

# 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  $T_{case} = +135^{\circ}C$

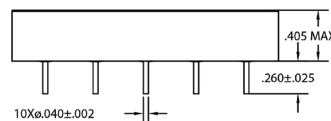
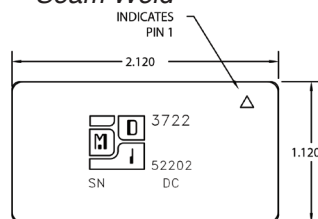
**WEIGHT:** 50 grams typical

#### Pin Outs

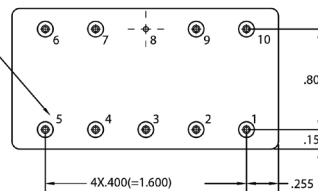
3722	
Pin 1	+ 28 VDC Input
Pin 2	Inhibit Not
Pin 3	+V Aux Output
Pin 4	Aux Return
Pin 5	-V Aux Output
Pin 6	Main Output Return
Pin 7	+V Main Output
Pin 8	Case Ground
Pin 9	N/C
Pin 10	Input Return

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	+3.3	+3.4	+3.2	+3.3	+3.4	+4.9	+5.0	+5.1	+4.9	+5.0	+5.1	
		+11.9	+12.0	+12.1	+14.9	+15.0	+15.1	+11.9	+12.0	+12.1	+14.9	+15.0	+15.1	
Output current	$V_{in\ min} - V_{in\ max}$	100mA	—	1A	100mA	—	1A	120mA	—	1.2A	120mA	—	1.2A	
		$\pm 29mA$	—	$\pm 292mA$	$\pm 23mA$	—	$\pm 233mA$	$\pm 29mA$	—	$\pm 292mA$	$\pm 23mA$	—	$\pm 233A$	
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	66mV	—	33mV	66mV	—	50mV	100mV	—	50mV	100mV	
		—	120mV	240mV	—	150mV	300mV	—	120mV	240mV	—	150mV	300mV	
Load regulation	$P_{out} = 10\% \text{ to F.L.}$	—	70mV	132mV	—	70mV	132mV	—	60mV	150mV	—	60mV	150mV	
		—	240mV	360mV	—	180mV	450mV	—	240mV	360mV	—	150mV	400mV	
Output ripple	F.L BW 2 MHz $mV_{pp}$	—	50mV	100mV	—	50mV	100mV	—	50mV	100mV	—	50mV	100mV	
		—	120mV	240mV	—	150mV	300mV	—	120mV	240mV	—	150mV	300mV	

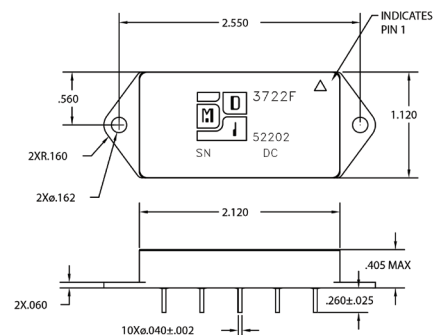
#### Seam Weld



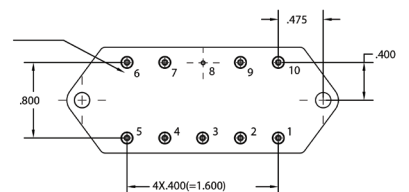
PIN NUMBERS SHOWN FOR REFERENCE ONLY



#### 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 <sup>+</sup>	—	C <sup>+</sup>	V	V	.	V	P <sup>‡</sup>
Series and Power				Grade	—	Config	Voltage			Package	

Series and Power = MDI Model Number

G<sup>+</sup> = Grade Level

BLANK = Industrial

M = Military

E = Extended Temperature

C<sup>+</sup> = Configuration

T = Triple Output

P<sup>‡</sup> = Package

BLANK = Seam Seal without Flange

F = Seam Seal with Flange

V = Voltage

See Above Tables



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