

DC-DC CONVERTERS



MAIN FEATURES

- Power range: 2 to 25W for current models; design capability up to 300W.
- SMD and thick film technology utilized to shrink size and enhance reliability
- Designed with derating to enhance reliability.
- High efficiency: 70% for 10W power models. 80% or above for higher power models.
- 100% burn-in.
- 200% computerized functional test before and after burn-in.
- 100% tested for dielectric withstand.
- MTBF: 500khrs typical.
- A wide range of standard products are provided. Semi-standard or OEM design are also acceptable.

SPECIFICATIONS OF REPRESENTATIVE MODELS

DELTA PRODUCTS CORP

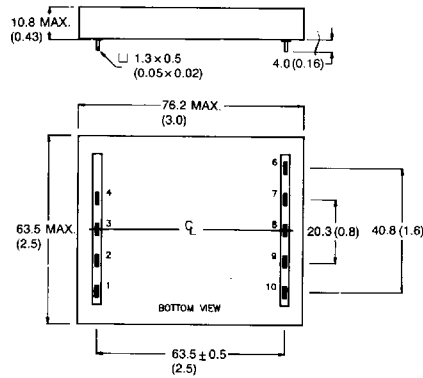
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25-30 Watts / 6-Sided Shielding

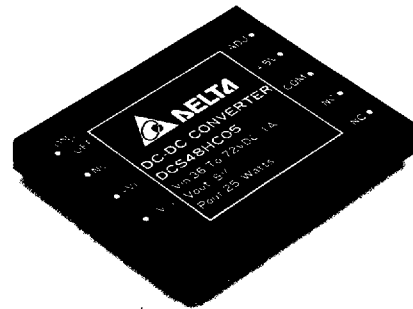
DCS48HC05

Input voltage		Output voltage (VDC)	Output current (A)	Model number	Package	Features
Nominal (VDC)	Range (VDC)					
48	36-72	5	5	DCS48HC05	HC	<ul style="list-style-type: none"> • Single regulated output • Ceramic hybrid technology • Low profile • High power density • 6-sided shielding • High efficiency (>80% typ) • 500 VDC isolation
		12	2.5	DCS48HC12		
24	18-36	5	5	DCS24HC05		
		12	2.5	DCS24HC12		
12	10-20	5	5	DCS12HC05		

Construction & Dimensions



UNIT: mm/(inch)

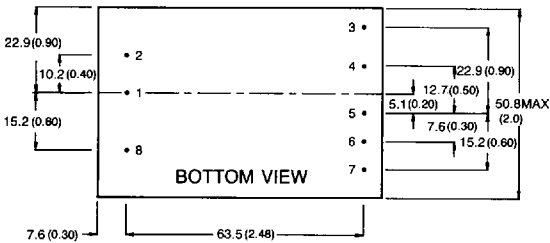
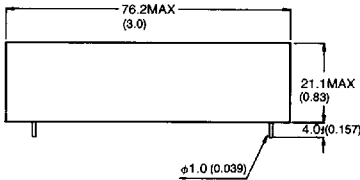


PIN	FUNCTION
1	REMOTE ON/OFF
2	N.C.
3	+Vin
4	-Vin
6	N.C.
7	N.C.
8	COM
9	V _{o1}
10	O/P ADJUST

20Watts/Wide Input Range

Input voltage		Output voltage (VDC)	Output current (A)	Model number	Package	Features
Nominal (VDC)	Range (VDC)					
12	9-18	5	4.0	DPS12J05	J	<ul style="list-style-type: none"> • Single regulated output • 2:1 wide input range • High efficiency • Short circuit protection • 500 VDC isolation
		12	1.6	DPS12J12		
		15	1.3	DPS12J15		
24	18-36	5	4.0	DPS24J05		
		12	1.6	DPS24J12		
		15	1.3	DPS24J15		
48	36-72	5	4.0	DPS48J05		<ul style="list-style-type: none"> • Dual regulated outputs • 2:1 wide input range • High efficiency • Short circuit protection • 500 VDC isolation
		12	1.6	DPS48J12		
		15	1.3	DPS48J15		
12	9-18	± 5	2.0	DPD12J05		
		± 12	0.8	DPD12J12		
		± 15	0.65	DPD12J15		
24	18-36	± 5	2.0	DPD24J05		
		± 12	0.8	DPD24J12		
		± 15	0.65	DPD24J15		
48	36-72	± 5	2.0	DPD48J05		
		± 12	0.8	DPD48J12		
		± 15	0.65	DPD48J15		

Construction & Dimensions



PIN	FUNCTION
1	+ Vin
2	- Vin
3	NC
4	NC
5	+ Vout
6	COM
7	- Vout
8	NC

UNIT: mm/(inch)

