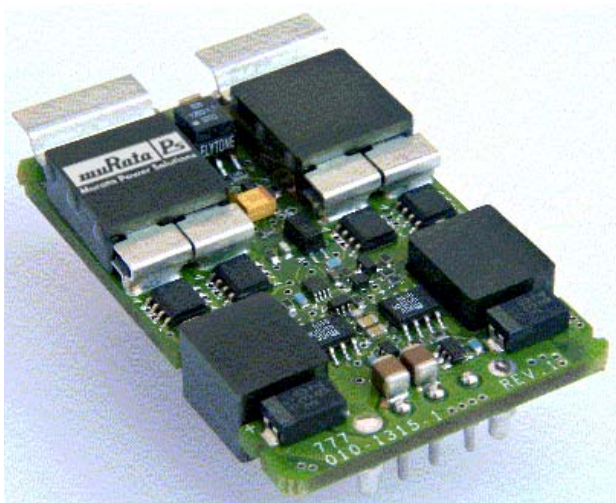




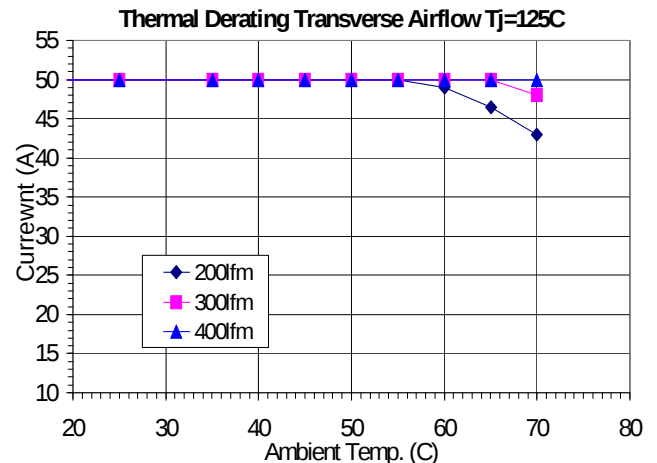
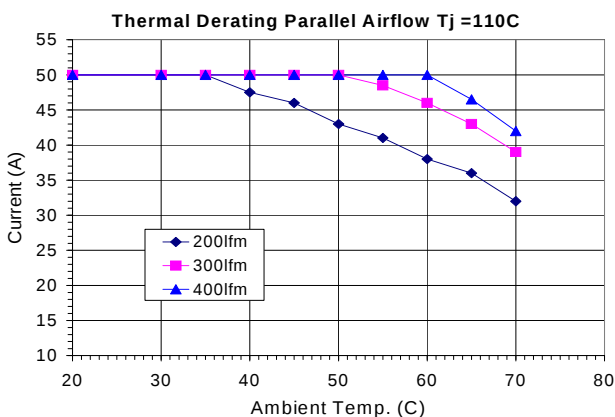
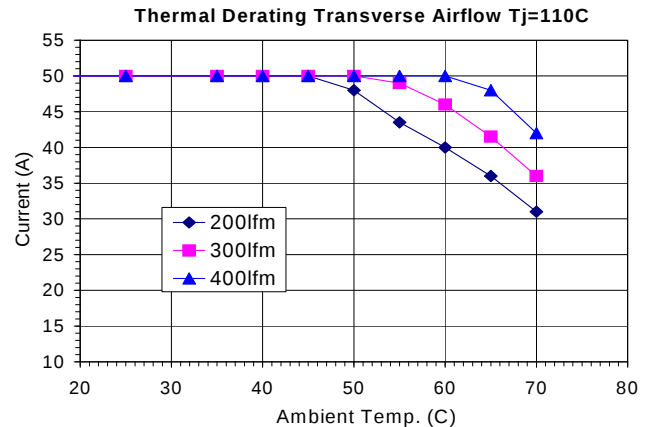
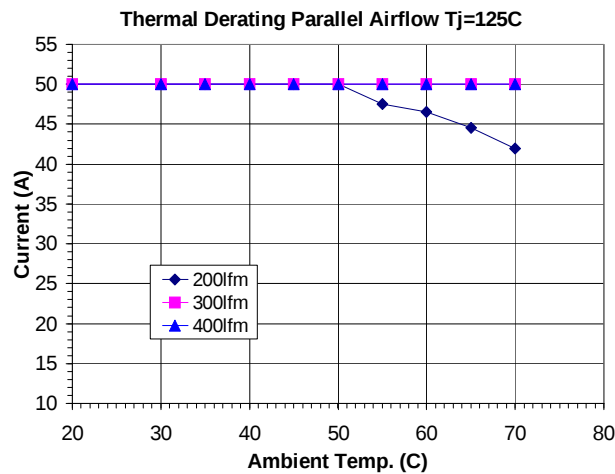
Model		1.8V	Units
Parameter			
Output Voltage Setpoint		1.78 – 1.82	Vdc
Line/Load Regulation	Max	0.1%, 0.2%	% Vo
Output total regulation		1.75 – 1.85	Vdc
Output adjust		90-110	%Vo,nom
Remote-sense Comp.		+10	%Vo,nom
Output Ripple & Noise (note 2)	Max	100	mVp-p
Output Current	Min	0.5	A
	Max	50	A
Efficiency (48V, Full load, 25C)	Typ	88%	%
External Capacitance	Max	10,000	μF
Transient Response (typ) (note3)	ΔVo	150	mV
	Ts	300	μs
Over-voltage trip point – static		2.1 - 2.3	V
	- dynamic	max 2.6	
Over-current trip point	Typ	57	A

