

CHEROKEE INTERNATIONAL

Hyper Series – Isolated DC-DC Power Modules

Output: 1.3 to 3.5V @ 30 to 40A DC Input: 36V to 75V

Hyper Series

- **Precise voltage and fast transient response (up to 50A/μs)**
- **Voltage trim capability**
- **Parallelable/Current Sharing**
- **High power density at realistic operating conditions (34A with 300LFM at 50°C)**
- **Output Over-voltage, Over-current, Short Circuit and Thermal Protection**



Features

- Vertical Mount Package (Standard SIP 70 Pin Connector)
- High Efficiency
- Programmable output voltage via 5-bit VID
- No external output capacitors required

Benefits

- Maximizes motherboard area in multiprocessor applications
- Reduces footprint area and improves thermal management
- Eliminates customization – NRE and lead time
- Lower cost of ownership, reduces component count

Key Market Segments & Applications

- Workstations and Servers
- Telecommunications equipments
- Data processing applications
- File Servers
- Storage Devices

Specifications

Hyper Series – Isolated DC-DC Power Modules

Output Model:	HY3048AP
Nominal Output Voltage	1.3V to 3.5V
Output Current	30A to 40A (see derating curve)
Output Power	130W
Efficiency	87% for (3.3V @ 30A)
Input Voltage Range	36 – 75Vdc
Input Current Protection	Solid state switch opens @ 10A
Input Current*	3.4A @ (36Vin)
Output Voltage Trim	-8% to +10% of Vout nominal**
Output Voltage Set-point	+/- 1.3% of Vout nominal
Line Regulation	+/- 2mV
Load Regulation	+/- 2mV
Transient Response	Peak deviation 120mV; Settling time of 65μs, slew rate of 50A/μs
Max Ripple and Noise	40mV (pk-pk)
Output Enable	TTL compatible Logic Level High ON (2.0 – 5.0V) and OFF (0 - 0.8V)
Power Good (Open collector type 2mA sink current)	TTL HIGH within the ranges of (89 – 94%) and (106 – 111%) of Vout nominal; LOW signal outside the specified range
Over Voltage Protection	112 – 124%
Current Share	Each unit will share within 15% at Half Load and 10% at Full Load
Isolation	Input to Output 1500VDC; VDC applied for 1 min.
Over Temperature Protection	125°C Typical
Operating Temperature	0 – 70°C
Cooling	See derating curve
Weight	2.30 Ounces (65.31grams)
Dimensions	3.59" x 1.625" x 0.390" (91.08mm x 41.28mm x 9.91mm)

Notes: * Measured at 3.5V @ 30A

** Vout nominal is adjustable within the specified range of 1.3V to 3.5V

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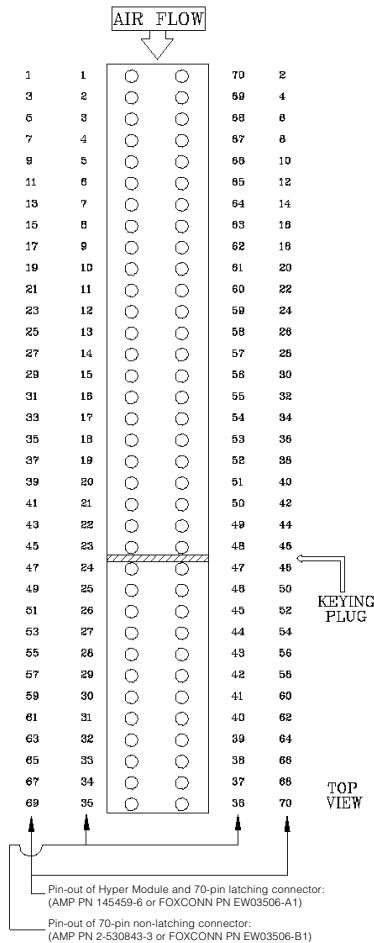
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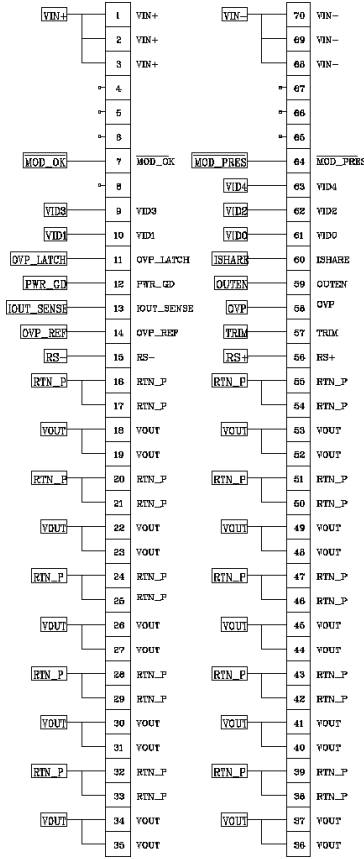
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Hyper Pin Out Guide

