15 Watt Triple Output Sequenced HYBRID

PROTON RAD HARD 100k+® DC-DC CONVERTERS

28 VOLTS DC INPUT

Features
• Rad Hard: TID > 100kRad(Si)
• 2:1 margin: Operates beyond 200kRad TID
• No SEE:LET > 82MeV·cm²/mg
• Proton Resistant: No optocouplers used
• Specifically designed for redundant or individual space applications
• Completely self contained Thick Film Hybrid DC-DC Converter
• No external filter caps required
• Fully isolated design
• “Inhibit-not” function
• Power on soft start
• 200 kHz operation for low ripple and fast response time
• Built-in EMI input filter meets MIL-STD-461C requirements CE01, CE03, CS01, CS02 and CS06
• Short circuit and overvoltage protection
• Built-in test capability

Specifications
INPUT: 28 VDC nominal
Range: 18 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
Acceleration: 500 G’s
Vibration: 30 G’s
Grade EU, R & S:
  Full Power Output at Tcase = +85°C
  Linearity derates to zero at Tcase = +115°C
Grade RE & SE:
  Full Power Output at Tcase = +125°C
  Linearity derates to zero at Tcase = +135°C
WEIGHT: 90 grams maximum
PACKAGE: Case Style 8 chassis mount shown. Other case styles available. Consult factory for more information.

Series 99200

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>CONDITION</th>
<th>MIN</th>
<th>TYP</th>
<th>MAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output voltage</td>
<td>+Vout = -Vout</td>
<td>+7.9</td>
<td>+8.0</td>
<td>+8.1</td>
</tr>
<tr>
<td>Output current</td>
<td>Vinp - Vmax</td>
<td>+300mA</td>
<td>—</td>
<td>1.7A</td>
</tr>
<tr>
<td>Efficiency</td>
<td>Pout = max rated load</td>
<td>—</td>
<td>—</td>
<td>70%</td>
</tr>
<tr>
<td>Line regulation</td>
<td>Pout = max rated load</td>
<td>—</td>
<td>—</td>
<td>72%</td>
</tr>
<tr>
<td>Load regulation</td>
<td>Pout = 10% to F.L.</td>
<td>—</td>
<td>—</td>
<td>74%</td>
</tr>
<tr>
<td>Output ripple</td>
<td>F.L. BW 2 MHz</td>
<td>50mV</td>
<td>—</td>
<td>50mV</td>
</tr>
</tbody>
</table>

99200

Turn-On Delay
Max Loads
-6.5v = -10A, +15v = +8A, +18v = 1.7A (All Resistive)

Ch 1 = -6.502v, Ch 2 = +14.972v, Ch 3 = +7.964v
Once the -6.5v output comes on, there is a 16.4ms delay to the turn-on of the +15v and +18v outputs.

99200

Turn-Off Delay
Max Loads
-6.5v = -10A, +15v = +8A, +18v = 1.7A (All Resistive)

Ch 1 = -6.5v, Ch 2 = +15v, Ch 3 = +18v
The time interval from the initial decay of the +18v and +15v outputs to the initial decay of the -6.5v output is 8.6ms

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

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<tr>
<td>EU</td>
<td>Engineering Units</td>
</tr>
<tr>
<td>R</td>
<td>100k+® +85°C military/aerospace</td>
</tr>
<tr>
<td>RE</td>
<td>100k+® +125°C military/aerospace</td>
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<tr>
<td>S</td>
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