



PRODUCT DATASHEET
MODEL KMA2040-M25
100-500 WATTS
200 kHz – 50 MHz

Amplifier model KMA2040-M25 is an RF power amplifier module for OEM applications or integration into a user system. The amplifier is available tuned for three performance classes.

GENERAL SPECIFICATIONS

The general specifications listed below apply to the three performance classes of the KMA2040-M25 family of amplifiers unless otherwise noted.

For ordering, see Model Configurations (Table 3, below) for detailed information for specific model names.

Table 1 - General Specifications

		Class A/100W	Class AB/300W	Class AB/500W
RATED POWER OUTPUT		100 Watts CW/avg	300 Watts CW/PEAK/PULSE	500 Watts PULSE @30% duty cycle
FREQUENCY		200 kHz – 50 MHz	2 – 30 MHz	2 – 30 MHz
DC FEED / MAX CURRENT		24V / 16 A	32V / 19 A	42V / 8 A
GAIN FLATNESS WINDOW		64-66 dB	54-56dB	
Digital regrowth @48kHz KSPS With 5db PAPR 2–30 MHz		< -30 dBc	Per customer spec	N/A
HARMONICS (dBc)	2 ND	-34 dBc typ -26 dBc max	-28 dBc typ -22 dBc max	-23 dBc typ -18 dBc max
	3 RD	-30dBc typ -21 dBc max	-16 dBc typ -12 dBc max	-16 dBc typ -12 dBc max
ON/OFF TIME		<1.5 ms		
ON/OFF RATIO		>85 dBc		
INPUT VSWR		≤ 1.5:1		
MISMATCH TOLERANCE		2:1 <i>Protection of the output devices against output mismatch are the responsibility of the user.</i>		
Heatsink Rated Temperature		<55°C		
Overtemperature Protection		Heatsink @ 80°C → overtemperature protection activated (amplifier shutdown) Heatsink @ 65°C → normal operation resumes <i>It is recommended sufficient cooling is provided to keep heatsink base temperature <55°C</i>		

CONTROL INTERFACE

Control and monitoring of the amplifier is accomplished via a Hybrid D-SUB connector. All specifications listed below apply unless otherwise noted.

For ordering, see Model Configurations (Table 3, below) for detailed information for specific model names.

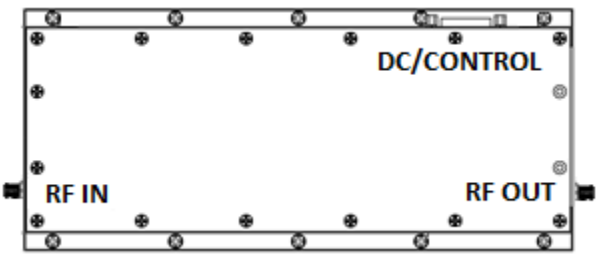
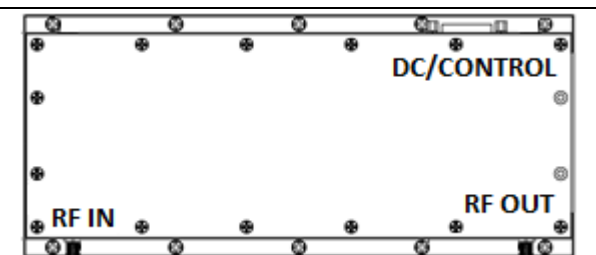
Table 2 – Control Interface

INTERFACE – DC POWER & CONTROL		
RF CONNECTORS	SMA FEMALE IN / OUT (for location see Ordering Information, Table 3)	
DC / CONTROL	Hybrid D-SUB (Mating Hybrid D-SUB connector is supplied)	
PINOUT	A1	GND
	A2	+VDC
	1	ON/OFF CONTROL (need sinking source >2mA) <ul style="list-style-type: none"> • GND or $\leq 0.5V$ = OFF • +5V or ON Not Connected = ON
	2	OVERTEMP STATUS: <ul style="list-style-type: none"> • $\leq 0.1V$ = OVERTEMP • $\geq 4V$ = NORM
	3	Reserved
	4, 5	Reserved

