

40 Watt Quad Output HYBRID

PROTON RAD HARD 100K+® DC-DC CONVERTERS



Features

- Rad Hard: TID > 100kRad(Si)
- 2:1 margin: Operates beyond 200kRad TID
- No SEE:LET > 82MeV*cm²/mg
- Proton Resistant: No optocouplers used
- Industry standard form factor and mounting footprint
- Built-in EMI input filter meets MIL-STD-461C requirements CE01, CE03, CS01, CS02 and CS06
- Completely self contained Thick Film Hybrid DC-DC Converter
- No external filter caps required
- Fully isolated design
- "Inhibit-not" enable function
- Power on soft start
- 250 kHz operation for low ripple and fast response time
- Short circuit and overvoltage protection
- External sync input

Specifications

INPUT: 28 VDC nominal

Range: 19 to 50 VDC

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 @ 11ms. Per MIL-STD-810, M516.5, P III

Acceleration: 500 G's Per MIL-STD-883, M2001

Vibration: 30 G's Per MIL-STD-883, M2026, C2H

Grade EU, R & S:

Full Power Output at T_{case} = +85°C

Linearly derates to zero at

T_{case} = +115°C

Grade RE & SE:

Full Power Output at T_{case} = +125°C

Linearly derates to zero at

T_{case} = +135°C

WEIGHT: 110 grams maximum, 95 grams typical.

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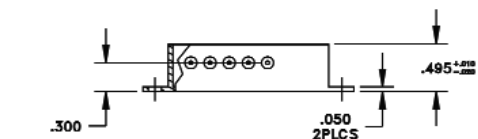
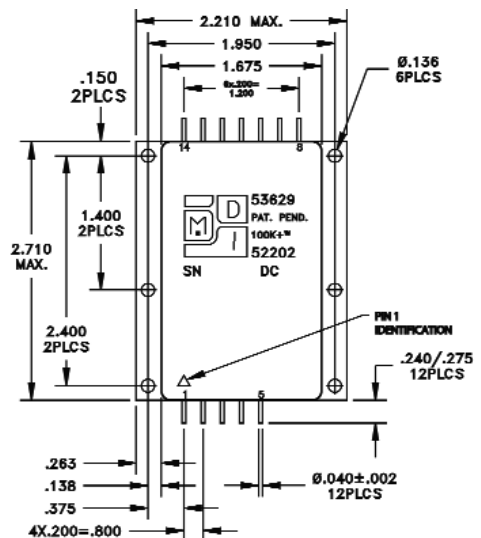
Released 0905-01

Series 53629

QUAD OUTPUT DEVICES		53629 (40W)		
PARAMETER	CONDITION	MIN	TYP	MAX
Output voltage	+I _{out} = -I _{out}	+4.9	+5.0	+5.1
		-4.9	-5.0	-5.1
		+15.1	+15.5	+15.9
		-15.1	-15.5	-15.9
Output current	V _{in min} — V _{in max}	+300mA	—	+3A
		-100mA	—	-1A
		+75mA	—	+750mA
		-75mA	—	-750mA
Efficiency	P _{out} = max rated load	83%	85%	—
Line regulation	P _{out} = max rated load V _{in min} — V _{in max}	—	±15mV	±65mV
		—	±15mV	±85mV
Load regulation	P _{out} = min to F.L.	—	±75mV	±125mV
		—	±175mV	±250mV
Output ripple	F.L. BW 2 MHz mV _{pp}	—	25	50
		—	35	70

- Model 53629 is a high efficiency cross regulated quad output DC-DC converter that incorporates a built-in MIL-STD-461 EMI filter.
- High efficiency and excellent cross regulation are achieved by using a planar power transformer and GaAs rectifiers. Sync and Enable inputs are also provided.
- Other input/output voltages available on special order
- A combined total of 40W may be drawn on all 4 outputs. Up to 750mA is available from the auxiliary outputs provided the total output power does not exceed 40W.

Pin #	Designation
1	+28 VDC Input
2	+28 VDC Input Return
3	Enable
4	-5 VDC Return
5	-5 VDC Output
6	N/C
7	N/C
8	Sync Input
9	-15 VDC Output
10	±15 VDC Common Return
11	+15 VDC Output
12	Chassis
13	+5 VDC Output
14	+5 VDC Return



GRADE LEVELS:

Please specify grade level for your application. EU grade units will be shipped if no option is specified.

EU Engineering Units
R 100K+® +85°C military/aerospace
RE 100K+® +125°C military/aerospace

S 100K+® +85°C Space
SE 100K+® +125°C Space