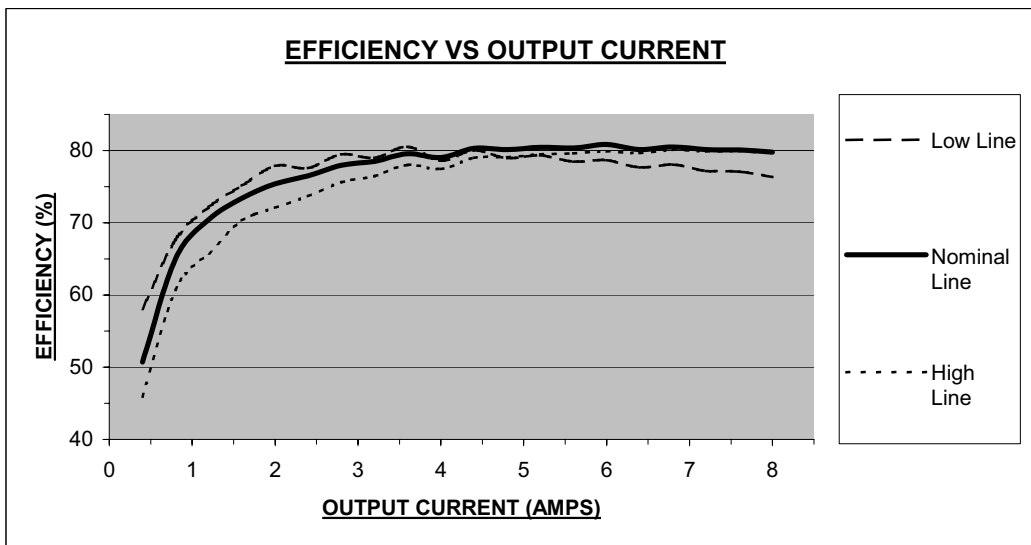
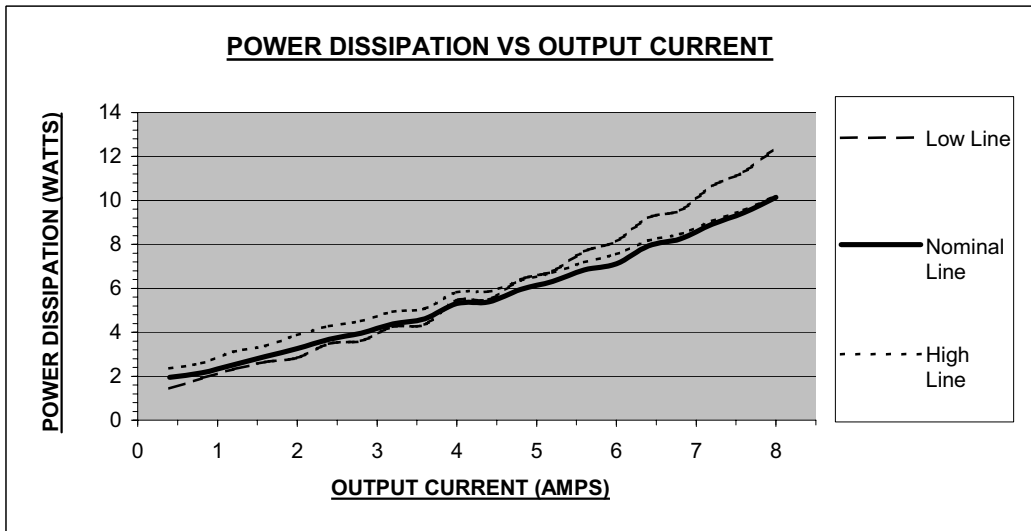
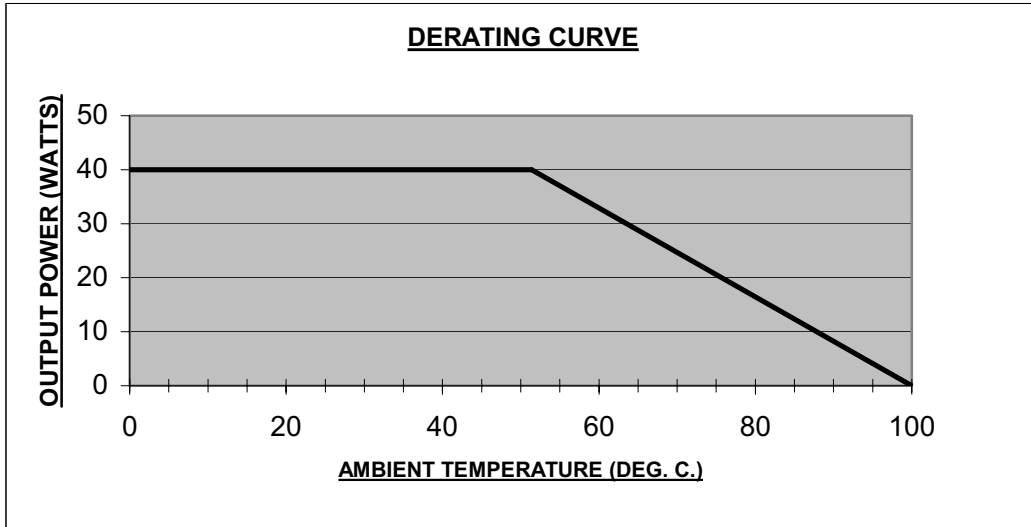


