL7035)
Connectors	DIN 7-16 (F) x 4 long neck
Mounting	Pole/wall bracket supplied with two metal clamps 45-178mm diameter poles

ORDERING INFORMATION

PART NUMBER	CONFIGURATION	OPTIONAL FEATURES	CONNECTORS
Contact Kaelus for options.			
TMA2044F02V1-1D	TWIN 2 in / 2 out	Configured with AT&T personality	DIN 7-16 (F)

ELECTRICAL BLOCK DIAGRAM



MECHANICAL BLOCK DIAGRAM

