



Unit measures 1.6"W x 2"L x 0.4"H

- Wide 2 : 1 Input Range
- High Efficiency
- Regulated Outputs
- 1600V Isolation
- Full EMI Shielding
- Standard Pinouts

Model Number	Output Voltage	Output Amps	Input Range
--------------	----------------	-------------	-------------

SINGLE OUTPUT

FDC20-12S33	3.3 VDC	4	9-18 VDC
FDC20-24S33		4	18-36 VDC
FDC20-48S33		4	36-72 VDC
FDC20-12S05	5 VDC	4	9-18 VDC
FDC20-24S05		4	18-36 VDC
FDC20-48S05		4	36-72 VDC
FDC20-12S12	12 VDC	1.67	9-18 VDC
FDC20-24S12		1.67	18-36 VDC
FDC20-48S12		1.67	36-72 VDC
FDC20-12S15	15 VDC	1.33	9-18 VDC
FDC20-24S15		1.33	18-36 VDC
FDC20-48S15		1.33	36-72 VDC

DUAL OUTPUT

FDC20-12D05	+/-5 VDC	+/-2	9-18 VDC
FDC20-24D05		+/-2	18-36 VDC
FDC20-48D05		+/-2	36-72 VDC
FDC20-12D12	+/-12 VDC	+/-0.833	9-18 VDC
FDC20-24D12		+/-0.833	18-36 VDC
FDC20-48D12		+/-0.833	36-72 VDC
FDC20-12D15	+/-15 VDC	+/-0.666	9-18 VDC
FDC20-24D15		+/-0.666	18-36 VDC
FDC20-48D15		+/-0.666	36-72 VDC



Unit measures 1.6"W x 2"L x 0.4"H

- Wide 2 : 1 Input Range
- High Efficiency
- Regulated Outputs
- 1600V Isolation
- Full EMI Shielding
- Standard Pinouts

Model Number	Output Voltage	Output Amps	Input Range
TRIPLE OUTPUT			
FDC20-12T3312	3.3, +/-12 VDC	3, +/-0.3	9-18 VDC
FDC20-24T3312		3, +/-0.3	18-36 VDC
FDC20-48T3312		3, +/-0.3	36-72 VDC
FDC20-12T3315	3.3, +/-15 VDC	3, +/-0.25	9-18 VDC
FDC20-24T3315		3, +/-0.25	18-36 VDC
FDC20-48T3315		3, +/-0.25	36-72 VDC
FDC20-12T0512	5, +/-12 VDC	2, +/-0.3	9-18 VDC
FDC20-24T0512		2, +/-0.3	18-36 VDC
FDC20-48T0512		2, +/-0.3	36-72 VDC
FDC20-12T0515	5, +/-15 VDC	2, +/-0.25	9-18 VDC
FDC20-24T0515		2, +/-0.25	18-36 VDC
FDC20-48T0515		2, +/-0.25	36-72 VDC

Isolated and Regulated 20 WATT Modular DC/DC Converters

FDC20 series

INPUT SPECIFICATIONS

Input Voltage Ranges:	12 VDC Nominal	9-18 VDC
	24 VDC Nominal	18-36 VDC
	48 VDC Nominal	36-72 VDC
Max. Voltage Surge (100mS max)	12 VDC Nominal	36 VDC
	24 VDC Nominal	50 VDC
	48 VDC Nominal	100 VDC
Input Filter	Pi Type	

OUTPUT SPECIFICATIONS

Voltage and Current		See Selection Chart
Load Regulation		singles: +/-1%
25% - FL (single/dual)		duals: +/-2%
10%-FL (triple)		3.3/5 V: +/-2%, 12/15 V: +/-5%
Line Regulation	(Single/Dual)	+/-0.2%
	(triple)	3.3/5V: +/-1%, 12/15V: +/-5%
Temperature Coefficient		+/-0.02%/DegC
Ripple/Noise(Single/Dual/Triple)		(75 / 100 / 1%) mV Pk-Pk, typ
Voltage Stability	(+/-12,+/-15)	+/- 2%, (+/-5%)
Transient Response Recovery		
25% Load Step Change		500 microSeconds
Short Circuit Protection		Continuous, self-recovering
Overvoltage Protection Threshold:		
	3.3V Output	3.9Volts
	5V Output	6.2Volts
	12V Output	15Volts
	15V Output	18Volts

GENERAL SPECIFICATIONS

On/Off Control	(Ref to - Input pin)
	Logic "1"/Open=ON
	Logic "0"/GND=OFF
Input-Out Isolation	1600VDC
In/Out Capacitance	1000 pF
Isolation Resistance	10000 M Ohms
Efficiency	81%, typ
Switching Frequency	300Khz, Single typ

ENVIRONMENTAL SPECIFICATIONS

Oper. Temperature	-25 to +70 DegC(see derate)
Storage Temperature	-55 to +125 DegC *
Maximum Case Temp	112 DegC *
MTBF	1.93 Mhrs
	MIL-HDBK-217F TA=25C FL

