

1.5W/3W DC/DC CONVERTERS

SPECIFICATIONS:

Typical (@ 25°C Under Full Load and Nominal Input Voltage Unless Otherwise Specified)

INPUT

Input Voltage:9-36 VdC
18-72 VdC
 Input Filter:Pi Network

OUTPUT

Voltage Accuracy:± 4% Max
 Line Regulation (@ Full Load):± 1% Max
 Load Regulation (@ Full Load to
 1/4 Load):+ VdC ± 1% Max
- VdC ± 2.5% Max
 Temperature Coefficient (@ Full Load):0.02%/°C Max
 Ripple and Noise (20 MHz BW):150 mVP-P Max
 Short Circuit Protection Fold Back

GENERAL

Efficiency (@ Full Load):65%
 Isolation Voltage:500 Vrms Min.
 Isolation Resistance:1000 Mohms
 Switching Frequency:50KHz Min.

PHYSICAL

Operating Temperature:-20°C to +71°C
 Storage Temperature:-40°C to +105°C
 Derating:None
 Relative Humidity:Up to 95%
 Cooling:Free Air Convection
 Case Material:Non Conductive Plastic Case
 Weight:0.8 oz. (22 grams)

1.5W DC/DC CONVERTER

	INPUT VOLTAGE (VdC)	OUTPUT VOLTAGE (VdC)	OUTPUT CURRENT (mA)	MODEL NO.	CASE	PRICE 1-9 QTY.
SINGLE VOLTAGE	9-36	5	300	TWB1.8-12S5	B	\$42.00
		12	125	TWB1.8-12S12	B	\$42.00
		15	100	TWB1.8-12S15	B	\$42.00
	18-72	5	300	TWB1.8-24S5	B	\$42.00
		12	125	TWB1.8-24S12	B	\$42.00
		15	100	TWB1.8-24S15	B	\$42.00
DUAL VOLTAGE	9-36	±5	±150	TWB1.8-12-5	B	\$48.00
		±12	±60	TWB1.8-12-12	B	\$48.00
		±15	±50	TWB1.8-12-15	B	\$48.00
	18-72	±5	±150	TWB1.8-24-5	B	\$48.00
		±12	±60	TWB1.8-24-12	B	\$48.00
		±15	±50	TWB1.8-24-15	B	\$48.00

3W DC/DC CONVERTER

	INPUT VOLTAGE (VdC)	OUTPUT VOLTAGE (VdC)	OUTPUT CURRENT (mA)	MODEL NO.	CASE	PRICE 1-9 QTY.
SINGLE VOLTAGE	9-36	5	500	TWB3-12S5	B	\$49.00
		12	250	TWB3-12S12	B	\$49.00
		15	200	TWB3-12S15	B	\$49.00
	18-72	5	500	TWB3-24S5	B	\$49.00
		12	250	TWB3-24S12	B	\$49.00
		15	200	TWB3-24S15	B	\$49.00
DUAL VOLTAGE	9-36	±5	±250	TWB3-12-5	B	\$54.00
		±12	±125	TWB3-12-12	B	\$54.00
		±15	±100	TWB3-12-15	B	\$54.00
	18-72	±5	±250	TWB3-24-5	B	\$54.00
		±12	±125	TWB3-24-12	B	\$54.00
		±15	±100	TWB3-24-15	B	\$54.00

5W, 10W DC/DC CONVERTERS

SPECIFICATIONS: Typical (at 25°C Under Full Load and Nominal Input Voltage Unless Otherwise Specified)

INPUT

Input Voltage 9-36 VdC
 18-72 VdC
 Input Filter PI Network

OUTPUT

Voltage Accuracy: + Output $\pm 1.5\%$
 - Output $\pm 2\%$
 Line Regulation: 10W, 15W Series: $\pm 1\%$ Max
 5W Series: $\pm 0.5\%$ Max
 Load Regulation: 5W Series: $\pm 1\%$ Max
 10W Series: Single: $\pm 1\%$ Max
 Dual: $\pm 2\%$ Max
 15W Series: Single: $\pm 0.5\%$ Max
 Dual: $\pm 2\%$ Max
 Ripple and Noise (20 MHz BW): 1% P-P Max

