

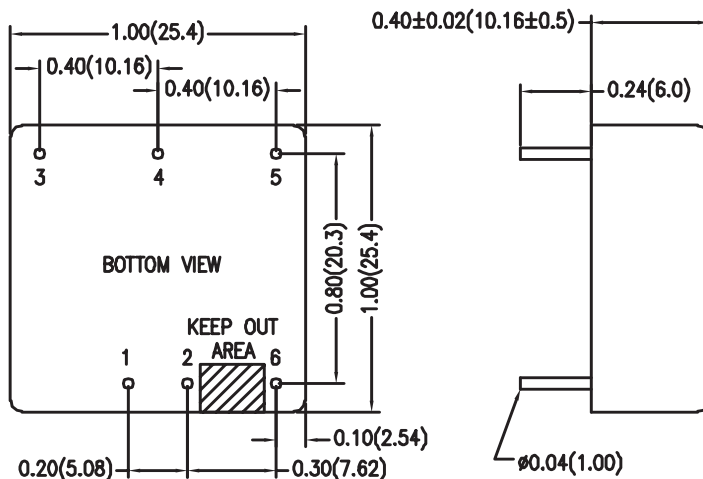
- Efficiency up to 90%
- 1500 VDC Isolation
- 2:1 Ultra Wide Input Range
- Remote On/Off Control
- Six Sided Shielding
- Trim
- RoHS Compliant
- CSA Approved



25 Watt QMS Single and Dual Series



| Model Number | Voltage | | | Current | | | Reflected Ripple Current | Over Voltage Protection | Input Surge Voltage | Efficiency | Capacitive Load |
|--------------|------------|-------------|--------|----------------|-----------------|----------|--------------------------|-------------------------|---------------------|------------|-----------------|
| | Input | | Output | Input | | Output | | | | | |
| | Nom. (VDC) | Range (VDC) | (VDC) | @ No Load (mA) | @ Max Load (mA) | Max (mA) | | | | | |
| QMS20H12S3 | 12 | 9 - 18 | 3.3 | 75 | 1900 | 6000 | 80 | 3.9 | 25 | 87 | 10300 |
| QMS25H12S5 | 12 | 9 - 18 | 5 | 85 | 2340 | 5000 | 80 | 6.2 | 25 | 89 | 6800 |
| QMS25H12S12 | 12 | 9 - 18 | 12 | 80 | 2350 | 2090 | 80 | 15 | 25 | 89 | 1200 |
| QMS25H12S15 | 12 | 9 - 18 | 15 | 80 | 2350 | 1670 | 80 | 18 | 25 | 89 | 750 |
| QMS25H12D12 | 12 | 9 - 18 | ±12 | 75 | 2340 | ±1040 | 80 | ±15 | 25 | 89 | 680 |
| QMS25H12D15 | 12 | 9 - 18 | ±15 | 75 | 2360 | ±840 | 80 | ±18 | 25 | 89 | 380 |
| QMS20H24S3 | 24 | 18 - 36 | 3.3 | 55 | 940 | 6000 | 50 | 3.9 | 50 | 88 | 10300 |
| QMS25H24S5 | 24 | 18 - 36 | 5 | 60 | 1160 | 5000 | 50 | 6.2 | 50 | 90 | 6800 |
| QMS25H24S12 | 24 | 18 - 36 | 12 | 55 | 1160 | 2090 | 50 | 15 | 50 | 90 | 1200 |
| QMS25H24S15 | 24 | 18 - 36 | 15 | 55 | 1160 | 1670 | 50 | 18 | 50 | 90 | 750 |
| QMS25H24D12 | 24 | 18 - 36 | ±12 | 50 | 1170 | ±1040 | 50 | ±15 | 50 | 89 | 680 |
| QMS25H24D15 | 24 | 18 - 36 | ±15 | 50 | 1180 | ±840 | 50 | ±18 | 50 | 89 | 380 |
| QMS20H48S3 | 48 | 36 - 75 | 3.3 | 35 | 470 | 6000 | 30 | 3.9 | 100 | 88 | 10300 |
| QMS25H48S5 | 48 | 36 - 75 | 5 | 40 | 580 | 5000 | 30 | 6.2 | 100 | 90 | 6800 |
| QMS25H48S12 | 48 | 36 - 75 | 12 | 35 | 580 | 2090 | 30 | 15 | 100 | 90 | 1200 |
| QMS25H48S15 | 48 | 36 - 75 | 15 | 35 | 580 | 1670 | 30 | 18 | 100 | 90 | 750 |
| QMS25H48D12 | 48 | 36 - 75 | ±12 | 40 | 585 | ±1040 | 30 | ±15 | 100 | 89 | 680 |
| QMS25H48D15 | 48 | 36 - 75 | ±15 | 40 | 590 | ±840 | 30 | ±18 | 100 | 89 | 380 |