All specifications at Ta=25C, Vin=48V, 300 LFM unless otherwise specified



For full details go to
www.murata-ps.com/rohs

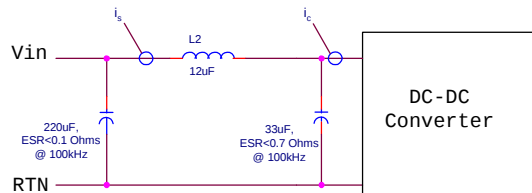
Parameter	Conditions	Min.	Typ.	Max.	Units	
Input	Input Voltage (Vin)	36	48	75	Vdc	
	Reflected Ripple Current (see note 1)	--	--	10	mA p-p	
	Input Current			3	A	
	Inrush Transient			0.2	A ² s	
	Input Voltage Transient	100mS 10% duty cycle		100	V	
	Undervoltage Lockout	Turn-on	32	35	Vdc	
		Turn-off	31	34	Vdc	
	Over-voltage lockout	Turn-off	76	80	Vdc	
		Turn-on	75	79	Vdc	
Isolation	Input-Output	1500			Vdc	
	Resistance; input-output	10			Mohm	
Temperature	Operating Ambient	-40	--	85	°C	
	Storage	-40	--	125	°C	
Protection	Over-Temperature	Measured on PCB	--	120	--	Deg C
Physical Information	Dimensions	2.28"L x 1.45" W x 0.47"H (57.91 x 36.83 x 11.8 mm)				
MTBF(Bellcore)	Calculated at 40C ambient, 100% Iomax:	1,000,000 Hrs				
Safety	Complies with IEC/EN/CSA/UL 60950, provides basic insulation, input to output. c-UL-us (US and Canada) recognized. TUV (Bauart) approved.					





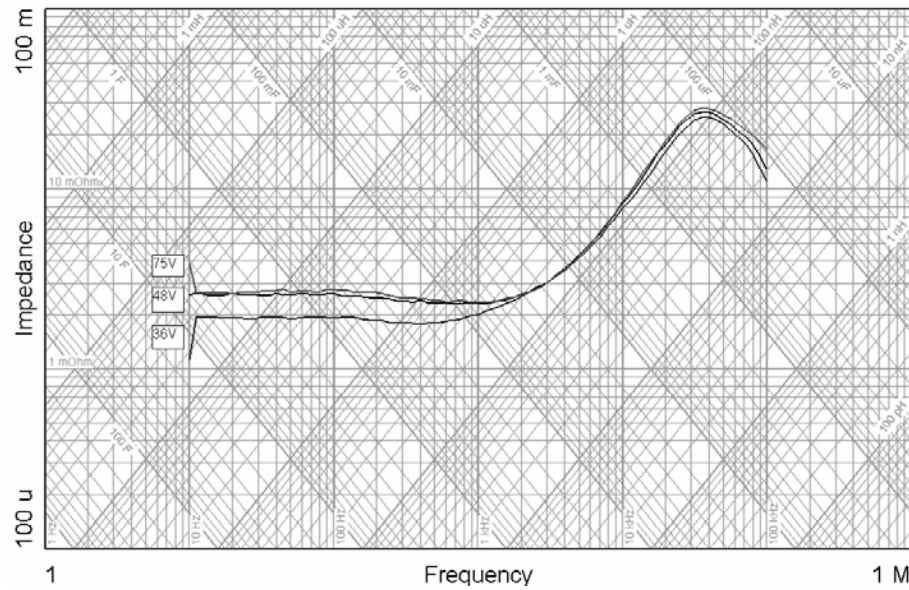
Pin #	Description	Pin #	Description	Pin #	Description
1	Vin (+)	4	Vout(-)	7	Sense +
2	Enable	5	Sense -	8	Vo (+)
3	Vin(-)	6	Vo adj		

