

# M8657 SERIES

THE MOST COMPLETE  
MINIATURE, HIGH DENSITY,  
FIVE OUTPUTS,  
DC/DC CONVERTERS  
(UP TO 125W)

## **APPLICATIONS**

Military, Ruggedized, Telecom, Industrial

## **SPECIAL FEATURES**

- Miniature size
- High efficiency
- Wide input range
- Input / Output isolation
- Fixed switching frequency (250 KHz)
- External synchronization capability
- TTL logic enable
- EMI/RFI filters included
- Indefinite short circuit protection with auto-recovery
- Over-voltage shutdown with auto-recovery
- Over temperature shutdown with auto-recovery

## **ENVIRONMENTAL**

Meets or exceeds MIL-STD-810D

Temperature:

Operating  $-55^{\circ}\text{C}$  to  $+90^{\circ}\text{C}$  (baseplate)

Storage  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$

## **RELIABILITY**

150,000 hours, calculated per  
MIL-STD-217F at  $+85^{\circ}\text{C}$  baseplate,  
ground fixed.



## **ELECTRICAL SPECIFICATIONS**

### **DC INPUT**

DC Input range: 18 to 70 VDC

Input transient protection:

All models meet or exceed (no damage)

MIL-STD-1275A (100V for 50 mSec) and

MIL-STD-704A, MIL-STD-704D (80V for 0.1 Sec)

Efficiency: up to 80%

EMI/RFI:

Meets or exceeds MIL-STD-461D

CE101, CE102, CS101, CS114, CS115,

CS116, RE101, RE102, RS101, RS103

Isolation:

200V between Input and Output

200V between Input and Case

### **DC OUTPUT (floating)**

Line/Load regulation:

Less than 1% (no load to full load,  $-55^{\circ}\text{C}$  to  $+90^{\circ}\text{C}$ )

Ripple and Noise: 50mVp-p, typical (max. 1%)

Current limiting (HickUp):

Continuous protection for unlimited time

Over voltage protection:

Passive tranzorb on outputs.

Over temperature protection:

Shutdown at baseplate temperature of  $+105^{\circ}\text{C}$  ( $\pm 5^{\circ}\text{C}$ )

Automatic recovery at baseplate temperature

lower than  $+95^{\circ}\text{C}$  ( $\pm 5^{\circ}\text{C}$ )

Isolation:

200V between Output and Input

100V between Output and Case

## SELECTION GUIDE

Model	Input	Regulation	Ripple (20 MHz BW)	
8657-1	18 to 70 VDC	± 1%	50 mVp-p	
Output #1	Output #2	Output #3	Output #4	Output #5
5V/8A	5V/2A	15V/1.25A	28V/1.5A	15V/1.25A

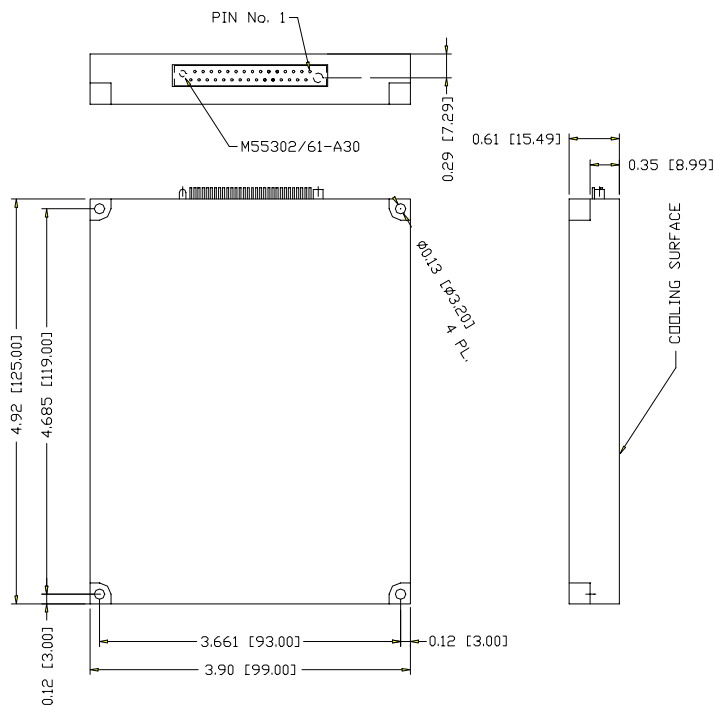
Note: other voltages and currents are available. consult factory

## PIN ASSIGNMENT

PIN No.	PIN Function	PIN No.	PIN Function	PIN No.	PIN Function
1	+ OUT 1	11	SYN	21	+ OUT 2
2	- OUT 1	12	- VIN	22	- OUT 2
3	+ OUT 5	13	- VIN	23	+ OUT 3
4	- OUT 5	14	+ VIN	24	- OUT 3
5	- OUT 4	15	+ VIN	25	INHIBIT
6	+ OUT 2	16	+ OUT 1	26	SIGNAL RTN *
7	- OUT 2	17	- OUT 1	27	- VIN
8	+ OUT 3	18	+ OUT 5	28	- VIN
9	- OUT 3	19	- OUT 5	29	+ VIN
10	N.C.	20	+ OUT 4	30	+ VIN

\* Signal RTN for the INHIBIT and the SYN signals.

## OUTLINE DRAWING



### Notes

1. Dimensions are in Inches [mm]
2. Tolerance is:  
.XX ±.02 IN  
.XXX ±.01 IN
3. Weight: 14 Oz (404 gr)
4. Add suffix SL to specify connector with guideset per M55302/57-A30X

\* Specifications are subject to change without prior notice by the manufacturer