ORDERING INFORMATION - MODEL CONFIGURATIONS

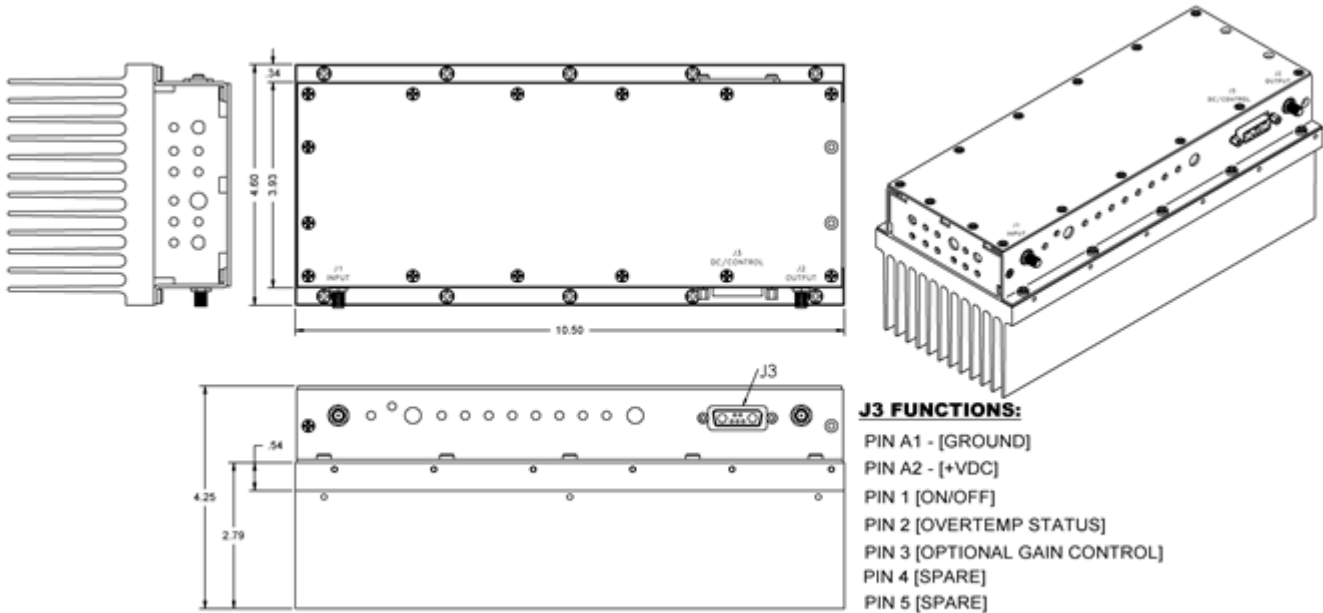
The following table provides specific details on orderable configurations of the KMA2040-M25. **For details not listed below General Specifications apply.**

Table 3 – Ordering Information - Specific Configuration Details

MODEL NAME	CONFIGURATION DETAILS	
KMA2040-M25C1	Performance: Class A/100W	
KMA2040-M25C2	Performance: Class AB/300W	
KMA2040-M25C3	Performance: Class AB/500W	
KMA2040-M25C4	Performance: Class A/100W	
KMA2040-M25C5	Performance: Class AB/300W	
KMA2040-M25C6	Performance: Class AB/500W	

MECHANICAL DETAILS

MODEL NUMBER	HEATSINK INCLUDED	WEIGHT	SIZE (WxHxD)
KMA2040-M25CX	YES	7lbs	4.60" x 4.25" x 10.50"



Drawing for reference only. Details subject to change. Location of connectors configured per model name.