15 Watt Triple Output Sequenced 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*cm^2/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 overvlotage protection
- Built-in test capability

Specifications

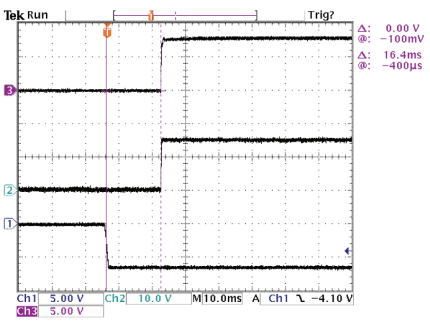
INPUT: 28 VDC nominal
Range: 18 to 50 VDC
ISOLATION:
Input to case: 500 VDC
Input to output: 500 VDC
Output to case: 100 VDC
ENVIRONMENT:
Storage temperature: -55°C to +150°C
Shock: 50 G's
Acceleration: 500 G's
Vibration: 30 G's
Grade EU, R & S:
Full Power Output at T_{case} = +85°C
Linearly derates 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: 90 grams maximum
PACKAGE: Case Style 8 chassis mount shown. Other case styles available. Consult factory for more information.

Series 99200

TRIPLE OUTPUT DEVICES		99200 (15W)		
PARAMETER	CONDITION	MIN	TYP	MAX
Output voltage	$+I_{out} = -I_{out}$	+7.9 +14.9 -6.4	+8.0 +15.0 -6.5	+8.1 +15.1 -6.6
Output current	$V_{in\ min}$ — $V_{in\ max}$	+300mA +50mA -20mA	— — —	1.7A +80mA -100mA
Efficiency	P_{out} = max rated load	70%	72%	74%
Line regulation	P_{out} = max rated load $V_{in\ min}$ — $V_{in\ max}$	— — —	10mV 25mV 25mV	50mV 50mV 50mV
Load regulation	P_{out} = 10% to F.L.	— — —	10mV 25mV 25mV	50mV 50mV 50mV
Output ripple	F.L. BW 2 MHz mV_{pp}	— — —	30 30 30	50 50 50

- The Model 99200 is a triple output sequenced power converter ideally suited for FET RF amplifiers or SSPAs where outputs are required to turn on and off in sequence so the negative gate voltage rises first and decays last with respect to the positive outputs.
- The 99200 turn-on sequencing feature is controlled by precision rad-hard 100K+® MOSFET switches, ensuring reliable operation at FET loads that are enhanced at zero voltage and uncontrolled without negative gate bias.
- Turn-off sequencing is achieved by pre-set RC networks, ensuring complete control of the negative gate output as the positive outputs decay first.
- Other input voltages and output voltage combinations are available

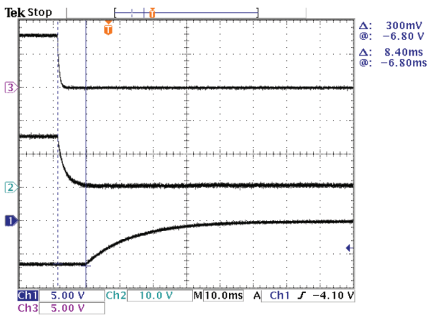
99200
Turn-On Delay
Max Loads
-6.5v = .10A, +15v = .08A, +8v = 1.7A (All Resistive)



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 +8v outputs.

99200
Turn-Off Delay
Max Loads
-6.5v = .10A, +15v = .08A, +8v = 1.7A (All Resistive)



Ch 1 = -6.5v, Ch 2 = +15v, Ch 3 = +8v

The time interval from the initial decay of the +8v and +15v outputs to the initial decay of the –6.5v output = 8.6ms

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

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