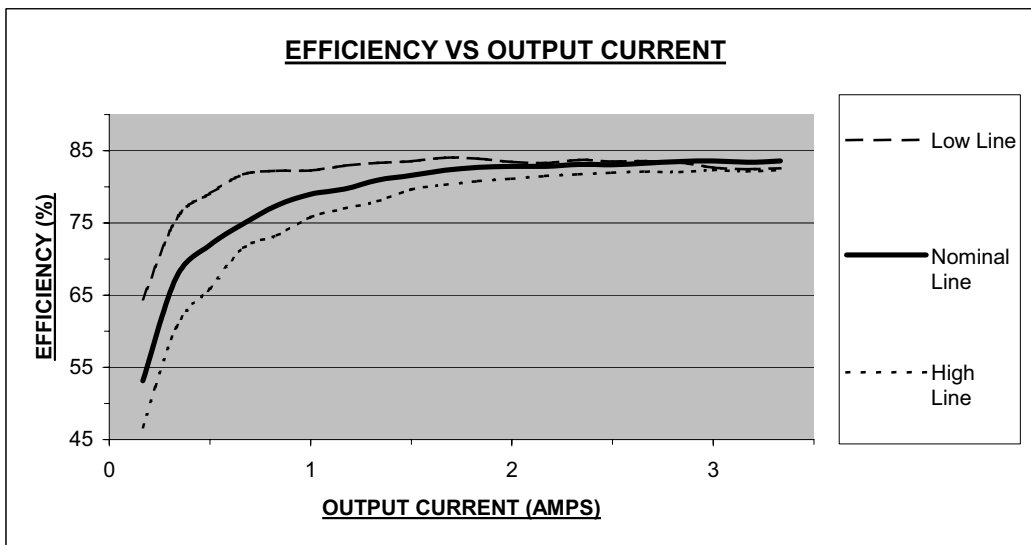
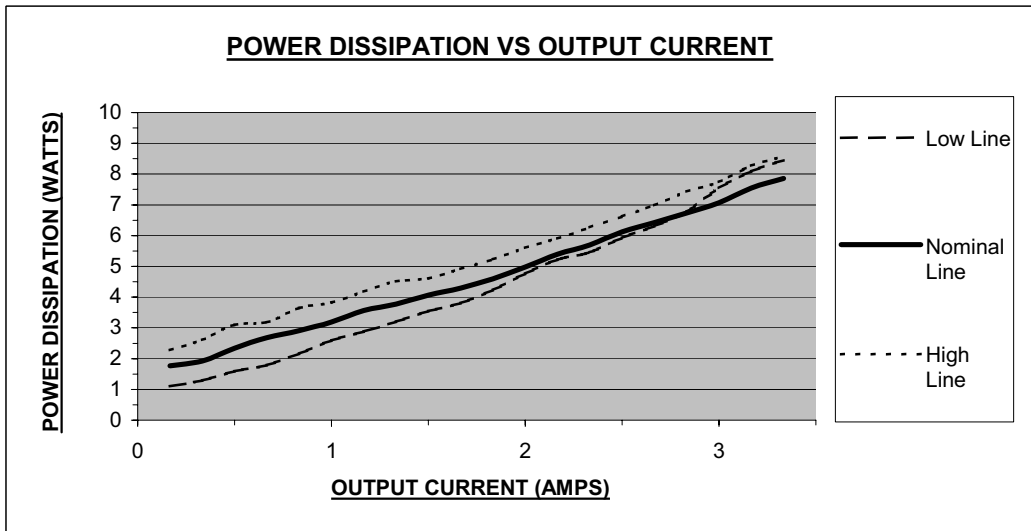
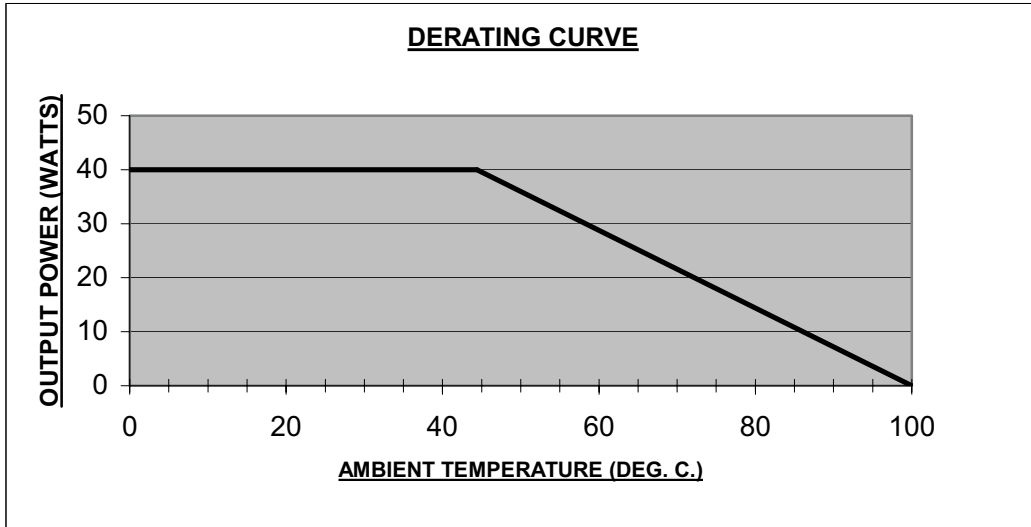