1. Input Reflected Ripple is specified when measured with the filter shown below.

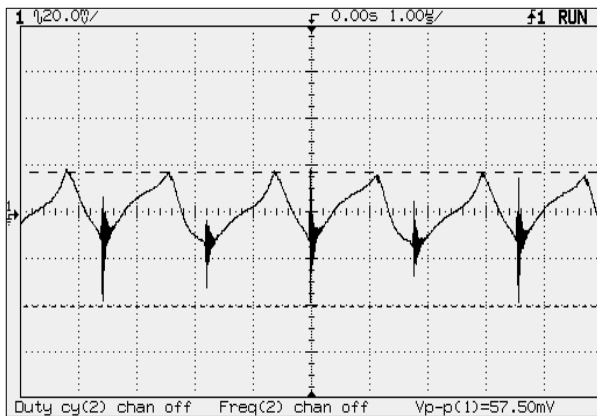


2. Output Ripple and noise is specified when measured with a 10uF tantalum and a 1uF ceramic capacitor at the converter output pins.
3. Transient response is specified without a capacitor at the output of the converter.
4. The Enable signal is Logic Low. It is referenced to Vi-. The pin should be tied to Vi- if it is not used. Isink = 1mA max, Voff = 15V max.

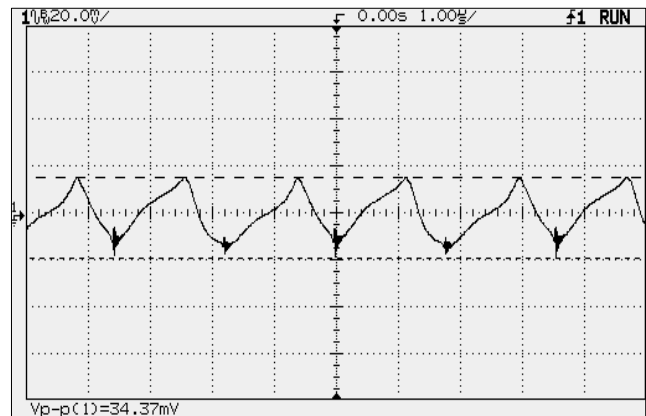
QHS50-018 Output Impedance



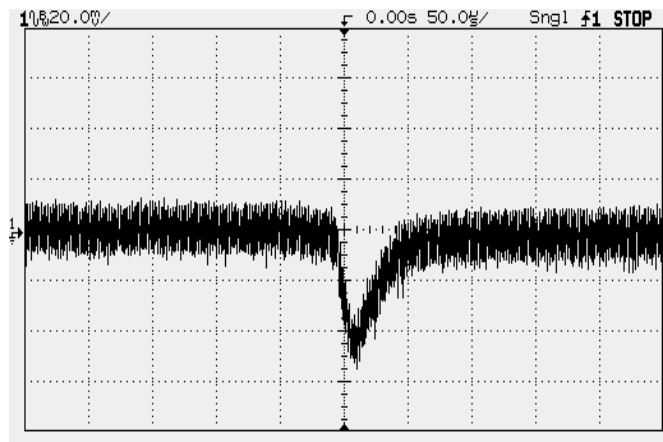
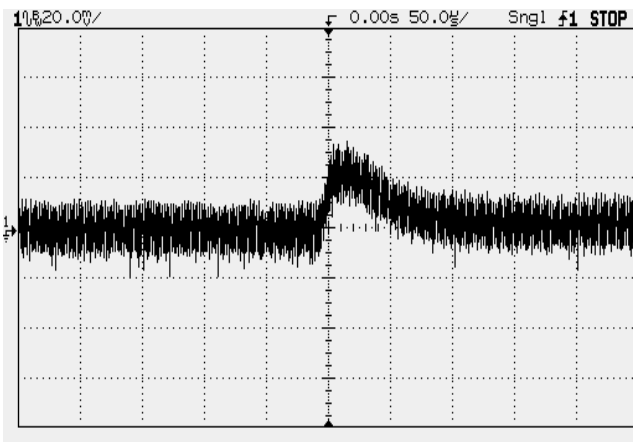
Output Ripple and Noise (Vin=48V, Io=50A, full BW)

