



**200 Watt, Wide Input
DC/DC Converters
Series DV200Q2**



Features

- 200 Watt Isolated Output
- Regulated Outputs
- 2 : 1 Wide Input Range
- Isolation I/O 2250Vdc
- Fixed Switching Frequency
- Remote ON/OFF
- Shock & Vibration Meet MIL-STD-810F
- Safety Meet UL62368-1 2nd (Functional Insulation)
- Quarter Brick Size Meet Industrial Standard 57,9 x 36,8 x 12,7 (mm)
- Efficiency to 92%
- Continuous Short Circuit Protection
- Protection OVT/OCP/OVP/UVLO
- Operating Case Temperature -40 to +105°C
- Low No Load Power Consumption
- Fire & Smoke Meet EN45545-2
- 3000m Operating Altitude

MODEL NUMBER	INPUT VOLTAGE [VDC]	OUTPUT VOLTAGE [VDC]	OUTPUT CURRENT [A] MAX.	INPUT CURRENT NO LOAD [mA]	INPUT CURRENT FULL LOAD [A]	EFF. [%] (Note 2)	CAP. LOAD Max. [μF]	CASE
DV200Q2-24S24	18 – 36	24	8,33	10	9,1	91	6600	Q
DV200Q2-24S48		28	7,14	10	9,1	92	5400	

NOTE:

1. Nominal Input Voltage 24 VDC.
2. An External Input Capacitor 220uF KY 47mΩ max. for All Models are Recommended to Reduce Input Ripple Voltage
3. Example **DV200Q2-24S24N-C**
200Watt, Q: Quarter Brick, 2: Input: 2:1, 24: 18-36Vdc, S: Output Single 24Vdc, N: Negative Logic, -C: Clear Mounting Insert
4. All Specifications Typical At Nominal Line, Full Load, and 25°C Unless Otherwise Noted.

INPUT SPECIFICATIONS:

Input Voltage Range.....	24V	18-36Vdc
Input Surge Voltage.....	100ms max	50Vdc max.
Input Under Voltage Lockout	Turn-On Voltage Threshold	16,5V min / 17,5V max.
	Turn-Off Voltage Threshold	15,5V min. / 16,5V max.
Maximum Input Current.....	Vin=18V, Full Load	14A typ.
Inrush Current.....		0,1 A ² s max.
Input Reflected Ripple Current... P-P thru 12uH inductor, 5Hz to 20MHz		60mA typ.
Input Filter		PI Type
Positive Logic Remote On/Off, Refer to -Vin pin.		
Logic Low (Module Off)	Von/off at Ion/off=1.0mA	0 to 1.2Vdc
Logic High (Module On)	Von/off at Ion/off=0.0uA, Pin open=On	3,5 to 75Vdc
Suffix "N" to the model number with negative logic Remote On/Off		
Logic Low (Module Off)	Von/off at Ion/off=0.0uA, Pin open=Off	3,5 to 75Vdc
Logic High (Module On)	Von/off at Ion/off=1.0mA	0 to 1.2Vdc
On/Off Current (for both remote on/off logic).....	Ion/off at Von/off=0V	1 mA max.
Leakage Current (both remote on/off logic).....	Logic High, Von/off=15V	30 uA
Off Converter Input Current	Shutdown input idle current	10 mA max.

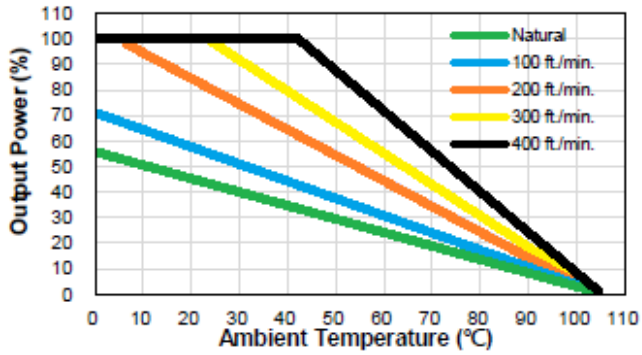
OUTPUT SPECIFICATION:

Voltage Set Point Accuracy	Vin=24V, Full Load	±1,0%max.
Output Current Min.		0 mA min.
Line Regulation.....	Vin High Line to Low Line, Full Load	±0,2% max.
Load Regulation	Full Load to No Load	±0,2% max.
Temperature Coefficient.....		±0,02%/°C max.
Ripple and Noise (5Hz to 20 MHz BW), Full load, 10uF tantalum capacitor and 1uF ceramic capacitors		
	Vo 24V & 28V	100mV RMS / 240mV pk-pk max.
Over Current Protection	Hiccup Mode, Auto Recovery	110%-150%
Short Circuit Protection		Continuous, Auto Recovery
External Trim Adj. Range.....	Po ≤ max rated power, Io ≤ Io_max	-10% min, +10% max.
Voltage Remote Sense	Po ≤ max power, Io ≤ Io_max % of Nominal Vo	+10% max.
Over Voltage Protection	Limited Voltage, % Vo Nominal Vo	115-140%
Output Voltage Current Transient: 75% to 100% Step Load Change (within 1% Vout nominal)		
Error Band		±5% max.
Recovery Time		250µ sec. max.
Output Voltage Rise Time	10%Vo_set to 90%Vo_set	15ms typ.
Start up Time	Remote ON	35ms typ.
	Power Up	30ms typ.

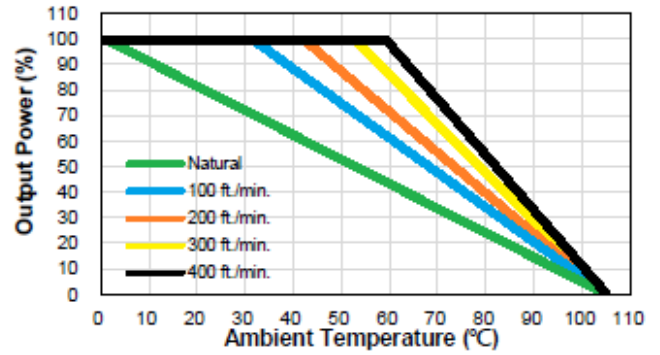
GENERAL SPECIFICATIONS:

Efficiency		See Table
Isolation Voltage (1 Minute)	Input/Output	2250 VDC max.
	Input/Case (Baseplate)	2250 VDC max.
	Output/Case (Baseplate)	2250 VDC max.
Isolation Resistance	Input/Output	100 MΩ min.
Isolation Capacitance	Input/Output	1500pF typ.
	Input to Case (Base Plate)	None
	Output to Case (Base Plate)	None
Switching Frequency		250 KHz typ.
Operating Case Temperature		-40°C to +105°C
Storage Temperature		-55°C to +125°C
Over Temperature Shutdown.....	Temp. at Center Part of Base Plate	110°C typ.
Over Temperature Recovery	Temp. at Center Part of Base Plate	100°C typ.
MTBF 25°C (MIL-HDBK-217F, GB, Full Load)	24V	730 Khours typ.
	28V	625 Khours typ.
Humidity		95% RH max. Non condensing
Altitude		3000m Operating Altitude, 12000m Transport Altitude
Thermal Shock		MIL-STD-810F
Fire & Smoke		Meet EN45545-2
Safety.....		Meets UL62368-1 2nd (Function Insulation)
EMI.....		Meets EN55032 Class A (with external filter)
Shock/Vibration		Meets MIL-STD-810F/EN61373
Dimensions		2.28x1.45x0.50 inches (57.9x36.8x12.7 mm)
Potting Material.....		UL 94-V0
Case Material		Aluminum Baseplate with Plastic Case, UL 94-V0
Weight.....		68g typ.