Dimensions are inches (mm) unless noted

Tolerance: Inches Millimeters

X.XX ±0.01 X.X ±0.25

X.XXX ±0.005 X.XX ±0.13

Pin ±0.002 ±0.05

| Pin Connections | | |
|-----------------|---------------|---------------|
| Pin | Single | Dual |
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 3 | +Vout | +Vout |
| 4 | Trim | Common |
| 5 | -Vout | -Vout |
| 6 | Remote On/Off | Remote On/Off |

Keep out area: Keep copper traces in mating assembly away from this area to prevent shorting.

See Model Selection Table for Model Specific Parameters

| Input Parameters | Min | Typ | Max | Units |
|-------------------------------------------------------------------------------|---------------------------------|-----|---------------|--------|
| Start Voltage 12 Vin 24 Vin 48 Vin | | | 9 18 36 | VDC |
| Switching Frequency | | 285 | | kHz |
| Start Time (Nom Vin and constant resistive load) Power Up Remote ON/OFF | | | 30 30 | ms |
| Input Polarity Protection | None | | | |
| Input Filter | LC Filter | | | |
| Conducted EMI | Meets EN55022, Class A, Class B | | | |
| Output Parameters | Min | Typ | Max | Units |
| Output Voltage Accuracy | | | ±1.0 | %Vnom |
| Output Voltage Balance Dual Output, Balanced Loads | | | ±2.0 | % |
| Load Regulation No Load to Full Load | Single Dual | | ±0.2 ±0.2 | % |
| Line Regulation Vin=Min. to Max. | | | ±0.2 | % |
| Ripple & Noise (20MHz) 3.3 & 5 V All other models | | | 100 150 | mV P-P |
| Transient Recovery Time 25% Load Step Change | | 250 | | µs |
| Temperature Coefficient | | | ±0.02 | % / °C |
| Over Current Protection | 150% of Iout Max. | | | |
| Short Circuit Protection | Hiccup Automatic Recovery | | | |
| Remote On Off | Min | Typ | Max | Units |
| DC/DC On | 3.5V-12VDC or Open Circuit | | | |
| DC/DC Off | 0v -1.2VDC or Short Circuit | | | |
| Control Input Current (on) Vctrl = 5.0V | | | 0.5 | mA |
| Control Input Current (off) Vctrl = 0V | | | -0.5 | mA |
| Control Common | Referenced to Negative Input | | | |
| Standby Input Current Supply Off & Nominal Vin | | 3 | | mA |
| Output Voltage Trim | Min | Typ | Max | Units |
| Trim Up / Trim Down (7) | ±10 | | | % |

| General Specifications | Min | Typ | Max | Units |
|------------------------------------------------------------------------------------------|-------------------------------------------------|-----|------|---------|
| Isolation Voltage, 60 seconds | 1500 | | | VDC |
| Isolation Resistance 500VDC | 1000 | | | Mohms |
| Isolation Capacitance, 100kHz, 1V | | | 2000 | pF |
| Operating Temperature (Ambient) | -40 | | +80 | °C |
| Operating Temperature (Case) | | | +105 | °C |
| Storage Temperature | -50 | | +125 | °C |
| Humidity | | | 95 | % |
| Thermal Impedance Natural Convection w/o heatsink Natural Convection with heatsink | 17.6 14.8 | | | °C/W |
| MTBF MIL-HDBK-217F @25°C, Ground Benign | 313 | | | K Hours |
| Cooling | Free-Air Convection | | | |
| Case Size | 1.0 x 1.0x 0.4 inches 25.4 x 25.4 x 10.16 mm | | | |
| Case Material | Six-Sided shielded, Metal Case UL94-V0 | | | |
| Weight | 16.5g | | | |
| Agency Approvals | CSA 60950-1 | | | |