Transient Response (Full Load to
 1/2 Load): 20m Sec Max to
 1% of Final Value

Over Voltage Protection Built-in
 Short Circuit Protection Fold Back

GENERAL

Efficiency: 5W Series 72%
 10W Series 80%
 15W Series 86%
 Isolation Voltage: 500 VdC Min
 Isolation Resistance: 10^9 Ohms
 Switching Frequency: 5W and 10W Series: 50-70 KHz
 15W Series: 100 KHz

ENVIRONMENTAL:

Operating Temperature: - 25°C to + 71°C
 Storage Temperature: - 55°C to + 105°C
 Temperature Coefficient: 0.02% / °C Max
 Cooling: Free Air Convection
 EMI/RFI: Six Sided Continuous Metal Shield

PHYSICAL:

Case Size: 2"x2"x0.4" (50.8x50.8x10.2mm)
 Case Material: Black Coated Copper with Non
 Conductive Metal Base
 Weight: 3 oz. (9 grams)

5W DC/DC CONVERTER

	INPUT VOLTAGE (VdC)	OUTPUT VOLTAGE (VdC)	OUTPUT CURRENT (mA)	MODEL NO.	CASE	PRICE 1-9 QTY.
SINGLE VOLTAGE	9-36	5	1000	Y5-12S5	B2	\$74.00
		12	417	Y5-12S12	B2	\$74.00
		15	334	Y5-12S15	B2	\$74.00
	18-72	5	1000	Y5-24S5	B2	\$74.00
		12	417	Y5-24S12	B2	\$74.00
		15	334	Y5-24S15	B2	\$74.00
DUAL VOLTAGE	9-36	± 5	± 500	Y5-12-5	B2	\$79.00
		± 12	± 210	Y5-12-12	B2	\$79.00
		± 15	± 170	Y5-12-15	B2	\$79.00
	18-72	± 5	± 500	Y5-24-5	B2	\$79.00
		± 12	± 210	Y5-24-12	B2	\$79.00
		± 15	± 170	Y5-24-15	B2	\$79.00

10W DC/DC CONVERTER

	INPUT VOLTAGE (VdC)	OUTPUT VOLTAGE (VdC)	OUTPUT CURRENT (mA)	MODEL NO.	CASE	PRICE 1-9 QTY.
SINGLE VOLTAGE	9-36	5	2000	Y10-12S5	B2	\$88.00
		12	840	Y10-12S12	B2	\$88.00
		15	664	Y10-12S15	B2	\$88.00
	18-72	5	2000	Y10-24S5	B2	\$88.00
		12	840	Y10-24S12	B2	\$88.00
		15	664	Y10-24S15	B2	\$88.00
DUAL VOLTAGE	9-36	± 5	± 1000	Y10-12-5	B2	\$93.00
		± 12	± 420	Y10-12-12	B2	\$93.00
		± 15	± 332	Y10-12-15	B2	\$93.00
	18-72	± 5	± 1000	Y10-24-5	B2	\$93.00
		± 12	± 420	Y10-24-12	B2	\$93.00
		± 15	± 332	Y10-24-15	B2	\$93.00

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15W & 25W TRIPLE VOLTAGE DC/DC CONVERTERS

SPECIFICATIONS: Typical @ 25°C Under Full Load and Nominal Input Voltage Unless Otherwise Specified

15W DC/DC CONVERTER TRIPLE VOLTAGE

INPUT

Input Voltage: 9-36 VdC
 18-72 VdC
 Input Filter PI Network

OUTPUT

Voltage Accuracy: (+ V1 & - V2): $\pm 2\%$ Max
 (+ V3): $\pm 3\%$ Max
 Line Regulation (@ Full Load): $\pm 1\%$ Max
 Load Regulation (@ Full Load to
 1/2 Load): $\pm 2\%$ Max
 Ripple and Noise (20MHz BW) 200 mVP-P
 Transient Response (Full Load to
 1/2 Load) 200m SEC Max
 to 1% of Final Value

Short Circuit Fold Back
 Over Voltage Protection Built-in

GENERAL

Efficiency (@ Full Load): 80%
 Isolation Voltage: 500 VdC Min.
 Isolation Resistance: 1000 MOhms
 Switching Frequency: 50KHz Min.

