Series 3721

15 Watt Hybrid

Features:

- Completely self contained DC - DC Converter
- For MIL-STD-704/1275 applications
- "Inhibit-not" function
- Short circuit protection
- Fully isolated, input to output
- Single, dual and triple outputs
- No external filter caps required
- Full hermetic package

Specifications

INPUT: 28 VDC nominal
Range: 15 to 50 VDC continuous
18 to 50 VDC full power
Survives 80 V transients/MIL-STD-704A

ISOLATION:
Input to case: 500 VDC
Input to output: 500 VDC
Output to case: 100 VDC

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

DERATING:
Grade M:
Full Power Output at T_{case} +85°C
Linearly derates to zero at T_{case} = +115°C
Grade E:
Full Power Output at T_{case} = +125°C
Linearly derated to zero at T_{case} = +135°C

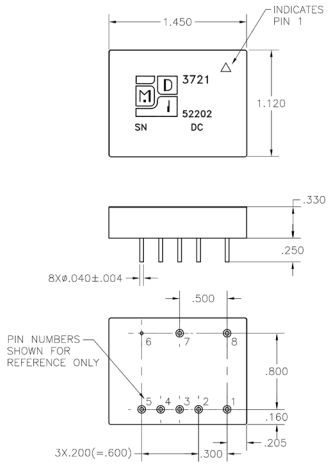
WEIGHT: 65 grams typical

SINGLE OUTPUT DEVICES		3721-S03.3 (15W)			3721-S05 (15W)			3721-S12 (15W)		
PARAMETER	CONDITION	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX
Output voltage	—	+3.2	+3.3	+3.4	+4.9	+5.0	+5.1	+11.76	+12.0	+12.24
Output current	$V_{in\,min} - V_{in\,max}$	0.015	—	1.5A	0.012	—	1.2A	0.005	—	0.5A
Efficiency	P_{out} = max rated load	70%	76%	—	72%	81%	—	77%	81%	—
Line regulation	P_{out} = max rated load, $V_{in\,min} - V_{in\,max}$	—	33mV	66mV	—	50mV	100mV	—	120mV	240mV
Load regulation	P_{out} = 10% to F.L.	—	70mV	132mV	—	60mV	150mV	—	240mV	360mV
Output ripple	F.L. BW 2 MHz mV_{pp}	—	50	100	—	50	100	—	120	240

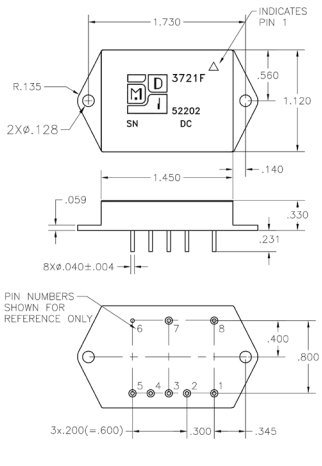
SINGLE OUTPUT DEVICES		3721-S15 (15W)			3721-S28 (15W)			3721-S48 (15W)		
PARAMETER	CONDITION	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX
Output voltage	—	+14.7	+15.0	+15.3	+27.4	+28.0	+28.5	+47.0	+48.0	+49.0
Output current	$V_{in\,min} - V_{in\,max}$	0.004	—	0.4A	0.0214	—	0.214mA	0.0125	—	0.125mA
Efficiency	P_{out} = max rated load	78%	83%	—	78%	83%	—	77%	81%	—
Line regulation	P_{out} = max rated load, $V_{in\,min} - V_{in\,max}$	—	150mV	300mV	—	280mV	560mV	—	150mV	300mV
Load regulation	P_{out} = 10% to F.L.	—	180mV	450mV	—	340mV	132mV	—	70mV	450mV
Output ripple	F.L. BW 2 MHz mV_{pp}	—	150	300	—	300	600	—	500	1000

Model No.		Case Style	Pin Count	Mounting
3721		18	8	Seam Weld Flangeless PCB Mount
3721	F	19	8	Seam Weld PCB Mount with Flange

