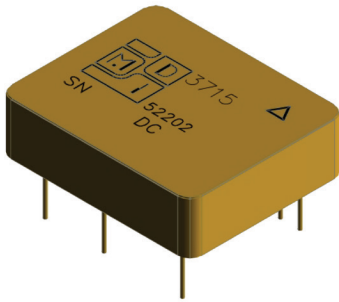


Series 3715

2 Watt DC – DC Converters



28 Volts DC Input

Features

- Specifically designed for demanding military and aerospace applications where best value is critical.
- High efficiency
- No external components required
- Fully isolated design
- Magnetic feedback - no optocouplers used
- Input ripple current inductor
- Output common mode spike filter
- "Inhibit-not" function
- Power on soft start
- Short circuit protection
- "The Mini"

Specifications

INPUT: 28 VDC nominal
 Range: 12 to 50 VDC continuous
 15 to 50 VDC full power
 Survives 80 V Surge
 Power derates to 75% at 12 VDC, full power at 20 VDC

ISOLATION:

Input to case: 500 VDC
 Input to output: 500 VDC
 Output to case: 500 VDC

ENVIRONMENT:

Storage temperature: -55°C to +150°C
 Shock: 50 G's
 Acceleration: 500 G's
 Vibration: 30 G's

Grades: Industrial:

Full Power Output at $T_{case} = +85^{\circ}C$
 Lineary derates to zero at $T_{case} = +115^{\circ}C$

Grades M:

Full Power Output at $T_{case} = +85^{\circ}C$
 Lineary derates to zero at $T_{case} = +115^{\circ}C$

Grades E:

Full Power Output at $T_{case} = +125^{\circ}C$
 Lineary derates to zero at $T_{case} = +135^{\circ}C$

WEIGHT: 16 grams typical

SINGLE OUTPUT DEVICES		3715-S3.3 (1.5W)			3715-S05 (2W)			3715-S12 (2W)			3715-S15 (2W)		
PARAMETER	CONDITION	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX
Output voltage	—	+3.2	+3.3	+3.4	+4.9	+5.0	+5.1	+11.8	+12.0	+12.2	+14.7	+15.0	+15.3
Output current	$V_{in\ min} - V_{in\ max}$	—	—	455mA	—	—	400mA	—	—	167mA	—	—	133mA
Efficiency	$P_{out} = \text{max rated load}$	64 %	70%	—	68%	74%	—	72%	78%	—	72%	79%	—
Line regulation	$P_{out} = \text{max rated load}$ $V_{in\ min} - V_{in\ max}$	—	33mV	66mV	—	50mV	100mV	—	120mV	240mV	—	150mV	300mV
Load regulation	$P_{out} = 10\% \text{ to F.L.}$	—	70mV	132mV	—	60mV	150mV	—	240mV	360mV	—	180mV	450mV
Output ripple	F.L. BW 2 MHz mV _{pp}	—	20	40	—	50	100	—	120	240	—	150	300

SINGLE OUTPUT DEVICES		3715-S28 (2W)			3715-D05 (2W)			3715-D12 (2W)			3715-D15 (2W)		
PARAMETER	CONDITION	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX
Output voltage	—	+27.4	+28.0	+28.6	—	—	—	—	—	—	—	—	—
Output current	$V_{in\ min} - V_{in\ max}$	—	—	71mA	—	—	—	—	—	—	—	—	—
Efficiency	$P_{out} = \text{max rated load}$	72%	79%	—	—	—	—	—	—	—	—	—	—
Line regulation	$P_{out} = \text{max rated load}$ $V_{in\ min} - V_{in\ max}$	—	280mV	560mV	—	—	—	—	—	—	—	—	—
Load regulation	$P_{out} = 10\% \text{ to F.L.}$	—	340mV	1.0V	—	—	—	—	—	—	—	—	—
Output ripple	F.L. BW 2 MHz mV _{pp}	—	50	600	—	—	—	—	—	—	—	—	—

Your Custom Requirement Here

DUAL OUTPUT DEVICES		3715-D05 (2W)			3715-D12 (2W)			3715-D15 (2W)			Your Custom Requirement Here		
PARAMETER	CONDITION	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX
Output voltage	—	+4.9	+5.0	+5.1	+11.8	+12.0	+12.2	+14.7	+15.0	+15.3	—	—	—
Output current*	$V_{in\ min} - V_{in\ max}$	—	—	±200mA	—	—	±83mA	—	—	±66mA	—	—	—
Efficiency	$P_{out} = \text{max rated load}$	68%	74%	—	72%	78%	—	72%	79%	—	—	—	—
Line regulation	$P_{out} = \text{max rated load}$ $V_{in\ min} - V_{in\ max}$	—	±50mV	±100mV	—	±120mV	±240mV	—	±150mV	±300mV	—	—	—
Load regulation†	$P_{out} = 10\% \text{ to F.L.}$	—	±60mV	±150mV	—	±240mV	±360mV	—	±150mV	±450mV	—	—	—
Output ripple	F.L. BW 2 MHz mV _{pp}	—	50	100	—	120	240	—	150	300	—	—	—

Notes: *Up to 90% full power available from either output if rated output power is not exceeded; †balanced load conditions.

Pin Outs

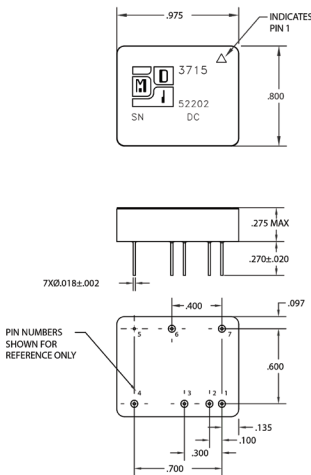
3715-SXX

- Pin 1 +28VDC Input
- Pin 2 Input Return
- Pin 3 + V Output
- Pin 4 Output Return
- Pin 5 Case Ground
- Pin 6 Output Return
- Pin 7 Inhibit Not

3715-DXX

- Pin 1 +28 VDC Input
- Pin2 Input Return
- Pin 3 + V Output
- Pin 4 Output Return
- Pin 5 Case Ground
- Pin 6 - V Output
- Pin 7 Inhibit Not

Case Style 16 Seam Weld



Note: Baseplate is recommended heat removal surface.

Part Numbering System

3	7	1	5	G*	—	C†	V	V	.	V	P‡
Series and Power				Grade	—	Config	Voltage			Package	

Series and Power = MDI Model Number

G* = Grade Level

BLANK = Industrial
 M = Military
 E = Extended Temperature

C† = Configuration

S = Single Output
 D = Dual Output
 T = Triple Output

V = Voltage

See Above Tables

P‡ = Package

BLANK = Case Style 17

D = Case Style 16



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