6 Watts

Input voltage		Output voltage (VDC)	Output current (mA)	Model number	Package	Features
Nominal (VDC)	Range (VDC)					
5	4.75-5.25	5	800	DPS05L05	L	<ul style="list-style-type: none"> • Single regulated output • Metal case • 500 VDC isolation
		12	500	DPS05L12		
		15	300	DPS05L15		
12	11.4-12.6	5	800	DPS12L05		
		12	500	DPS12L12		
		15	300	DPS12L15		
24	22.8-25.2	5	800	DPS24L05		
		12	500	DPS24L12		
		15	300	DPS24L15		
5	4.5-5.5	±12	200	DPD05L12		<ul style="list-style-type: none"> • Dual unregulated outputs • Metal case • 500 VDC isolation
		±15	150	DPD05L15		
12	10.8-13.2	±12	200	DPD12L12		
		±15	150	DPD12L15		
24	22.8-26.4	±12	200	DPD24L12		
		±15	150	DPD24L15		
48	36-72	5	800	DPS48L05	<ul style="list-style-type: none"> • Single regulated output • 2:1 wide input range • Metal case • 500 VDC isolation 	
		12	500	DPS48L12		
		15	400	DPS48L15		
		±12	250	DPD48L12		
		±15	200	DPD48L15		

5-6 Watts/6-Sided Shielding

Input voltage		Output voltage (VDC)	Output current (mA)	Model number	Package	Features
Nominal (VDC)	Range (VDC)					
5	4.6-5.5	5	1000	DPS0505A-1	A1	<ul style="list-style-type: none"> • Single regulated output • 6-sided shielding • 500 VDC isolation
24	21.6-26.4	5	1000	DPS2405A-1		
5	4.75-5.25	±15	150	DPD0505A-1		
5	4.5-5.5	±12	230	DPD0506A-1		<ul style="list-style-type: none"> • Dual regulated outputs • 6-sided shielding • 500 VDC isolation

2-3 Watts/Wide Input Range

Input voltage		Output voltage (VDC)	Output current (mA)	Model number	Package	Features
Nominal (VDC)	Range (VDC)					
5	4.5-5.5	5	300	DPS05T05	T	<ul style="list-style-type: none"> • Single regulated output • Wide input range • Short circuit protection • 500 VDC isolation
		12	140	DPS05T12		
		15	100	DPS05T15		
12	9.4-18	5	300	DPS12T05		
		12	140	DPS12T12		
		15	100	DPS12T15		
24	20-30	5	300	DPS24T05		
		12	140	DPS24T12		
		15	100	DPS24T15		
48	36-72	5	500	DPS48T05		
		12	200	DPS48T12		
		15	200	DPS48T15		

2-3 Watts/Wide Input Range

Input voltage		Output voltage (VDC)	Output current (mA)	Model number	Package	Features
Nominal (VDC)	Range (VDC)					
5	4.5-5.5	9	200	DPS05M09	M	<ul style="list-style-type: none"> • Single regulated output • Wide input range • Short circuit protection • Remote control • 2000 VAC isolation
12	9.4-16	9	200	DPS12M09		
5	4.5-5.5	9	200	DPS05S09	S	<ul style="list-style-type: none"> • Single regulated output • Wide input range • Short circuit protection • Open type • 2000 VAC isolation
12	9.4-16	9	200	DPS12S09		
		12	140	DPS12S12		
48	36-72	5	500	DPS48S05	SE	<ul style="list-style-type: none"> • Enable/disable control for SE models
5	4.5-5.5	9	200	DPS05SE09		
12	9.4-16	9	200	DPS12SE09		

2 Watts

Input voltage		Output voltage (VDC)	Output current (mA)	Model number	Package	Features
Nominal (VDC)	Range (VDC)					
48	38-62	5	500	DPS4802A-1	A2	<ul style="list-style-type: none"> • 500 VDC isolation • 5-sided metal case
48	42-56	5	400	DPS4802C-1	A3	<ul style="list-style-type: none"> • 500 VDC isolation • 6-sided shielding
15	12-18	5	400	DUS1502A-1	A4	<ul style="list-style-type: none"> • Non-isolation • 24 pin DIP package
5	4.75-5.25	9	200	DPS0502B	A5	<ul style="list-style-type: none"> • 500 VDC isolation • Single unregulated output • SIP package