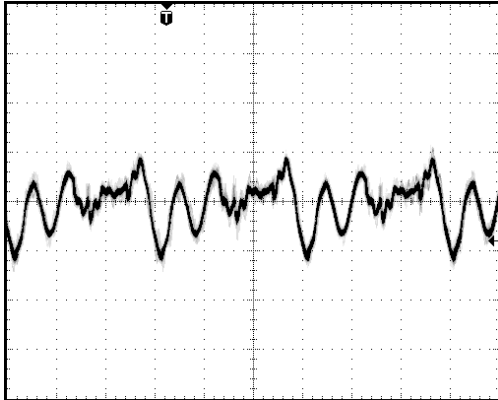


Wall Industries, Inc.

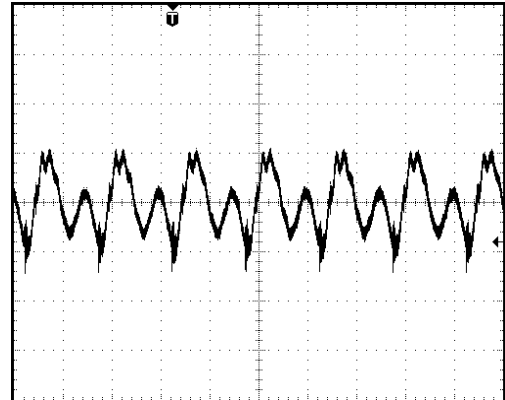
APPLICATION NOTES
QAW SERIES

Technical Specifications		Model No.		QAW48S12-40			
All specifications are based on 25C, Nominal Line and Full Load unless otherwise noted. We reserve the right to change specifications based on technological advances.							
SPECIFICATION		Related condition		MIN	NOM	MAX	Unit Measured
INPUT							
Turn on at					16.5		Volt DC
Turn off at					15.6		Volt DC
Input Over voltage Shutdown							
Turn off at					77.6		Volt DC
Turn on at					76		Volt DC
Operating Voltage Range		Rated Input Voltage		18	48	75	Volt DC
Maximum Input Current		Low Line 100% load			2.7		A
No Load Input Current					25		mA
Input Current under "LOGIC OFF"					5		mA
Inrush Current Transient Rating					1		A ² Sec
Reflected Ripple Current		20 MHz w/low source impedance			1060		mA
OUTPUT							
Output Voltage Set point				11.88	12	12.12	Volt DC
Output Voltage Regulation							
Over Load					± 0.5		%
Over Line					± 0.5		%
Over Temperature					0.02		% / °C
Output Voltage Ripple and Noise							
Basic Ripple					60	100	mV
Spikes P-P					70	100	mV
Output Current Ranges		Rated Output Current		0.333		3.333	A
Output Current Limit		Self Resetting		4.333	5	5.667	A
Short Term Output Current Surge							A/sec
DYNAMIC CHARACTERISTICS							
Input Voltage Ripple Rejection		120 Hz			60		dB
Output Transient and Load Changes							
Load step / Δ V		X	50 to 75%		50 to 100%	60	mV
Load step / Δ V		X	75 to 50%		100 to 50 %	50	mV
Recovery Time		To within 1% Rated Vo			150		μsec
Turn on Delay		From Vin(nom) to 90% Vout (nom)			47		msec
Overshoot of Output Voltage		Full Load Resistive			0		%
EFFICIENCY							
@ 100% load					84		%
@ 75% load					83		%
@ 50% load					82		%
@ 25% load					77		%
TEMPERATURE CONSIDERATIONS							
Thermal Resistance							
Normal Convection		R0c-a			6.72		°C/Watt
100 lfm							°C/Watt
200 lfm							°C/Watt
300 lfm							°C/Watt
400 lfm							°C/Watt
Heatsink Considerations		Available, Contact Factory					
General Technical Data							
Switching Frequency		Fixed			320		KHz
Remote ON OFF Control		Active HIGH, Open Collector					TTL
Trimmability				11.4		12.6	Volt DC
Over Temperature Shutdown		Case Temperature				105	°C
MTBF							
		Bellcore TR-332			3.51E6		Hours

