

# M640 SERIES

HIGH DENSITY  
SIX 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 (250KHz)
- 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
- Internal temperature report

## **ENVIRONMENTAL**

Meets or exceeds MIL-STD-810D

Temperature:

Operating - 40°C to +55°C (baseplate)

Storage - 55°C to +125°C

## **RELIABILITY**

25'000 hours, calculated per MIL-STD-217F at +85°C baseplate, ground fixed.

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

## **ELECTRICAL SPECIFICATIONS**

### **DC INPUT**

DC input range: 13.5 to 22VDC

Input transient protection:

All models meet or exceed (consult factory) MIL-STD-1275A (100V for 50mSec) and MIL-STD-704A, MIL-STD-704D (80V for 0.1Sec)

Efficiency: up to 80%

EMI/RFI:

Design to meet or exceed MIL-STD-461D CE101, CE102, CS101, CS114, CS115, CS116, RE101, RE102, RS101, RS103 (for further information please consult factory)

Isolation:

50V between Input and Output

50V between Input and Case

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

Line /load regulation:

Less than 2% (no load to full load, - 40°C to +55°C)

Ripple and noise: 70mVp-p, typical (max. 2%)

Current limiting (Hiccup):

Continuous protection for unlimited time.

Over voltage protection:

Passive transzorb on outputs.

Over temperature protection:

Shutdown at baseplate temperature of +95°C (±5°C)

Automatic recovery at baseplate temperature lower than +85°C (±5°C)

Isolation:

50V between Output and Input

50V between Output and Case

## SELECTION GUIDE

Model	Input	SSP1 Connector			SSP2 Connector		
		Out#1	Out#2	Out#3	Out#4	Out#5	Out#6
M640	13.5 to 22VDC	3.31V/5A	2.51V/5A	1.51V/16A	3.31V/5A	2.51V/5A	1.51V/5A

Note: other voltages and currents are available, consult factory.

## PIN ASSIGNMENT (Input)

Pin No.	Pin Function	Pin No.	Pin Function
1	CHASSIS	11	SSP2 TEMP
2	SSP1 INHIBIT	12	15V VIN
3	SSP2 INHIBIT	13	SYN IN
4	LOGIC RTN	14	SSP1 TEMP
5	+VIN	15	+VIN
6	+VIN	16	+VIN
7	+VIN	17	+VIN
8	- VIN	18	- VIN
9	- VIN	19	- VIN
10	- VIN	20	- VIN

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

## PIN ASSIGNMENT (SSP1 OUTPUT)

Pin No.	Pin Function
A	SSP1 OUT 3
B	SSP1 RTN
C	SSP1 OUT 3
D	SSP1 OUT 3
E	SSP1 RTN
F	SSP1 OUT 3
H	SSP1 OUT 3
J	SSP1 RTN
K	SSP1 OUT 3
L	SSP1 RTN

Pin No.	Pin Function
M	SSP1 RTN
N	SSP1 RTN
P	SSP1 OUT 2
R	SSP1 RTN
S	SSP1 OUT 2
T	SSP1 OUT 1
U	SSP1 RTN
V	SSP1 OUT 1
W	SSP1 RTN
X	SSP1 RTN

## PIN ASSIGNMENT (SSP2 OUTPUT)

Pin No.	Pin Function
A	SSP2 RTN
B	SSP2 RTN
C	SSP2 RTN
D	SSP2 OUT 1
E	SSP2 RTN
F	SSP2 OUT 1
H	SSP2 OUT 2
J	SSP2 RTN
K	SSP2 OUT 2
L	SSP2 RTN

Pin No.	Pin Function
M	SSP2 RTN
N	SSP2 RTN
P	SSP2 OUT 3
R	SSP2 RTN
S	SSP2 OUT 3
T	SSP2 OUT 3
U	SSP2 RTN
V	SSP2 OUT 3
W	SSP2 OUT 3
X	SSP2 OUT 3