CASE STYLE 18
Seam Weld



CASE STYLE 19
Seam Weld



Case Dimensions

Units: inches | millimeters

TOLERANCES: ALL DIMENSIONS ±0.01 EXCEPT F= MAX. C = +0.01/-0.02; **DRAWINGS IN INCHES.**

Case Style		A	B	C	D	E	F	G
3721	18	1.450 | 36.830	1.120 | 28.448	0.330 | 8.382	0.800 | 20.320	0.900 | 22.860	— | —	— | —
3721F	19	1.450 | 36.830	1.120 | 28.448	0.330 | 8.382	0.800 | 20.320	0.900 | 22.860	2.005 | 50.927	1.730 | 43.942

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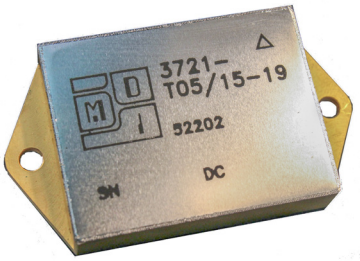
Series 3721

DC – DC Converters

28 Volts DC Input



DUAL OUTPUT DEVICES		3721-D05 (15W)			3721-D12 (15W)			3721-D15 (15W)		
PARAMETER	CONDITION	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX
Output voltage	—	+4.9 -4.9	+5.0 -5.0	+5.1 -5.1	+11.76 -11.76	+12.0 -12.0	+12.24 -12.24	+14.7 -14.7	+15.0 -15.0	+15.3 -15.3
Output current*	$V_{in\,min} - V_{in\,max}$	±0.06mA	—	±0.6A	±0.025mA	—	±0.25A	±0.02mA	—	±0.2A
Efficiency	P_{out} = max rated load	72%	81%	—	77%	81%	—	78%	83%	—
Line regulation	P_{out} = max rated load $V_{in\,min} - V_{in\,max}$	—	±50mV	±100mV	—	±120mV	±240mV	—	±150mV	±300mV
Load regulation†	P_{out} = 10% to F.L	—	±60mV	±150mV	—	±240mV	±360mV	—	±180mV	±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.

TRIPLE OUTPUT DEVICES		3721-T3.3/12 (7.5W)			3721-T3.3/15 (7.5W)			3721-T05/12 (7.5W)			3721-T05/15 (7.5W)		
PARAMETER	CONDITION	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX
Output voltage	$+I_{out} = -I_{out}$	+3.2 +11.76 -11.76	+3.3 +12.0 -12.0	+3.4 +12.24 -12.24	+3.2 +14.7 -14.7	+3.3 +15.0 -15.0	+3.4 +15.3 -15.3	+4.9 +14.9 -14.9	+5.0 +15.0 -15.0	+5.1 +15.1 -15.1	+4.9 +14.7 -14.7	+5.0 +15.0 -15.0	+5.1 +15.3 -15.3
Output current	$V_{in\,min} - V_{in\,max}$	15mA ±0.0312mA	— —	1.5A ±312mA	15mA ±0.025mA	— —	1.5mA ±0.25mA	15mA ±0.0312mA	— —	1.5mA ±0.3125mA	0.15mA ±0.025mA	— —	1.5A ±0.250mA
Efficiency	P_{out} = max rated load	70%	76%	—	70%	76%	—	72%	81%	—	72%	81%	—
Line regulation	P_{out} = max rated load $V_{in\,min} - V_{in\,max}$	— —	33mV 120mV	66mV 240mV	— —	33mV 15mV	66mV 300mV	— —	50mV 120mV	100mV 240mV	— —	50mV 150mV	100mV 300mV
Load regulation	P_{out} = 10% to F.L.	— —	70mV 240mV	132mV 360mV	— —	70mV 180mV	132mV 450mV	— —	60mV 240mV	150mV 360mV	— —	60mV 180mV	150mV 450mV
Output ripple	F.L. BW 2 MHz mV_{pp}	— —	50 120	100 240	— —	50 150	100 300	— —	50 120	100 240	— —	50 150	100 300

3721-SXX		3721-DXX		3721-TXX	
Pin 1	inhibit not	Pin 1	+ input	Pin 1	inhibit not
Pin 2	N/C	Pin 2	+ output	Pin 2	+V main output
Pin 3	output ret	Pin 3	+ output ret	Pin 3	com output return
Pin 4	+ output	Pin 4	- output	Pin 4	+ V output
Pin 5	N/C	Pin 5	N/C	Pin 5	- V output
Pin 6	case	Pin 6	case	Pin 6	case gnd
Pin 7	input ret	Pin 7	input ret	Pin 7	input return
Pin 8	+ input	Pin 8	+ input	Pin 8	+ input