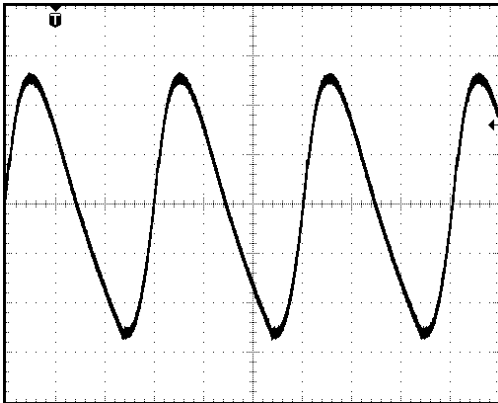




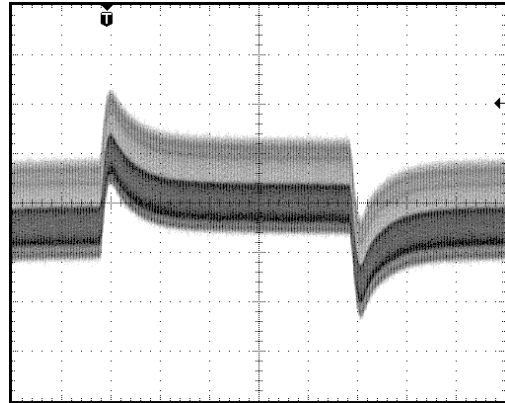
TYPICAL OUTPUT RIPPLE
 50mV/div, 2 μ S/div, full load, 18Vin
 0.1 μ F decoupling cap at room temp



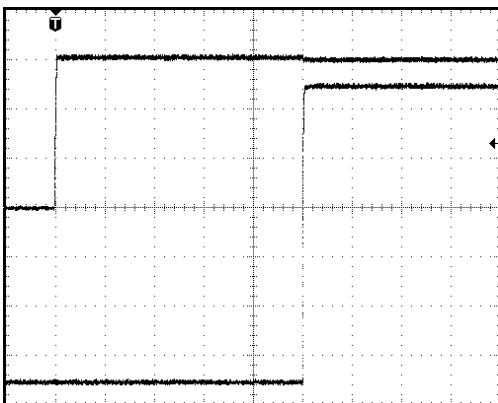
TYPICAL OUTPUT RIPPLE
 50mV/div, 2 μ S/div, full load 75Vin
 0.1 μ F decoupling cap at room temp



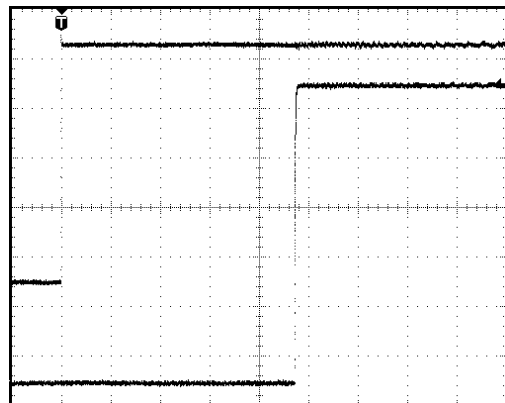
TYPICAL INPUT RIPPLE CURRENT
 200mA/div, 1 μ S/div, full load 48Vin at
 room temp with a low source impedance



TYPICAL TRANSIENT RESPONSE
 50mV/div, 200 μ S/div, 50% full load
 to 75% full load 48Vin room temp



TYPICAL RISE TIME & TURN-ON DELAY
 USING LOGIC ENABLE
 2V/div, 100mS/div (Vout), 2V/div 100mS/div (logic
 enable) 18Vin, full load at room temp



TYPICAL RISE TIME & TURN-ON DELAY
 WITH Vin 0-48V
 2V/div, 100mS/div (Vout), 10V/div, 100mS/div (Vin)
 at room temp