

Series 3722

13 Watt DC – DC Converters



15 – 50 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
- "Inhibit-not" function
- Power on soft start
- Short circuit protection
- Built-in EMI Filter Meets MIL-STD-461C, D, E, F, EMC requirements
- Meets MIL-STD_461C CS01, CS02 conducted susceptibility specifications

Specifications

INPUT: 28 VDC nominal
 Range: 15 to 50 VDC continuous
 18 to 50 VDC full power
 Survives 80 V Surge MIL-STD704A
 Power derates to 90% at 15 VDC, full power at 18 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 $T_{case} = +135^{\circ}C$

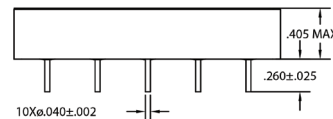
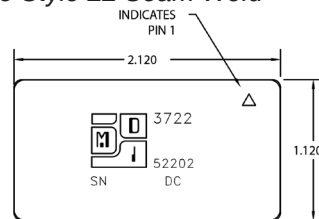
WEIGHT: 50 grams typical

Pin Outs

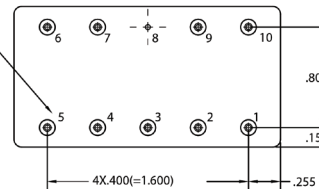
3722	
Pin 1	+ 28 VDC Input
Pin 2	Inhibit Not
Pin 3	+V Aux Output
Pin 4	Aux Return
Pin 5	-V Aux Output
Pin 6	Main Output Return
Pin 7	+V Main Output
Pin 8	Case Ground
Pin 9	N/C
Pin 10	Input Return

TRIPLE OUTPUT DEVICES		3722-T3.3/12 (10W)			3722-T3.3/15 (10W)			3722-T05/12 (13W)			3722-T05/15 (13W)		
PARAMETER	CONDITION	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX
Output voltage	$+I_{out} = -I_{out}$	+3.2 +11.9 -11.9	+3.3 +12.0 -12.0	+3.4 +12.1 -12.1	+3.2 +14.9 -14.9	+3.3 +15.0 -15.0	+3.4 +15.1 -15.1	+4.9 +11.9 -11.9	+5.0 +12.0 -12.0	+5.1 +12.1 -12.1	+4.9 +14.9 -14.9	+5.0 +15.0 -15.0	+5.1 +15.1 -15.1
Output current	$V_{in\ min} - V_{in\ max}$	100mA ±29mA	—	1A ±292mA	100mA ±23mA	—	1A ±233mA	120mA ±29mA	—	1.2A ±292mA	120mA ±23mA	—	1.2A ±233A
Efficiency	$P_{out} = \text{max rated load}$	70%	76%	—	70%	76%	—	72%	81%	—	72%	81%	—
Line regulation	$P_{out} = \text{max rated load}$ $V_{in\ min} - V_{in\ max}$	—	33mV 120mV	66mV 240mV	—	33mV 150mV	66mV 300mV	—	50mV 120mV	100mV 240mV	—	50mV 150mV	100mV 300mV
Load regulation	$P_{out} = 10\% \text{ to F.L.}$	—	70mV 240mV	132mV 360mV	—	70mV 180mV	132mV 450mV	—	60mV 240mV	150mV 360mV	—	60mV 150mV	150mV 400mV
Output ripple	F.L BW 2 MHz mV _{pp}	—	50mV 120mV	100mV 240mV	—	50mV 150mV	100mV 300mV	—	50mV 120mV	100mV 240mV	—	50mV 150mV	100mV 300mV

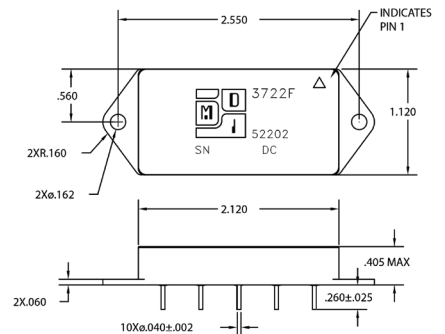
Case Style 22 Seam Weld



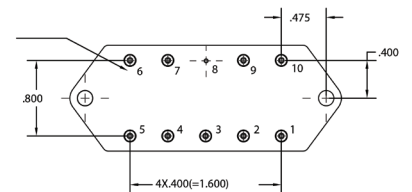
PIN NUMBERS SHOWN FOR REFERENCE ONLY



Case Style 23 Seam Weld with Flange



PIN NUMBERS SHOWN FOR REFERENCE ONLY



Note: Baseplate is recommended heat removal surface.

Part Numbering System

3	7	2	2	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

T = Triple Output

P[‡] = Package

BLANK = Seam Seal without Flange

F = Seam Seal with Flange

V = Voltage

See Above Tables



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Power Conversion for Space and Military/Aerospace

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