ENVIRONMENTAL:

Operating Temperature Range: -25°C to +71°C
 Storage Temperature Range: -55°C to +125°C
 Cooling: Free Air Convection
 EMI/RFI: Six Sided Continuous Metal Shield

PHYSICAL:

Case Size: 3"x2.60"x 0.40"
 (76.2 x 66.0 x 20.8mm)
 Case Material: Black Coated Copper With
 Non-Conductive Metal Base
 Weight: 10 oz. (280 grams)

	INPUT VOLTAGE (VdC)	OUTPUT VOLTAGE (VdC)	OUTPUT CURRENT (mA)	MODEL NO.	CASE	PRICE 1-9 QTY.
TRIPLE VOLTAGE	9-36	5 / ± 12	1500 / ± 310	Y15-12S5-12	J1	\$114.00
		5 / ± 15	1500 / ± 250	Y15-12S5-15	J1	\$114.00
		12 / + 5 / - 5	300 / 1500 / 500	Y15-12S12-5	J1	\$114.00
	18-72	5 / ± 12	1500 / ± 310	Y15-24S5-12	J1	\$114.00
		5 / ± 15	1500 / ± 250	Y15-24S5-15	J1	\$114.00
		12 / + 5 / - 5	300 / 1500 / 500	Y15-24S12-5	J1	\$114.00

25W/30W DC/DC CONVERTER TRIPLE VOLTAGE

INPUT

Input Voltage: 9-36 VdC
 18-72 VdC
 Input Filter: PI Network
 Overvoltage Shutdown: 20 VdC, 40 VdC or 74 VdC
 Undervoltage Shutdown: 8 VdC
 Remote On/Off Control: Supply On = 5.5 VdC or
 Open Circuit
 Supply Off = 0-0.8 VdC
 Logic Input Reference: To Minus Input
 Logic Compatibility: TTL or CMOS

OUTPUT:

Voltage Accuracy: (+ V1, - V2): $\pm 2\%$ Max
 (+ V3): $\pm 3\%$ Max
 $\pm 1\%$ Max
 Line Regulation (@ Full Load): $\pm 1\%$ Max
 Load Regulation (Full Load to
 1/2 Load): $\pm 2\%$ Max
 Temperature Coefficient (@ Full Load): 0.02%/°C Max
 Transient Recovery Time (Full Load to
 1/2 Load): 20m SEC Max
 to 1% of final value
 Ripple and Noise (20MHz BW): 1% P-P Max
 Short Circuit Protection: Fold Back
 Overvoltage Protection: Built-in

GENERAL:

Efficiency (@ Full Load): 84%
 Isolation Voltage: 500 VdC Min
 Isolation Resistance: 1000 MOhms
 Switching Frequency: 100 KHz

ENVIRONMENTAL:

Operating Temperature: -25°C to +71°C
 Storage Temperature: -55°C to +125°C
 Derating: None
 Relative Humidity: Up to 95%
 Cooling: Free Air Convection
 EMI/RFI: Six Sided Continuous
 Metal Shield

PHYSICAL:

Case Size: J1: 3" x 2.60" x 0.40"
 (76.2 x 66.0 x 10.2 mm)
 JY: 3" x 2.60" x 0.82"
 Case Material: Black Coated Copper With
 Non-Conductive Metal Base
 Weight: J1: 5 oz. (156 grams)
 JY: 10 oz. (280 grams)

