UM1400 SERIES

5 &15 to 45 Watt DC-DC Converters

- **Ultra-Wide Input Range**
- **Power Density to 8 Watt/Cubic Inch**
- **Efficiency to 89%**
- **Six-Sided Shield**
- **Constant Switching Frequency 75KHz**
- **OVP on All Models**

SPECIFICATIONS:

All specifications are typical at nominal line, full load and 25°C unless otherwise noted.

INPUT SPECIFICATIONS

Input Voltage Range ..... See table
Input Filter C Case ..... Low ESR Cap.
EA Case ..... Low ESR Cap.
E Case ..... Pi Network
Voltage Reversal ..... Not Protected

OUTPUT SPECIFICATIONS

Voltage Accuracy, E/EA Case ..... ±1.0% max.
C Case ..... ±2.0% max.
External Trim Range ..... ±10.0%
Temperature Coefficient
E/EA Case ..... ±0.02%/°C max.
C Case ..... ±0.1%/°C max.
Short Circuit Protection
Output to Common ..... Continuous
Overvoltage Protection ..... All Models
Ripple/Noise, 20 MHz BW
E/EA Case ..... 60mV P-P, 15mV RMS, max.
C Case ..... 60mV P-P, 10mV RMS, max.
Line Regulation[1] ..... ±0.5% max.
Load Regulation[2],E/EA Case..... ±0.5% max.
C Case ..... ±1% max.

GENERAL SPECIFICATIONS

Efficiency ..... See Table
Isolation ..... not Galvanically Isolated.
Minus Input Connected Minus Output.
Switching Frequency, E/EA Case 75KHz
C Case 100KHz
Input Idle Current During Shutdown 10mA
Operating Temperature Range
Ambient, None Derating ..... -25°C to +71°C
Cooling ..... Free Air Convection
Storage Temperature Range ..... -55°C to +105°C
Dimensions, E Case ..... 2.56 x 3 x 0.83 inches
(65 x 76.2 x 21.1 mm)
EA Case ..... 2.56 x 3 x 0.4 inches
(65 x 76.2 x 10.2 mm)
C Case ..... 2 x 2 x 0.4 inches
(50.8 x 50.8 x 10.2 mm)
Case Material ..... Black-Coated Copper with
Non-Conductive Base.
Weight, E Case 260g
EA Case 120g
C Case 46g

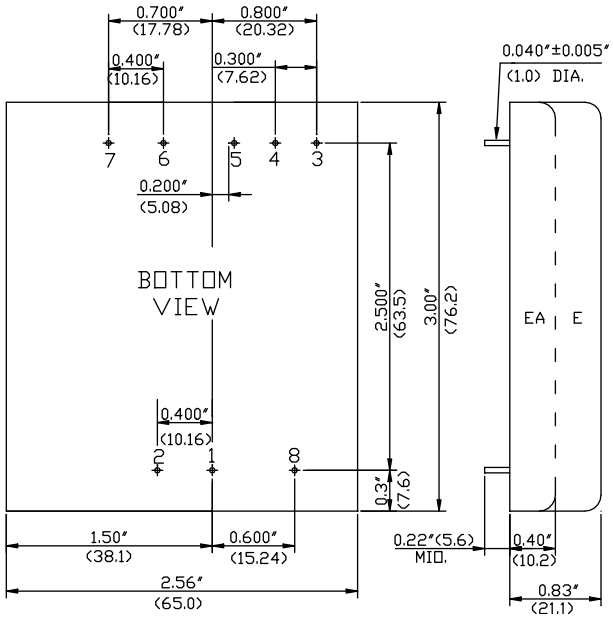
NOTES:

1. Measured from high line to low line.
2. Measured from full load to 10% load.

REMOTE ON/OFF CONTROL	
Logic Compatibility.....	
.....CMOS or Open Collector TTL	
Ec-ON,	
5V Models	>4.2 VDC or Open Circuit
12 & 15V Models	>9.6 VDC or Open Circuit
Ec-OFF,	
5V Models	<3.5 VDC
12 & 15V Models	<9.0 VDC

MODEL NUMBER	INPUT VOLTAGE RANGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRNET		% EFF	CASE
				NO LOAD	FULL LOAD		
UM1401	7-40 VDC	5 VDC	3000 mA	20 mA	1570 mA	80	EA
UM1402	7-40 VDC		5000 mA	20 mA	2600 mA	80	E
UM1411	14-40 VDC	12 VDC	2000 mA	20 mA	1180 mA	85	EA
UM1412	14-40 VDC		3500 mA	20 mA	2010 mA	87	E
UM1421	17-40 VDC	15 VDC	1500 mA	20 mA	1080 mA	87	EA
UM1422	17-40 VDC		3000 mA	20 mA	2110 mA	89	E
UM1431	7-32 VDC	5 VDC	1000 mA	16 mA	555 mA	75	C

E CASE, EA CASE

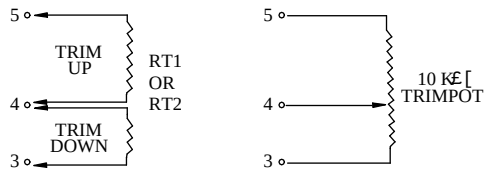


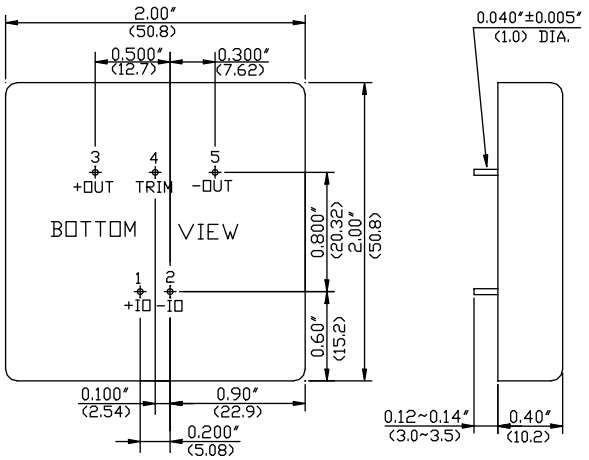
CASE C

PIN CONNECTIONS			
Pin	E Case[1]	EA Case	C Case
1	+Input	+Input	+Input
2	-Input	-Input	-Input
3	Output Sense+	Output Trim Down	+Output
4	Output Trim	Output Trim	Output Trim
5	Output Sense-	Output Trim Up	-Output
6	+Output	+Output	No Pin
7	-Output	-Output	No Pin
8	Remote On/Off	No Pin	No Pin

EXTERNAL OUTPUT TRIMMING

Output may optionally be externally trimmed (±10%) with a fixed resister or an external trimpot as shown.





NOTE:

1. If remote sensing is not utilized, output sense pins must be jumpered to respective output power pins, for normal operation connect Pin NO.3 to Pin NO.6 and Pin NO.5 to Pin NO.7

All dimensions in inches(mm).
Tolerance .xx =± 0.04
.xxx =± 0.010

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