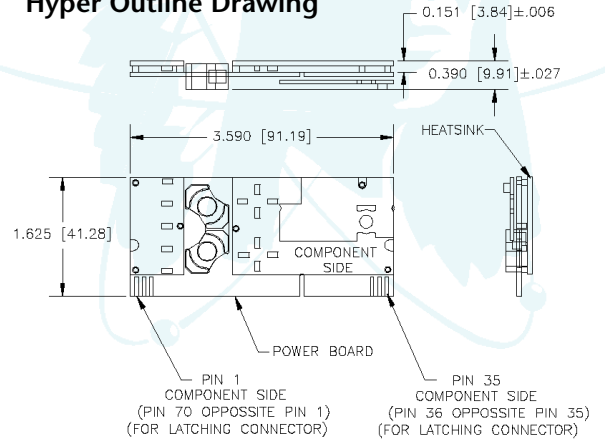


Pin-out of Hyper Module and two types of 70-pin connectors (AMP and FOXCONN)

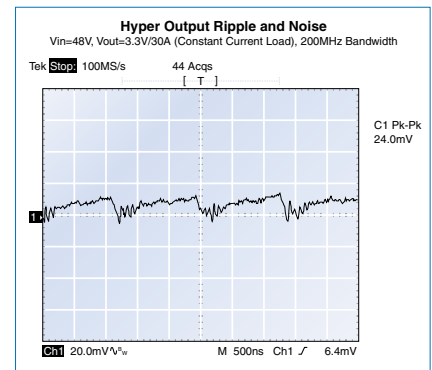
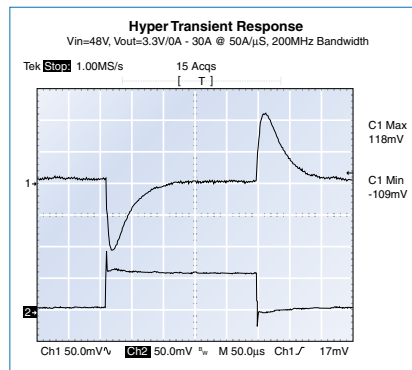
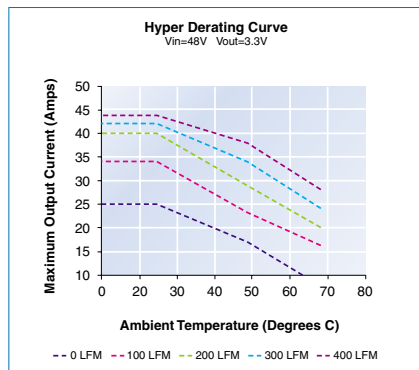
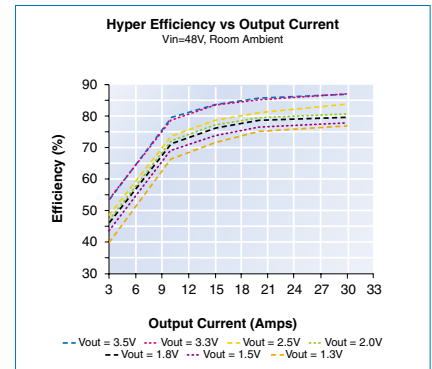
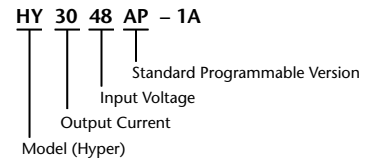


Pin-out configuration

Hyper Outline Drawing



Hyper Model Selection Guide



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