	INPUT VOLTAGE (VdC)	OUTPUT VOLTAGE (VdC)	OUTPUT CURRENT (mA)	MODEL NO.	CASE	PRICE 1-9 QTY.
TRIPLE VOLTAGE	9-36	5 / ± 12	3000 / ± 600	Y30-12S5-12	JY	\$132.00
		5 / ± 12	3000 / ± 600	Y30-12S5-12-J1	J1	\$142.00
		5 / ± 15	3000 / ± 500	Y30-12S5-15	JY	\$132.00
		5 / ± 15	3000 / ± 500	Y30-12S5-15-J1	J1	\$142.00
		+ 5 / + 12 / - 5	3000 / 600 / 1000	Y30-12S12-5	JY	\$132.00
		+ 5 / + 12 / - 5	3000 / 600 / 1000	Y30-12S12-5-J1	J1	\$142.00
	18-72	5 / ± 12	3000 / ± 600	Y30-24S5-12	JY	\$132.00
		5 / ± 12	3000 / ± 600	Y30-24S5-12-J1	J1	\$142.00
		5 / ± 15	3000 / ± 500	Y30-24S5-15	JY	\$132.00
		5 / ± 15	3000 / ± 500	Y30-24S5-15-J1	J1	\$142.00
		+ 5 / + 12 / - 5	3000 / 600 / 1000	Y30-24S12-5	JY	\$132.00
		+ 5 / + 12 / - 5	3000 / 600 / 1000	Y30-24S12-5-J1	J1	\$140.00

25W DC/DC CONVERTERS

SPECIFICATIONS:

Typical @ 25°C Under Full Load and Nominal Input Voltage Unless Otherwise Specified

INPUT

Voltage Range: 9-36 VdC
18-72 VdC

OUTPUT

Voltage Accuracy: Single $\pm 1\%$
Dual $\pm 1\%$ (w/Balance Load)
Line Regulation: Case JY: $\pm 0.02\%$ Max
Case JI: Single: $\pm 0.05\%$ Max
Dual: $\pm 1\%$ Max
Load Regulation: Case JY: Single $\pm 1\%$ Max
Dual: $\pm 2\%$ Max
Case JI: Single $\pm 0.5\%$
Dual: $\pm 2\%$ Max

Ripple and Noise (20 MHz BW): 0.5 — 1% P-P Max

Over Voltage Protection: Built-in

Short Circuit Protection: Fold Back

GENERAL

Efficiency: Case JY: 82%
Case JI: 84%
Isolation Voltage: 500 VdC
Isolation Resistance: 10^9 Ohms
Switching Frequency: 100KHz

ENVIRONMENTAL

Operating Temperature: — 25°C to + 71°C
Storage Temperature: — 55°C to + 105°C
Temperature Coefficient (@ Full Load): 0.02%°C Max
Cooling: Free Air Convection
EMI/RFI: Six Sided Continuous
Metal Case

PHYSICAL:

Case Material: Black Coated Copper with Non-Conductive Base

Case Size: Case JY: 3" x 2.60" x 0.82" (76.2 x 66.0 x 20.83mm)

Case JI: 3" x 2.60" x 0.40" (76.2 x 66.0 x 10.2mm)

Weight: Case JY: 10 oz. (280 grams)

Case JI: 5 oz (156 grams)