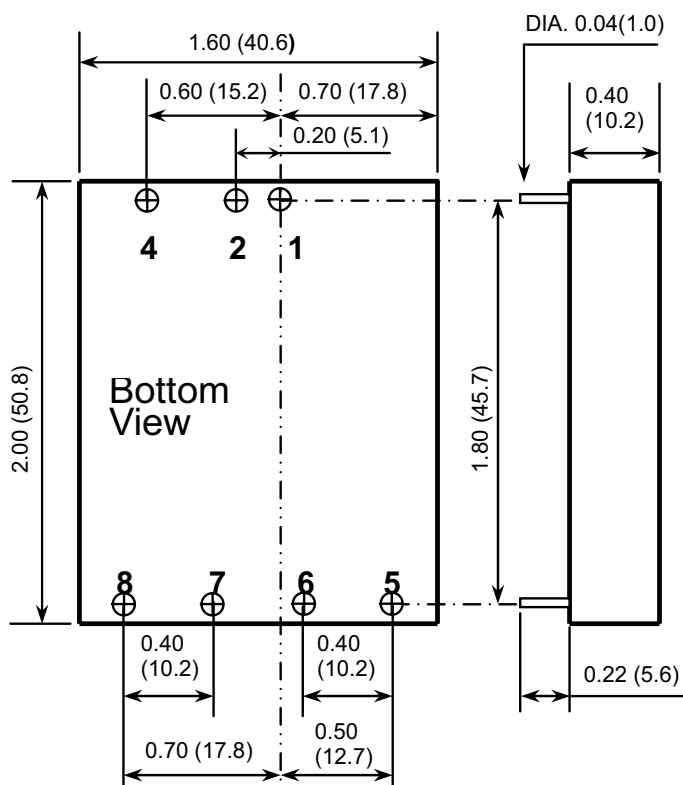
PHYSICAL SPECIFICATIONS

Case Material	Nickel-Coated Copper
	Non-Conductive Base
Construction/Weight	Encapsulated/1.86oz (52g)
Size	1.6" x 2" x 0.4"
	(40.64 x 50.8 x 10.16mm)

All specifications are typical at nominal input, full load, and 25DegC unless otherwise noted

* These are stress ratings. Exposure of the devices to any of these conditions may adversely affect long term reliability. Proper operation under conditions other than the standard operating conditions is neither warranted nor implied.

MECHANICAL DIMENSIONS

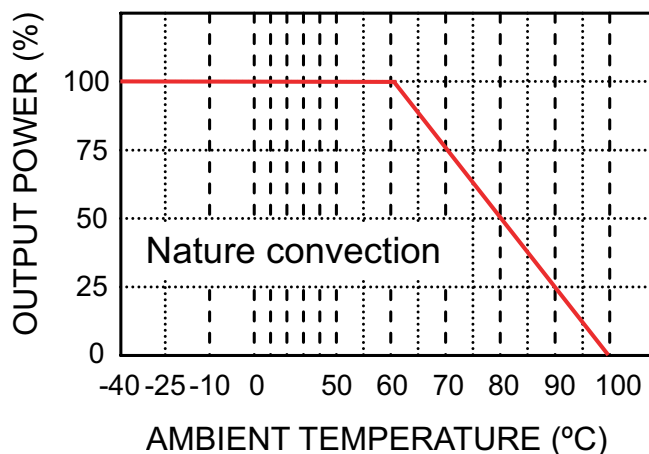


1. All dimensions in Inches (mm)
Tolerance: X.XX±0.02 (X.X±0.5)
X.XXX±0.01 (X.XX±0.25)
2. Pin pitch tolerance ±0.014(0.35)

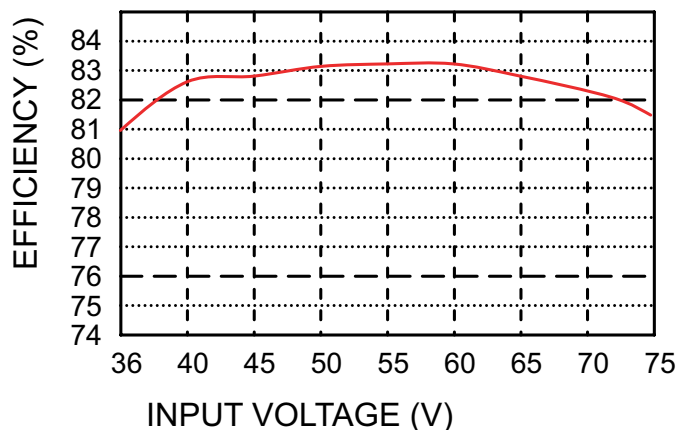
Pin #	Single	Dual	Triple
1	+ Input	+ Input	+ Input
2	- Input	- Input	- Input
3	No Pin	No Pin	No Pin
4	Control	Control	Control
5	No Pin	+ Output	+ Aux Out
6	+ Output	Common	+5V, +3.3V
7	- Output	- Output	Common
8	Trim	Trim	- Aux Out

OUTPUT DERATING CURVE

FDC20-48S05 Derating Curve



FDC20-48S05
Efficiency VS Input Voltage



FDC20-48S05
Efficiency VS Output load