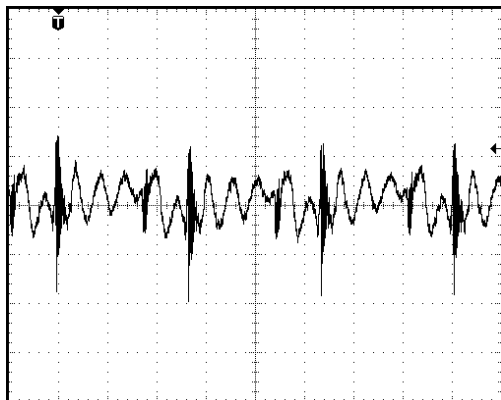


Wall Industries, Inc.

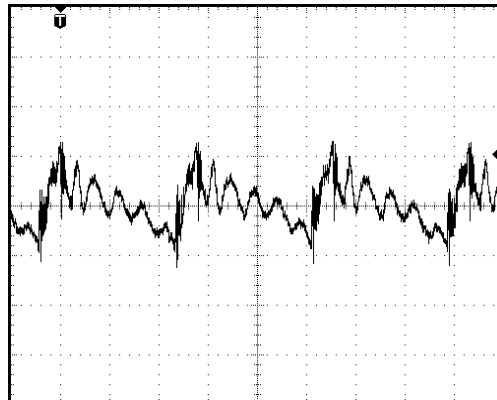
**APPLICATION NOTES**  
QAW SERIES

Technical Specifications		Model No.		QAW24D5-40			
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
<b>INPUT</b>							
Turn on at					8.8		Volt DC
Turn off at					8.8		Volt DC
Input Over voltage Shutdown							
Turn off at					39		Volt DC
Turn on at					38		Volt DC
Operating Voltage Range		Rated Input Voltage		9	24	36	Volt DC
Maximum Input Current		Low Line 100% load			5.8		A
No Load Input Current					30		mA
Input Current under "LOGIC OFF"					<1		mA
Inrush Current Transient Rating					1		A <sup>2</sup> Sec
Reflected Ripple Current		20 MHz w/low source impedance			1080		mA
<b>OUTPUT</b>							
Output Voltage Set point				±4.9	±5	±5.1	Volt DC
Output Voltage Regulation							
Over Load		with balanced loads			± 1		%
Over Line					± 1		%
Over Temperature					0.02		% / °C
Output Voltage Ripple and Noise							
Basic Ripple					15	100	mV
Spikes P-P					25	100	mV
Output Current Ranges		Rated Output Current		±0.4		±4	A
Output Current Limit		Self Resetting		±5.2	±6	±6.8	A
Short Term Output Current Surge							A/sec
<b>DYNAMIC CHARACTERISTICS</b>							
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 %	60	mV
Recovery Time		To within 1% Rated Vo			220		μsec
Turn on Delay		From Vin(nom) to 90% Vout (nom)			220		msec
Overshoot of Output Voltage		Full Load Resistive			0		%
<b>EFFICIENCY</b>							
@ 100% load					80		%
@ 75% load					81		%
@ 50% load					79		%
@ 25% load					75		%
<b>TEMPERATURE CONSIDERATIONS</b>							
Thermal Resistance							
Normal Convection		R0c-a			4.81		°C/Watt
100 lfm							°C/Watt
200 lfm							°C/Watt
300 lfm							°C/Watt
400 lfm							°C/Watt
Heatsink Considerations		Available, Contact Factory					
<b>General Technical Data</b>							
Switching Frequency		Fixed			360		KHz
Remote ON OFF Control		Active HIGH, Open Collector					TTL
Trimmability				±4.75		±5.25	Volt DC
Over Temperature Shutdown		Case Temperature				105	°C
<b>MTBF</b>							
		Bellcore TR-332			3.51E6		Hours

