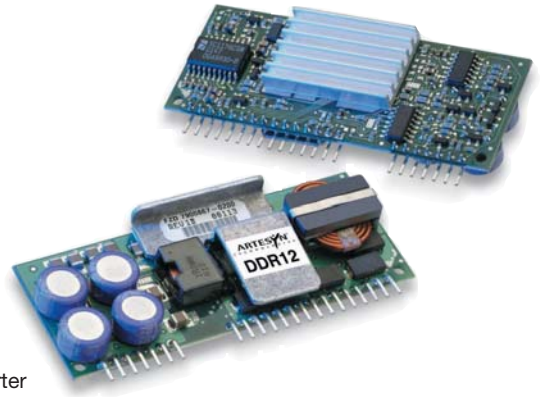


# DDR12 Series

## Dual output

**NEW Product**

- High current dual-output power module for DDR memories
- Single compact module provides 25A@2.5V for  $V_{ddq}$  supply and 8A@1.25V for  $V_{tt}$  termination
- Dual output voltages (1.25V @ 8A, 2.5V @ 25A)
- Output voltage trim (1.125V - 1.375V, 2.25V - 2.75V)
- Output voltage remote sense (only on  $V_{ddq}$ )
- Power good output signal
- Over-voltage protection
- Over-current protection
- Remote ON/OFF



The dual output DDR12-25D08-A is specially designed to meet the power needs of double data rate memory DIMMS and associated memory control logic. This converter offers typical efficiencies of 85% when operated at 50% load or greater. This model features a wide input range as well as trimmable output voltages. Remote sense on  $V_{ddq}$  and remote ON/OFF facilities are included as standard, and the converter is protected against over-current and over-voltage conditions.

CE<sup>®</sup> TÜV

**2 YEAR WARRANTY**

All specifications are typical at nominal input, full load at 25°C unless otherwise stated

### SPECIFICATIONS

#### OUTPUT SPECIFICATIONS

Voltage adjustability	$V_{ddq}$ $V_{tt}$	2.25V to 2.75V 1.125V to 1.375V
Output setpoint accuracy	Using 1% trim resistors	±2.5%
Line regulation	Low line to high line	±0.2% max.
Load regulation	Full load to minimum load	±1.0% max.
Min/max load	$V_{ddq}$ $V_{tt}$	1.5A/25A 0A/8A
Overshoot	Nominal output at turn-on	2.0% max.
Undershoot		150mV max.
Ripple and noise 5Hz to 20MHz (See Note 1)	$V_{ddq}$ $V_{tt}$	50mV pk-pk 30mV pk-pk
Transient response (See Note 2)	$V_{ddq}$ $V_{tt}$	±2.0% deviation 4A/100µs 8A/1µs

#### INPUT SPECIFICATIONS

Input voltage range	Nominal 12V	10.8 to 13.2VDC
Input current	Minimum load Remote OFF	400mA 100mA
Input current (max.)	(See Note 3)	9A max. @ $I_o$ max. and $V_{in} = 10.8V$
Input reflected ripple	(See Note 4)	100mA (pk-pk)
Remote ON/OFF Logic compatibility	Open collector ref to -input	
ON		>1.7VDC
OFF		<0.8VDC
Start-up time (See Note 5)	Power up Remote ON/OFF	<20ms <20ms

#### EMC CHARACTERISTICS

Electrostatic discharge	EN61000-4-2, IEC801-2
Conducted immunity	EN61000-4-2

#### GENERAL SPECIFICATIONS

Efficiency	$V_{ddq} = 2.75V$ $V_{tt} = 1.375V$	85% @ 50% load
Switching frequency (Fixed)	$V_{ddq}$ $V_{tt}$	300kHz typ. 300kHz typ.
Approvals and standards (pending)	(See Note 7)	EN60950 UL/cUL60950
Material flammability		UL94V-0
Weight		34g (1.3oz)
MTBF	Telecordia 332	2,916,858 hours

#### ENVIRONMENTAL SPECIFICATIONS

Thermal performance	Operating ambient, temperature Non-operating	0°C to +80°C -40°C to +125°C
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# DDR12 Series

## Dual output

DC/DC CONVERTERS

80W DC/DC Converters

2

For the most current data and application support visit [www.artesyn.com/powergroup/products.htm](http://www.artesyn.com/powergroup/products.htm)

**NEW Product**

OUTPUT POWER (MAX.)	INPUT VOLTAGE	OVP	OUTPUT VOLTAGE	OUTPUT CURRENT (MIN.)	OUTPUT CURRENT (MAX.)	EFFICIENCY (TYP.)	REGULATION		MODEL NUMBER
							LINE	LOAD	
69W	12VDC	3.43VDC	2.25-2.75V	1.5A	25A	85%	±0.2%	±1.0%	DDR12-25D08-A
11W	12VDC	N/A	1.125-1.375V	0A	8A	85%	±0.2%	±1.0%	

### Notes

- 1 Measured as per recommended set-up.  $C_{in} = 270\mu\text{F}$  (20m $\Omega$  ESR max,  $C_{out} = 2 \times 680\mu\text{F}$  (5m $\Omega$  ESR max).
- 2  $V_{in} = 12\text{VDC}$ ,  $T_c = 25^\circ\text{C}$ , bounded by min/max load specification with recommended system caps.
- 3 External input fusing is recommended.
- 4 Measured with external filter.
- 5 Start-up into resistive load.
- 6 Meets levels A and B conducted emissions with external components.
- 7 This product is only for inclusion by professional installers within other equipment and must not be operated as a stand alone product.
- 8 Use of additional high quality ceramic output capacitors is recommended in the end system.