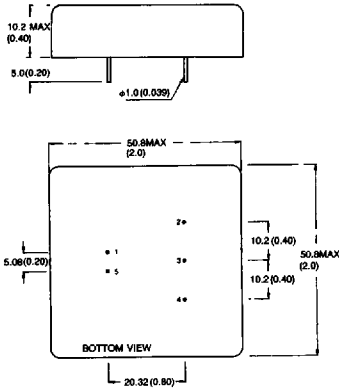
2 Watts DIP Package

Input voltage		Output voltage (VDC)	Output current (mA)	Model number	Package	Features
Nominal (VDC)	Range (VDC)					
5	4.75-5.25	5	220	DPS05RB05	RB	<ul style="list-style-type: none"> • Single regulated output • 10 mm (0.4 in.) low profile • 500 VDC isolation • Enable/disable control for RE model
		9	200	DPS05RB09		
		12	160	DPS05RB12		
		15	100	DPS05RB15		
12	10.8-13.2	5	220	DPS12RB05		
		9	200	DPS12RB09		
		12	160	DPS12RB12		
		15	100	DPS12RB15		
12	11.4-12.6	9	200	DPS12RE09	RE	
5	4.75-5.25	5	220	DPS05C05	C	<ul style="list-style-type: none"> • Single regulated output • 2000 VDC isolation
		12	160	DPS05C12		
		15	100	DPS05C15		
12	10.8-13.2	5	220	DPS12C05		
		12	160	DPS12C12		
		15	100	DPS12C15		

2 Watts DIP Package

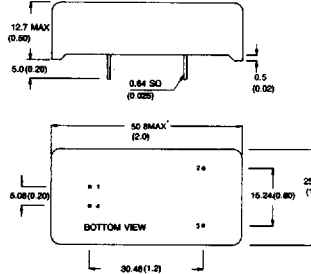
Input voltage		Output voltage (VDC)	Output current (mA)	Model number	Package	Features
Nominal (VDC)	Range (VDC)					
5	4.75-5.25	5	220	DPS05R05	RS	<ul style="list-style-type: none"> • Single regulated output • 500 VDC isolation
		9	200	DPS05R09		
		12	160	DPS05R12		
		15	100	DPS05R15		
12	10.8-13.2	5	220	DPS12R05		
		9	200	DPS12R09		
		12	160	DPS12R12		
		15	100	DPS12R15		
5	4.75-5.25	±12	60	DPD05R12	RD	<ul style="list-style-type: none"> • Dual regulated outputs • 500 VDC isolation
		±15	40	DPD05R15		
12	10.8-13.2	±5	80	DPD12R05		
		±12	60	DPD12R12		
		±15	40	DPD12R15		
5	4.75-5.25	9	200	DPS05U09	RS	<ul style="list-style-type: none"> • Single unregulated output • 500 VDC isolation
12	10.8-13.2	9	200	DPS12U09		

A1



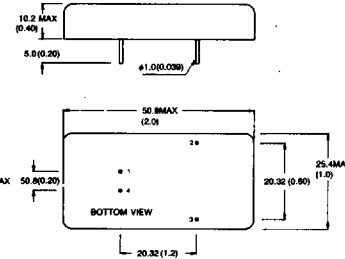
PIN	SINGLE	DUAL
1	+ Vin	+ Vin
2	+ Vout	+ Vout
3	NO PIN	COM
4	- Vout	- Vout
5	- Vin	- Vin

A2



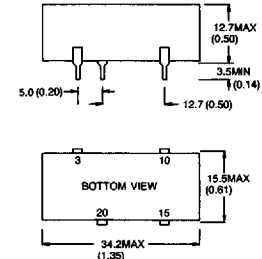
PIN	FUNCTION
1	+ Vin
2	+ Vout
3	- Vout
4	- Vin

A3



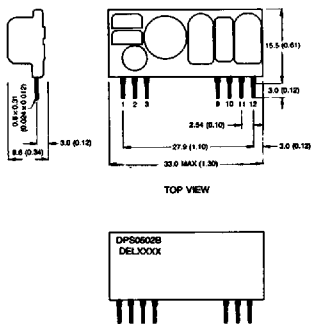
PIN	FUNCTION
1	+ Vin
2	+ Vout
3	- Vout
4	- Vin

A4



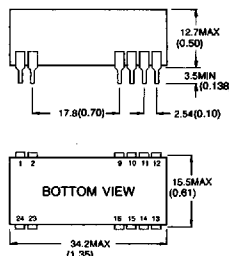
PIN	FUNCTION
3	COM
10	+ Vin
15	NC
20	+ Vout