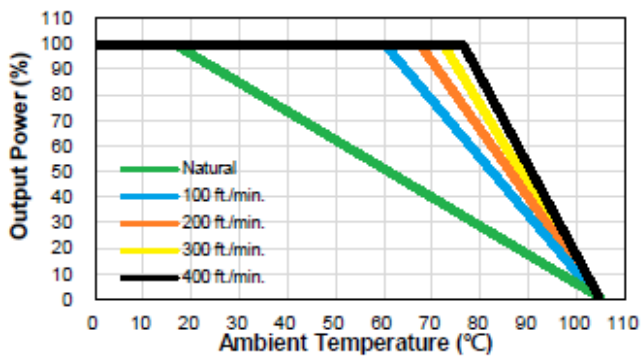
DV200Q2-24S24 Derating Curve
without Heatsink (Vin=24V)



DV200Q2-24S24 Derating Curve
with Heatsink KQ368127 (Vin=24V)

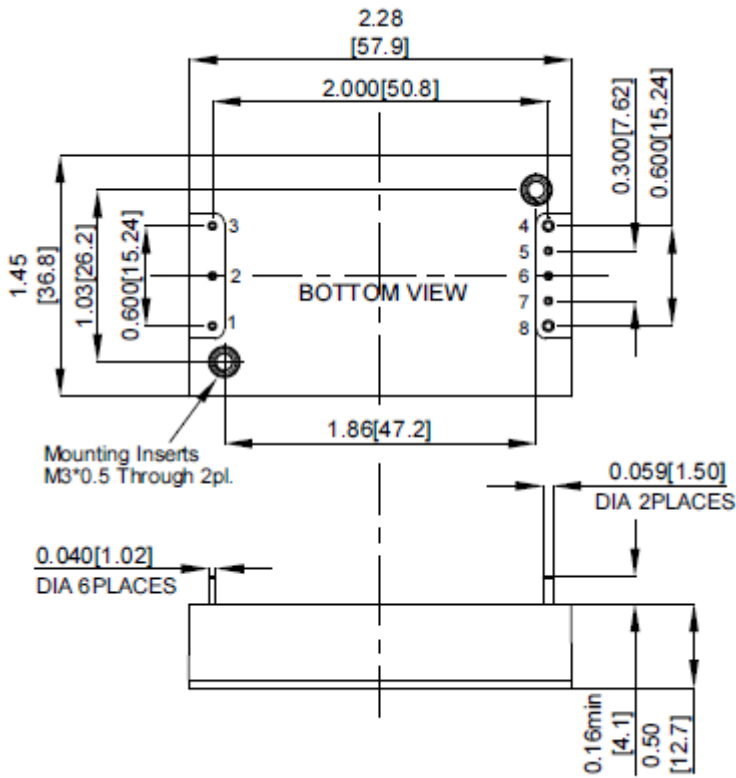


DV200Q2-24S24 Derating Curve
with Heatsink KQ580210 (Vin=24V)



All Dimensions in Inches (mm)

Tolerance Inches x.xx±0.02 x.xxx±0.010
 Millimeters x.x±0.5 x.xx±0.25

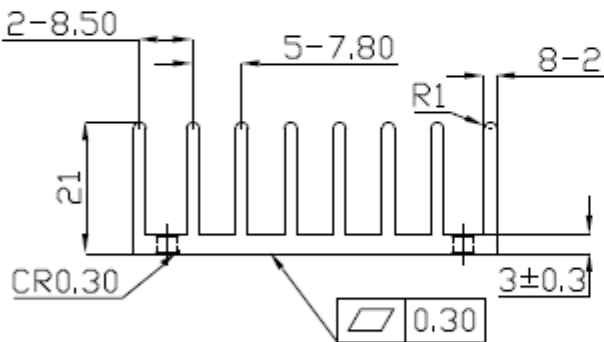
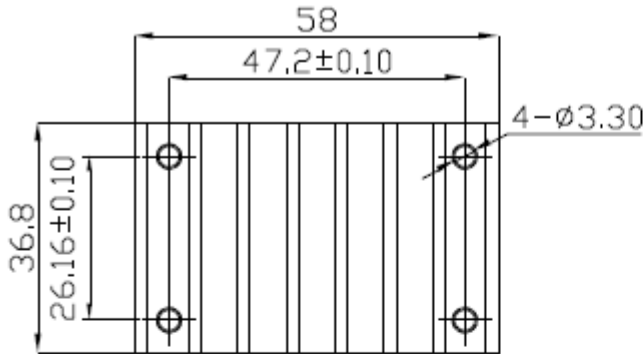


PIN CONNECTION	
Pin	Function
1	+V Input
2	On/Off
3	-V Input
4	-V Output
5	-Sense
6	Trim
7	+Sense
8	+V Output