### PROTECTION

Short-circuit protection	Continuous
Remote sense short	Non-latching clamp

### RECOMMENDED SYSTEM CAPACITANCE

Input capacitance		270 $\mu\text{F}$ /20m $\Omega$ ESR max.
Output capacitance (See Note 8)	$V_{ddq}$ $V_{tt}$	1500 $\mu\text{f}$ /5m $\Omega$ ESR max. 1500 $\mu\text{F}$ /5m $\Omega$ ESR max.

**CAUTION: Hazardous internal voltages and high temperatures. Ensure that unit is not user accessible.**

### PIN CONNECTIONS

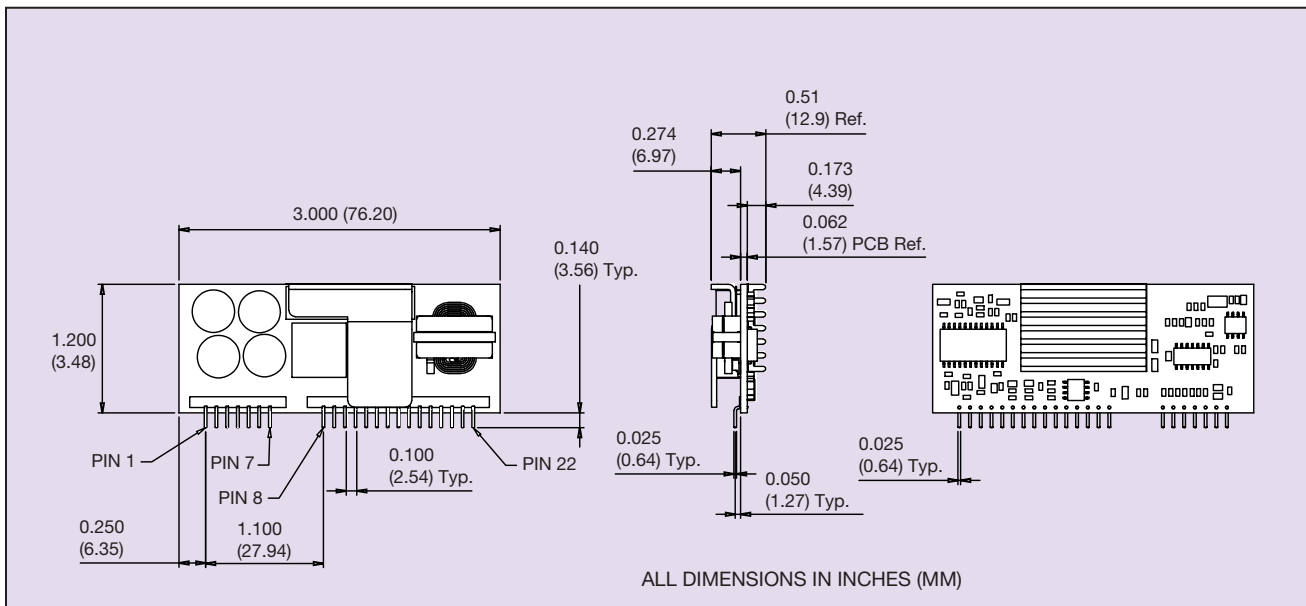
PIN NO.	FUNCTION	PIN NO.	FUNCTION
J1-1	Power Good	J2-5	Ground
J1-2	Output Enable	J2-6	Ground
J1-3	Ground	J2-7	Ground
J1-4	Ground	J2-8	Ground
J1-5	12V Input	J2-9	$V_{ddq}$ Sense -
J1-6	12V Input	J2-10	$V_{ddq}$ Sense +
J1-7	12V Input	J2-11	$V_{ddq}$
J2-1	$V_{tt}$ Ref	J2-12	$V_{ddq}$
J2-2	$V_{tt}$	J2-13	$V_{ddq}$
J2-3	$V_{tt}$	J2-14	$V_{ddq}$
J2-4	Ground	J2-15	$V_{ddq}$

Please consult our website for the following items: ✓ Application Note ✓ Longform Data Sheet

[www.artesyn.com](http://www.artesyn.com)

# DDR12 Series

Dual output



### International Safety Standard Approvals (pending)



UL/cUL CAN/CSA 22.2 File No. TBC  
 UL 60950 File No. TBC  
 TÜV Product Service (EN60950)  
 Certificate No. TBC. CB Report and Certificate to IEC60950

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