

MAXETA™ iFA SERIES DC/DC POWER MODULES 24V Input, 28V Output, 420W Full Brick



The Maxeta™ series power modules are ideally suited for CDMA wireless applications to power RF amplifiers. With a 89.5% typical efficiency, a power density of 76W per cubic inch and a total power and current output capability of 420W and 15A 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, power good indication, isolated remote on/off control and single wire active current sharing are standard features enhancing versatility. The Maxeta™ series modules are also suited for other telecommunication applications.

Features

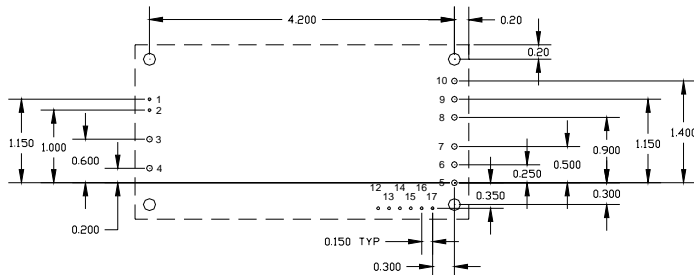
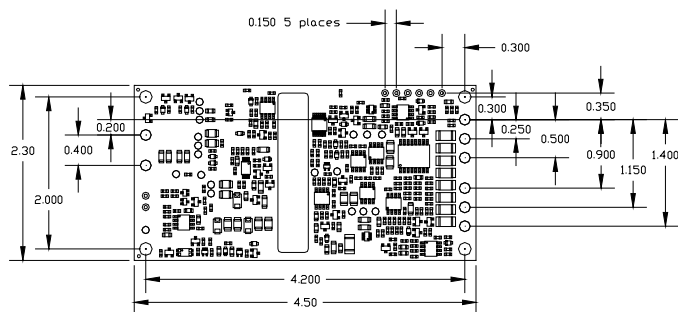
- **Industry Standard Full Brick**
- **Power density: 76W / inch³**
- **High efficiency: up to 92%**
- **Typical efficiency: 89.5% at nominal input and 100% load**
- **Up to 420W of output power in high ambient temperature with air flow**
- **Meets basic insulation requirements**
- **Single wire forced current sharing**
- **Start-up into pre-biased output bus**
- User selectable on/off (either positive or negative logic)
- Wide output voltage adjustment range
- Auto-recovery protection:
 - Input under and over voltage
 - Current limit
 - Short circuit
 - Thermal limit
- Latched output over-voltage protection
- High reliability open frame, surface mount construction
- Baseplate for improved thermal management
- Constant switching frequency
- Optional 0.110" pin length
- Safety agency approvals: pending
- Multiple patents pending

Base Product Code	Input Voltage	Output Voltage	Output Current	Efficiency
iFA24015A280V	18-36V	28V	15A	89.5%

Typical Performance

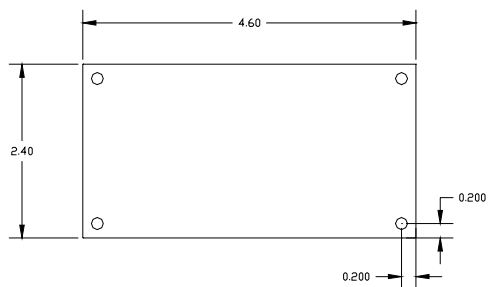
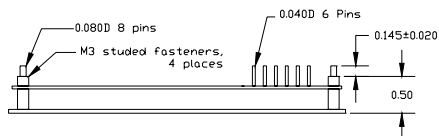
Input Characteristics		
Operating input range	18-36 V	
Transient input voltage	50 V	100mS max
Turn-on voltage	16.5 V	
Turn-off voltage	15 V	
Start-up time	55 mS	On/Off to 90% Vout
Maximum input current:	26.5A	Input 0-75V, I _{o,max}
Output Characteristics		
Output voltage tolerance	+/- 3% max	Over line, load, and temp to end of life
Efficiency:	89.5%	Nominal input, full load, T _c =25C
Line regulation:	28 mV	Over rated input
Load regulation:	28 mV	Over rated load
Output voltage adjustment	60% - 110%	P _o ≤ P _{o,max}
Output ripple:	150 mVp-p	20MHz bandwidth
Dynamic response	Load step 25% of I _{o,max} slew rate =0.1A/us	
Transient voltage	500 mV	
Recovery time	1 mS	
Ripple frequency:	310 kHz	Fixed
Protection		
Current limit inception	110% of I _{o,rated}	V _o =90% of V _{o,nom}
Short circuit	< I _{o,rated}	Auto recovery hiccup
Output over-voltage	122% of V _{o,nom}	Latching
Thermal shutdown	125C	Auto recovery with hysteresis
Environmental		
Operating temperature	-40°C to 120°C	See full datasheet

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



Recommended hole pattern

Top view - Footprint



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	24	015	A	280	V	- 0	00
Innoveta Technologies	Full Brick	Standard Maxeta™	18-36V	015 – 15	Amps	280 – 28V	Single		00 – Standard

Feature Set	OVP Out Replaces Power Good	Pin Length
00	No	0.145"
01	No	0.110"
02	Yes	0.145"
03	Yes	0.110"