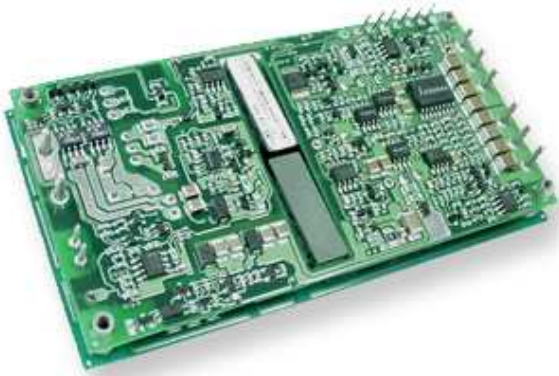


Product Brief: Maxeta™ iFA Series –Full Brick Power Modules



Maxeta™ iFA Series DC/DC Power Modules 48V Input, 30V Output, 700W Full Bricks

The Maxeta™ series power modules are ideally suited for wireless applications to power RF amplifiers. With a typical 92% full load efficiency (92.5% at 600W), a power density of 126W per cubic inch, voltage foldback constant current limit, and a total power and current output capability of 700W and 23.3A respectively, the Maxeta™ series offers the highest efficiency, power density and usable power for low input voltage applications in a standard full brick package currently available. A very wide output voltage trim range, -40% to +10%, remote sensing, and isolated remote on/off control are standard features enhancing versatility. The Maxeta™ series modules are also suited for other telecommunication applications.

Features

- Industry Standard Full Brick
- Power density: > 126W / inch³
- High efficiency: up to 93.5%
- Typical efficiency: 92% at 48Vin, full load
- Typical efficiency: 92.5% at 600W
- Up to 700W of power in high ambient
- Meets basic insulation requirements
- Voltage foldback constant current limit
- Single wire current sharing (possible)
- Start-up into pre-biased output bus
- Isolated remote ON/OFF control
- Wide output voltage adjustment range
- Auto-recovery protection:
 - Input under and over voltage
 - Short circuit
 - Thermal limit
- Latched output over-voltage protection
- High reliable open frame SMT construction
- Base-plate for improved heat transfer
- Constant switching frequency
- Safety agency: UL60950, VDE, EN60950
- EMI: CISPR Class A/B with external filters
- Multiple patents
- Optional 0.110" pin length
- Optional thru-hole PEM studs mounting
- Power good indication (optional)
- Auxiliary (10V) logic power (optional)

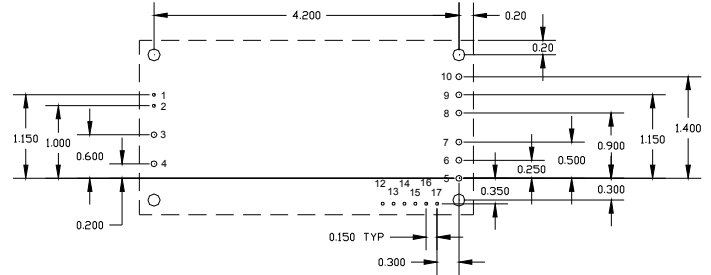
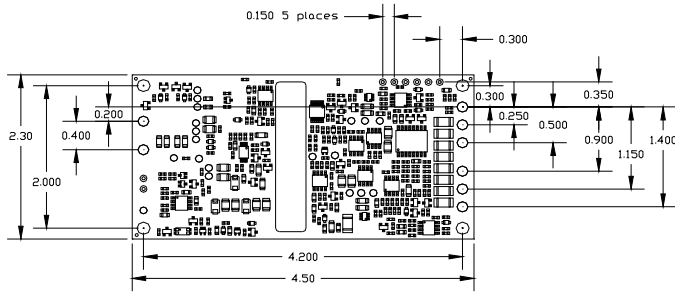
Base Product Code	Input Voltage	Output Voltage	Output Current	Efficiency
iFA48023A300V	42-60V	30V	23.3A	92%

Typical Performance

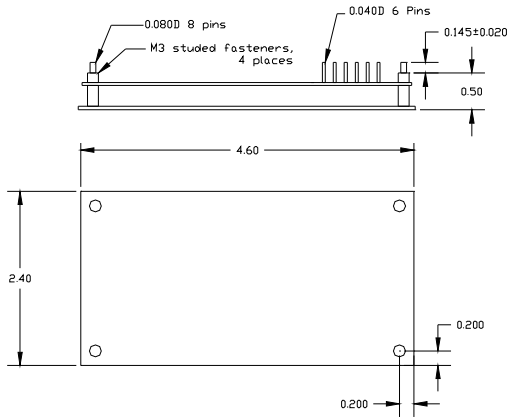
Input Characteristics		
Operating input range	42-60 V	
Transient input voltage	100 V	100mS max
Turn-on voltage	39.7 V	
Turn-off voltage	37.7 V	
Start-up time	52 mS	On/Off to 90% Vout
Maximum input current:	19 A	Input 0-75V, Io,max
Output Characteristics		
Output voltage tolerance	+/- 3% max	Over line, load, and temp to end of life
Efficiency:	92%	Nominal input, full load, Tc=25C
Line regulation:	15 mV	Over rated input
Load regulation:	10 mV	Over rated load
Output voltage adjustment	60% - 110%	Po ≤ Po,max
Output ripple:	135 mVp-p	20MHz bandwidth
Dynamic response	Load step 25% of Io,max	
Transient voltage	150 mV	slew rate =0.1A/us
Recovery time	150 μS	
Ripple frequency:	340 kHz	Fixed
Protection		
Current limit inception	109% of Io,rated	Vo=90% of Vo,nom
Short circuit	1 A	Auto recovery hiccup
Output over-voltage	116% of Vo,nom	Latching
Thermal shutdown	125C	Auto recovery with hysteresis
Environmental		
Operating temperature (Tc)	-40°C to 105°C	Measurement point in full datasheet



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Recommended hole pattern



PIN	FUNCTION	PIN	FUNCTION
1	ON/OFF (+)	10	Vout (+)
2	ON/OFF (-)	11	Not Present
3	Vin (+)	12	AUX Output
4	Vin (-)	13	Power Good
5	Vout (-)	14	Parallel Control
6	Vout (-)	15	Trim
7	Vout (-)	16	Sense (+)
8	Vout (+)	17	Sense (-)
9	Vout (+)	18	

Ordering Information

Product Identifier	Package Size	Platform	Input Voltage	Output Current/Power	Output Units	Main Output Voltage	# of Outputs	Safety Class	Feature Set
i	F	A	48	023	A	300	V	- 0	00
TDK Innoveta	Full Brick	Standard Maxeta™	42 - 60V	023 - 23.3	Amps	300 - 30V	Single		00 - Standard >00 - See option table

Feature Set	OVP Out Replaces Power Good	Pin Length	PEM Stud Style
00	No	0.145"	Threaded
01	No	0.110"	Threaded
02	Yes	0.145"	Threaded
03	Yes	0.110"	Threaded
20	No	0.145"	Thru-hole
96	No	0.200"	Thru-hole (Special code)

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