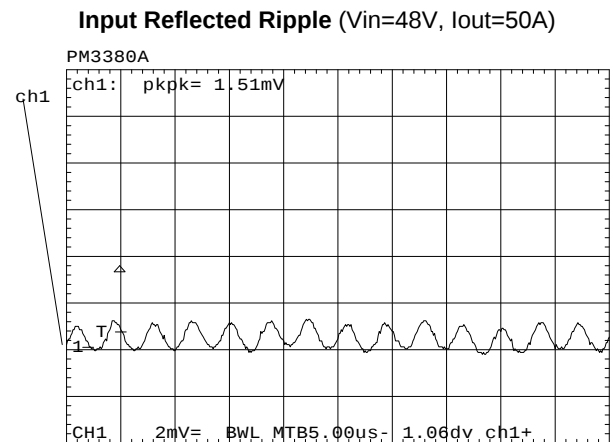
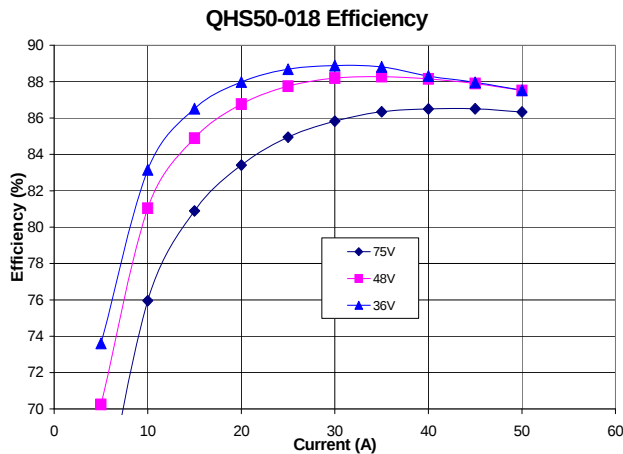


Output Ripple and Noise (Vin=48V, Io=50A, 20Mz BW)



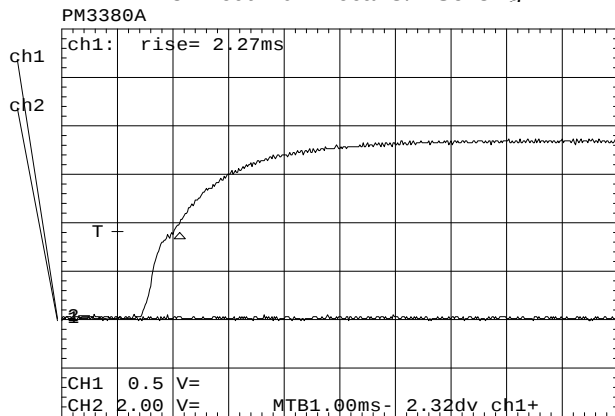
Output Voltage Response to Step Load (50-75% load step, di/dt = 1A/us, Tamb=25C, Vin=48V)



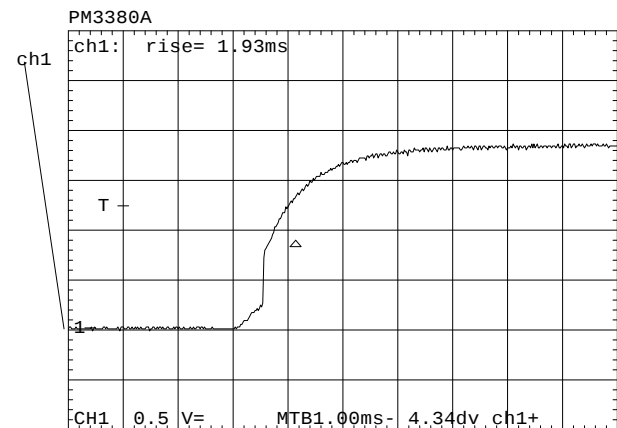


Startup Characteristics

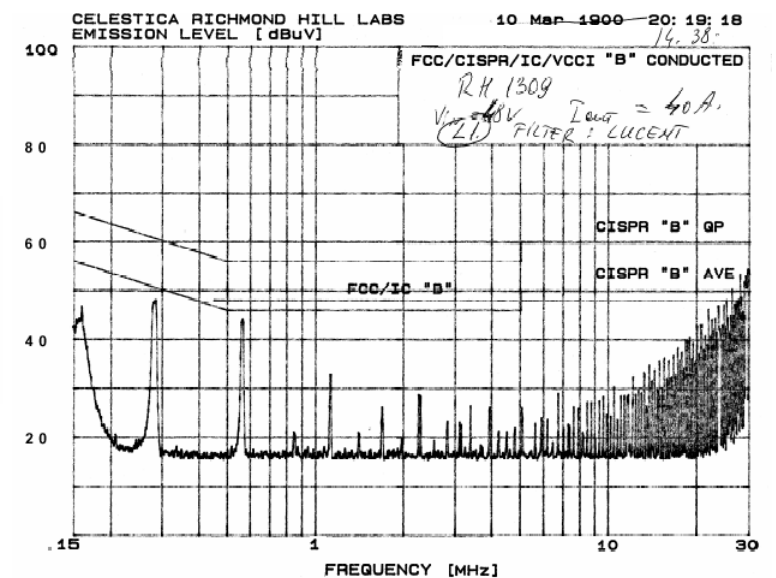
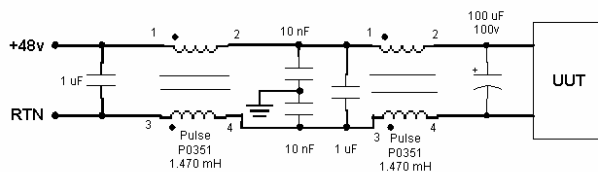
Vin = 48V Iout = 0A Local O/P Sensing