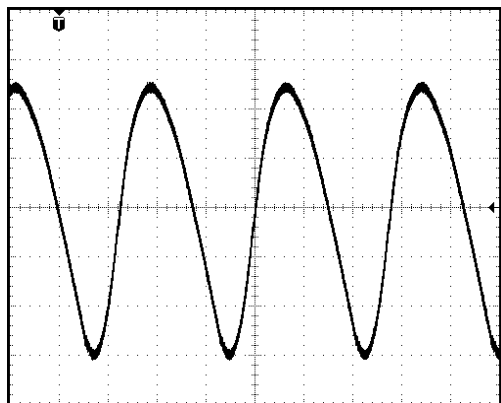




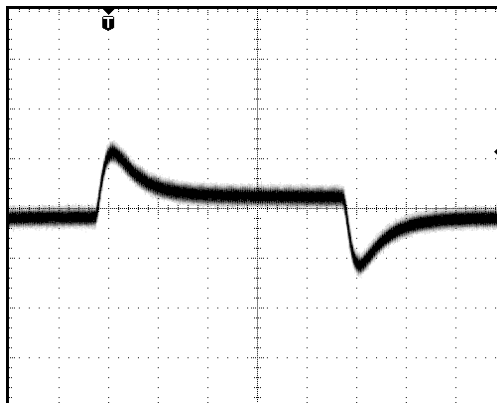
TYPICAL OUTPUT RIPPLE  
 10mV/div, 1uS/div, full load, 9Vin  
 0.1uF decoupling cap at room temp  
 measured at positive output (+Vout)



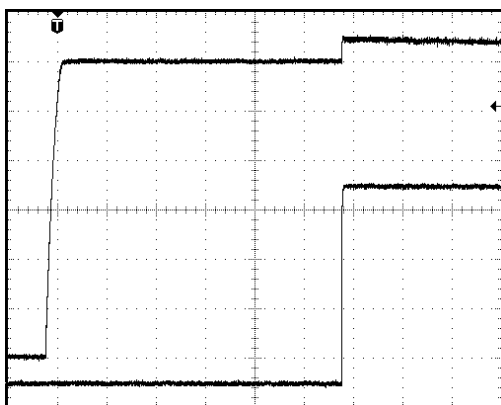
TYPICAL OUTPUT RIPPLE  
 10mV/div, 1uS/div, full load 36Vin  
 0.1uF decoupling cap at room temp  
 measured at positive output (+Vout)



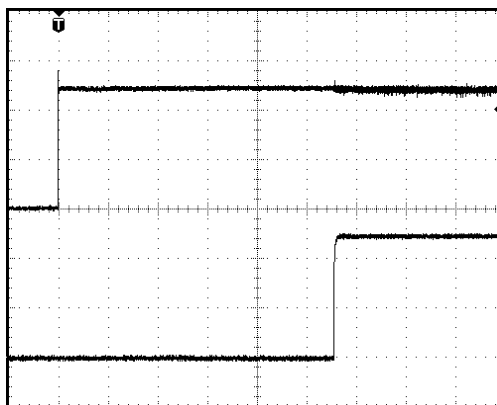
TYPICAL INPUT RIPPLE CURRENT  
 200mA/div, 1uS/div, full load 24Vin at  
 room temp with a low source impedance



TYPICAL TRANSIENT RESPONSE  
 50mV/div, 200uS/div, 50% full load  
 to 75% full load 24Vin room temp  
 measured across both outputs (+Vout to -Vout)



TYPICAL RISE TIME & TURN-ON DELAY  
 USING LOGIC ENABLE  
 2V/div, 40mS/div (Vout), 2V/div 40mS/div (logic  
 enable) 9Vin, full load at room temp



TYPICAL RISE TIME & TURN-ON DELAY  
 WITH Vin 0-24V  
 2V/div, 40mS/div (Vout), 10V/div, 40mS/div (Vin)  
 at room temp