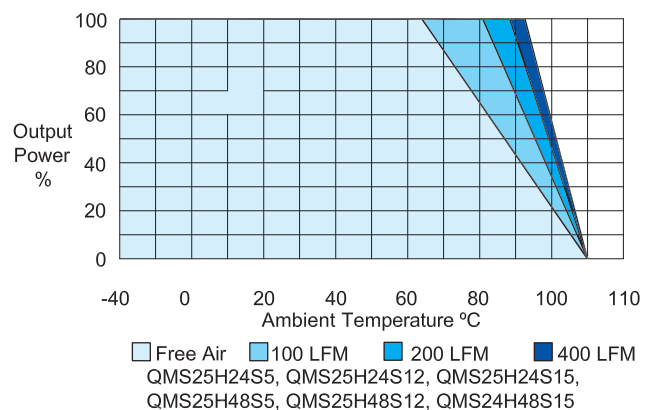
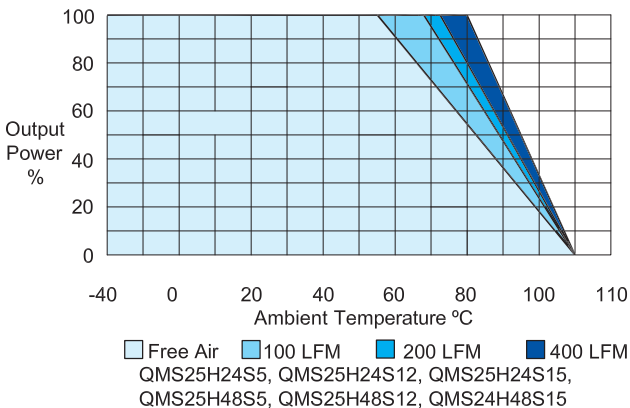
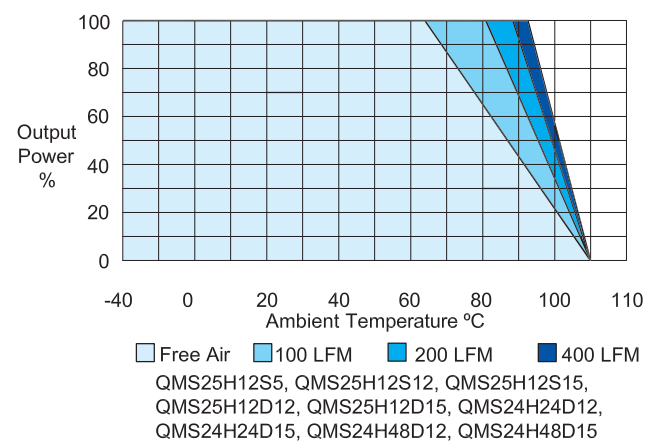
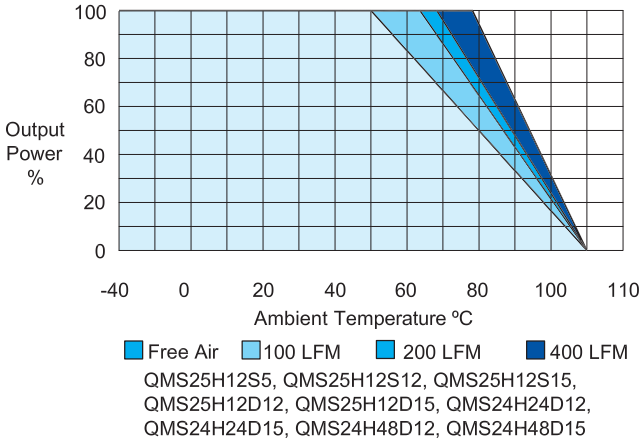