Vin = 48V Iout = 50A Local O/P Sensing



Conducted EMI Characteristic with external filter as specified



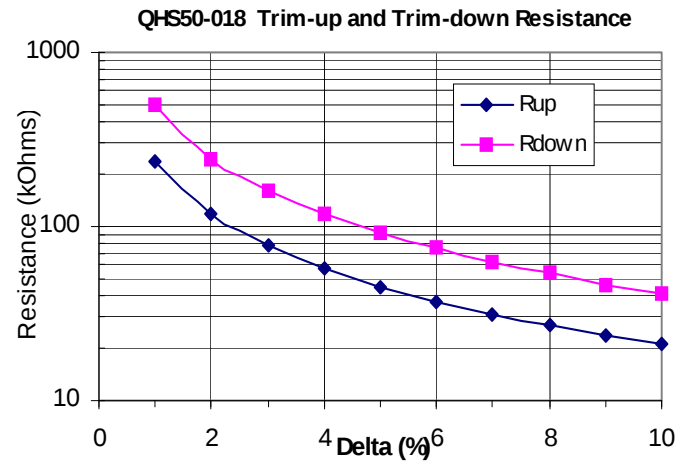
$$R_{up}(V_{nom}, \Delta\%) := \left[5.11 \cdot V_{nom} \cdot \frac{(100 + \Delta\%)}{1.225 \cdot \Delta\%} \right] - \left(\frac{511}{\Delta\%} \right) - 10.22$$

$$R_{dwn}(\Delta\%) := \frac{511}{\Delta\%} - 10.22$$

$$\Delta\% = \left\lceil 100 \times (V_o - V_{nom}) / V_{nom} \right\rceil$$

V_o : target output voltage

V_{nom} : nominal output voltage



Safety considerations

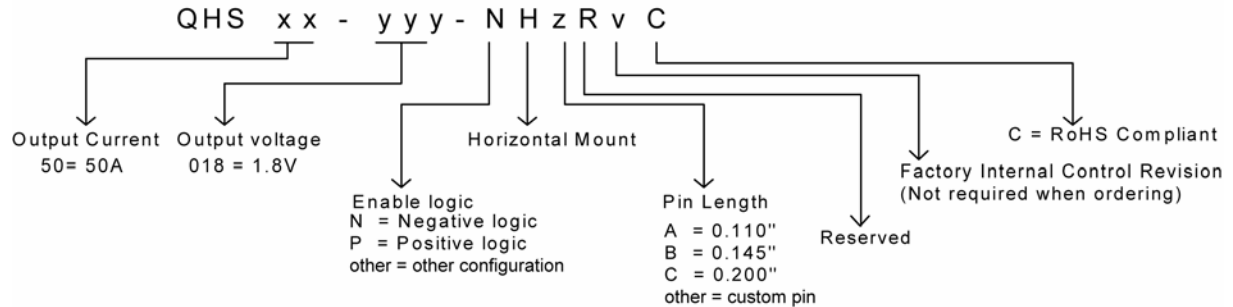
The QHS series of converters are certified to IEC/EN/CSA/UL 60950. If this product is built into information technology equipment, the installation must comply with the above standard.

An external input fuse (5A to 30A recommended), must be used to meet the above requirements.

The output of the converter [$V_o(+)/V_o(-)$] is considered to remain within SELV limits when the input to the converter meets SELV or TNV-2 requirements.

The converters and materials meet UL 94V-0 flammability ratings.

Part Number Designations



RoHS Compliant

The QHS50-018 series of converters is in compliance with the European Union Directive 2002/95/EC (RoHS) with respect to the following substances: lead (Pb), mercury (Hg), cadmium (Cd), hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE).

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