CASE Q: HEAT SINK

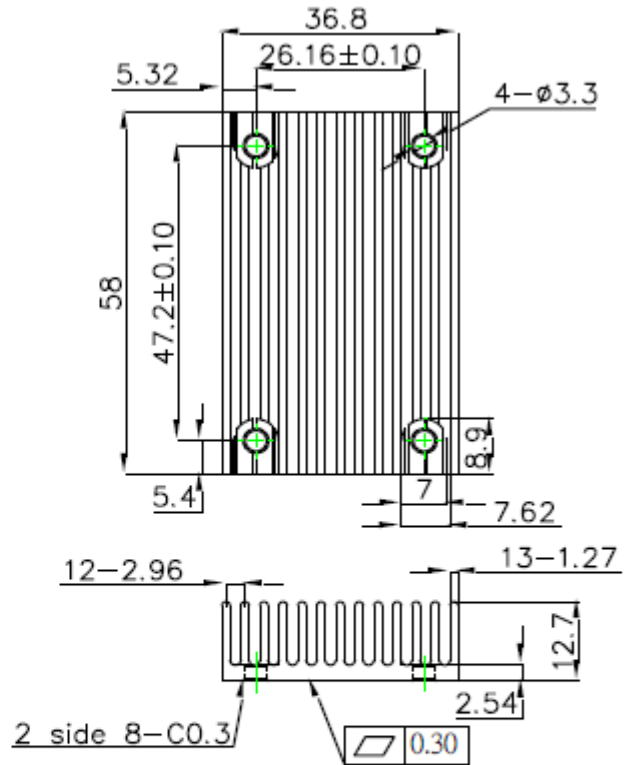
Order No. 17.079.206
 Model No. KQ580210
 all dimensions in mm

Order No. 17.079.209
 Model No. KQ368127



All Dimensions in mm
KQ580210
 Heat Sink

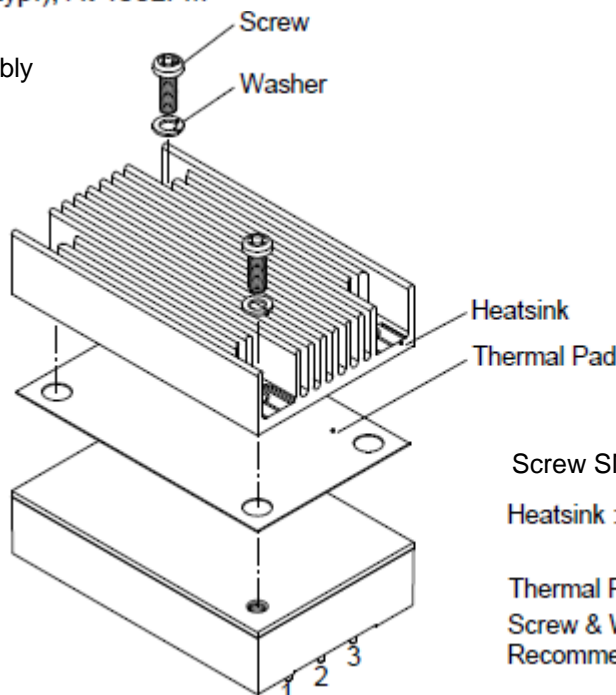
- Rca: 4.78°C/W (typ.), At natural convection
- 2.44°C/W (typ.), At 100LFM
- 2.06°C/W (typ.), At 200LFM
- 1.76°C/W (typ.), At 300LFM
- 1.58°C/W (typ.), At 400LFM



KQ368127
 Heat Sink

- Rca: 5.61°C/W (typ.), At natural convection
- 4.01°C/W (typ.), At 100LFM
- 3.39°C/W (typ.), At 200LFM
- 2.86°C/W (typ.), At 300LFM
- 2.49°C/W (typ.), At 400LFM

Heat Sink Assembly
 example



- Screw SMP+SW M3x8L
- Heatsink : KQ580210
 KQ368127
- Thermal Pad SZ35.8x56.9x0.25mm
- Screw & Washer
- Recommended torque 3 Kgf-cm