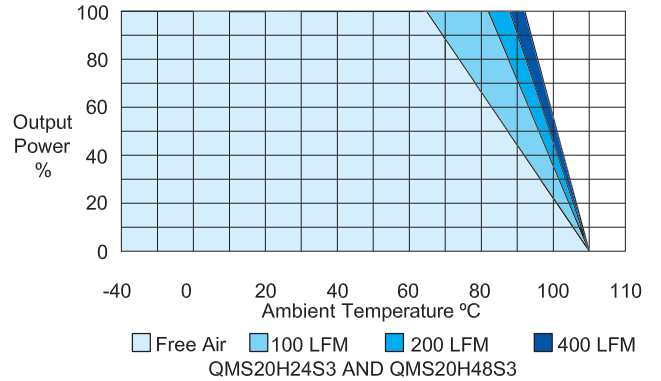
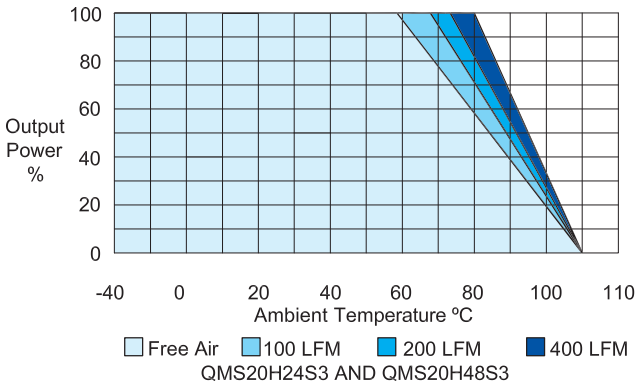
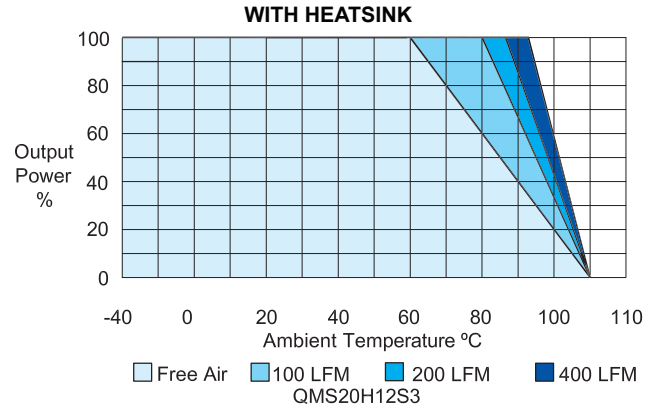
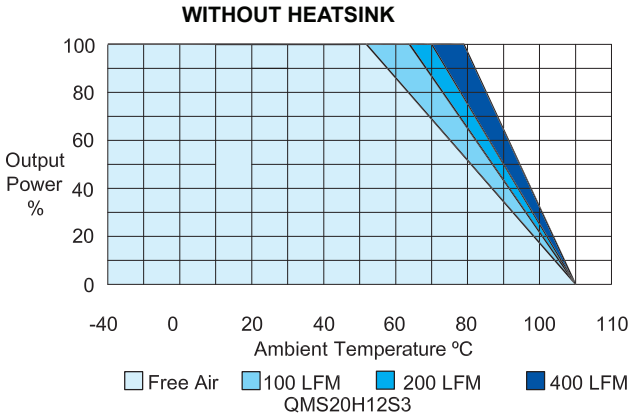
Notes:

- Specifications typical at Ta=+25°C, resistive load, nominal input voltage, full rated output current unless otherwise noted.
- Ripple & Noise measurement bandwidth is 20MHz.
- Transient recovery time is measured to within 1% error band for a step change in output load 75% to 100%.
- Water washability - ConTech DC/DC converters are designed to withstand most solder/wash processes. Careful attention should be used when assessing the applicability in your specific manufacturing process. Converters are not hermetically sealed.
- See ConTech website for Definition of Terms, Application Notes, and Test Setups and Parameters. www.ConTech-us.com/appnotes.html.
- Specifications subject to change without notice.
- Output voltage trimming must use resistive components only. Applying external voltage to the trim pin can damage unit.
- See ConTech website www.ConTech-us.com/pdf/rohs.pdf for RoHS Statement.

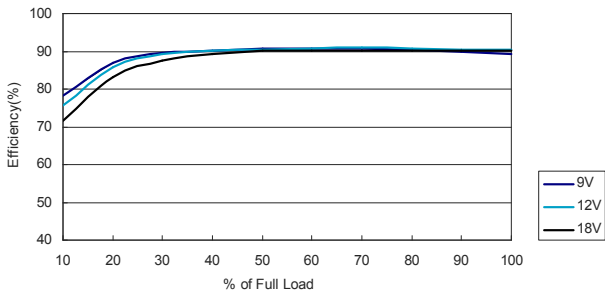


Derating Curves

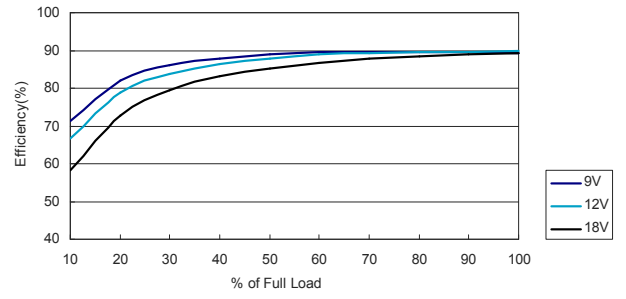
To avoid exceeding the maximum temperature rating of the components inside the power module, the case temperature must be kept below 105°C.



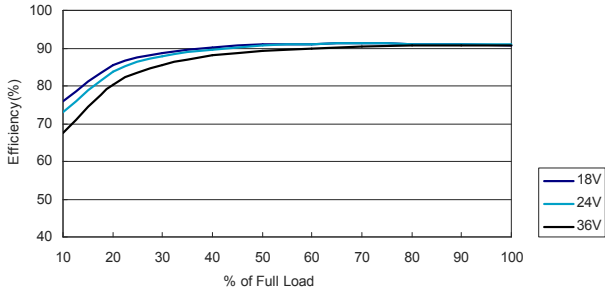
Efficiency Curves - Typical



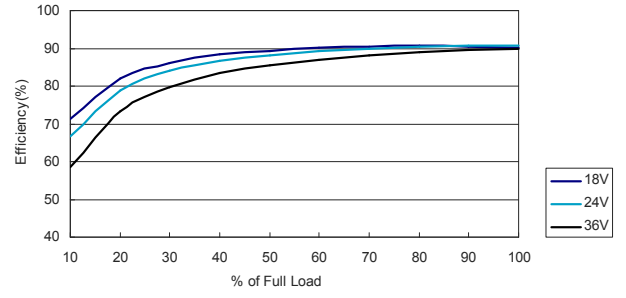
QMS25H12S5



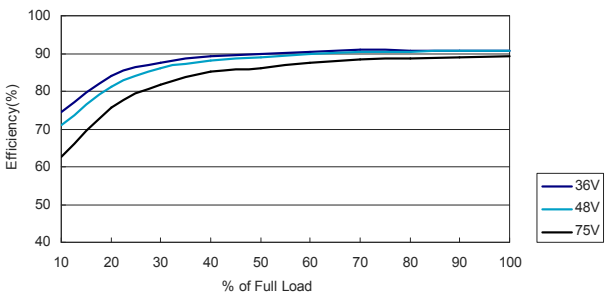
QMS25H12D12



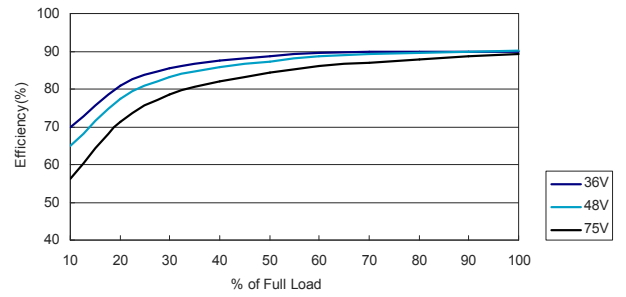
QMS25H24S5



QMS25H24D12



QMS25H48S5



QMS25H48D12