A5



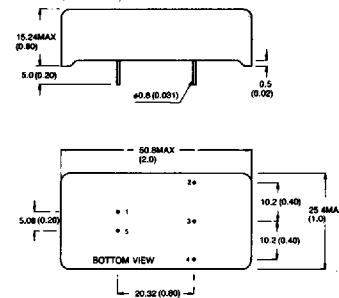
PIN	SINGLE OUTPUT
1	+ INPUT
2	NC
3	NC
9	NC
10	- OUTPUT
11	+ OUTPUT
12	- INPUT

C



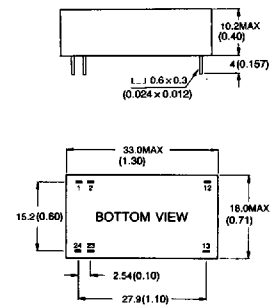
PIN	FUNCTION
1, 2	+ Vin
9, 10	- Vout
11, 12	+ Vout
13-16	NC
23, 24	- Vin

L



PIN	SINGLE	DUAL
1	+ Vin	+ Vin
2	+ Vout	+ Vout
3	NO PIN	COM
4	- Vout	- Vout
5	- Vin	- Vin

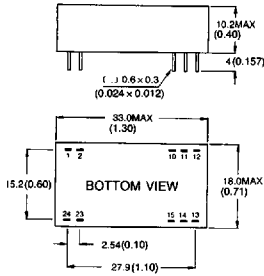
M



PIN	FUNCTION
1	+ Vin
2	ENABLE
12	+ Vout
13	- Vout
23, 24	- Vin

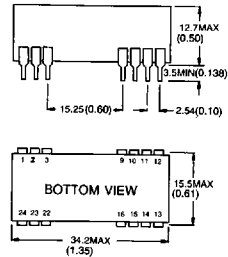
UNIT: mm/(inch)

RB



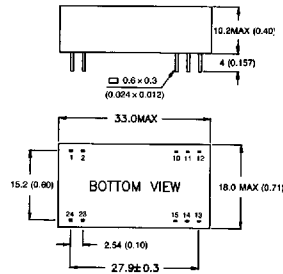
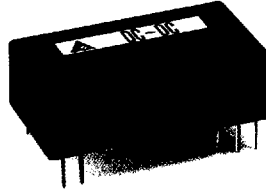
PIN	FUNCTION
1, 24	+ V _{in}
2, 23	NC
10, 15	- V _{out}
11, 14	+ V _{out}
12, 13	- V _{in}

RD



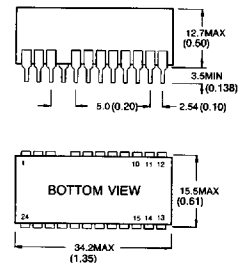
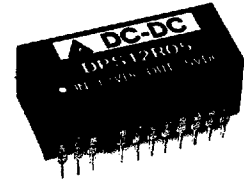
PIN	FUNCTION
1, 24	+ V _{in}
2, 23	- V _{out}
3, 22	COM
9, 16	NC
10, 15	COM
11, 14	+ V _{out}
12, 13	- V _{in}

RE



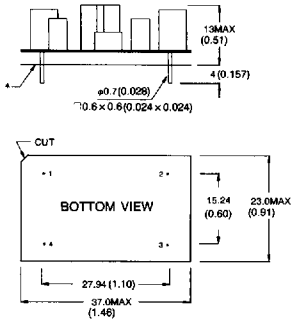
PIN	FUNCTION
1, 24	+ V _{in}
23	NC
10, 15	- V _{out}
11, 14	+ V _{out}
12, 13	- V _{in}
2	ENABLE

RS



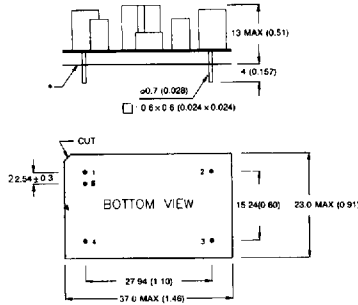
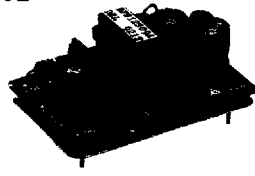
PIN	FUNCTION
1, 24	+ V _{in}
10, 15	- V _{out}
11, 14	+ V _{out}
12, 13	- V _{in}
OTHERS	NC

S



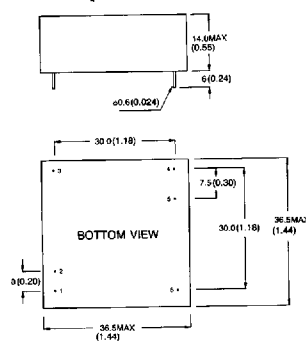
PIN	FUNCTION
1	+ V _{in}
2	+ V _{out}
3	- V _{out}
4	- V _{in}

SE



PIN	FUNCTION
1	+ V _{in}
2	+ V _{out}
3	- V _{out}
4	- V _{in}
5	ENABLE

T



PIN	FUNCTION
1	+ V _{in}
2	- V _{in}
3	NC
4	- V _{out}
5	+ V _{out}
6	NC