Remote On/Off Control Supply On = 5.5V or Open Circuit, Supply Off = 0-0.8V

Logic Input Reference to Minus Input

25/30W DC/DC CONVERTER

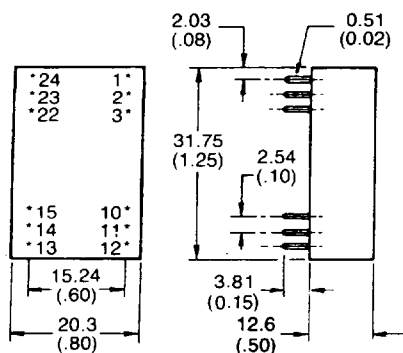
	INPUT VOLTAGE (VdC)	OUTPUT VOLTAGE (VdC)	OUTPUT CURRENT (mA)	MODEL NO.	CASE	PRICE 1-9 QTY.
SINGLE VOLTAGE	9-36	5	5000	Y25-12S5	JY	\$118.00
		5	5000	Y25-12S5-JI	JI*	\$128.00
		12	2500	Y25-12S12	JY	\$118.00
		12	2500	Y25-12S12-JI	JI*	\$128.00
		15	2000	Y25-12S15	JY	\$118.00
		15	2000	Y25-12S15-JI	JI*	\$128.00
	18-72	5	5000	Y25-24S5	JY	\$118.00
		5	5000	Y25-24S5-JI	JI*	\$128.00
		12	2500	Y25-24S12	JY	\$118.00
		12	2500	Y25-24S12-JI	JI*	\$128.00
DUAL VOLTAGE	9-36	15	2000	Y25-24S15	JY	\$118.00
		15	2000	Y25-24S15-JI	JI*	\$128.00
		± 12	± 1250	Y25-12-12	JY	\$123.00
		± 12	± 1250	Y25-12-12-JI	JI*	\$133.00
	18-72	± 15	± 1000	Y25-12-15	JY	\$123.00
		± 15	± 1000	Y25-12-15-JI	JI*	\$133.00
		± 12	± 1250	Y25-24-12	JY	\$123.00
		± 12	± 1250	Y25-24-12-JI	JI*	\$133.00
		± 15	± 1000	Y25-24-15	JY	\$123.00
		± 15	± 1000	Y25-24-15-JI	JI*	\$133.00

*LOW PROFILE PACKAGE

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CASE B

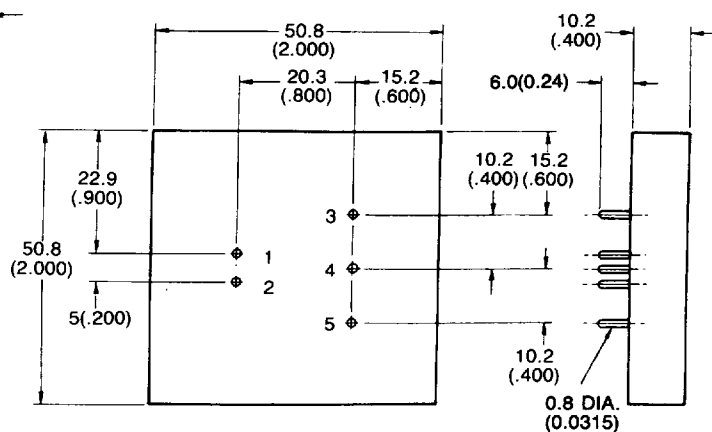


PIN	SINGLE	DUAL
1 & 24	+ INPUT	+ INPUT
2 & 23	NO PIN	— OUTPUT
3 & 22	NO PIN	COMMON
10 & 15	— OUTPUT	COMMON
11 & 14	+ OUTPUT	+ OUTPUT
12 & 13	— INPUT	— INPUT

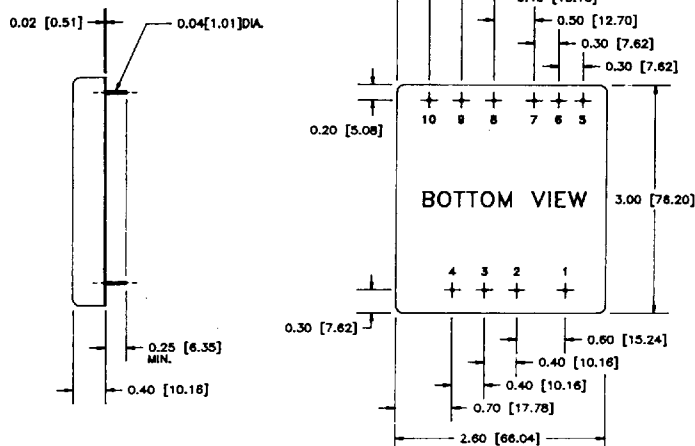
CASE B2

PIN	SINGLE	DUAL
1	+ INPUT	+ INPUT
2	— INPUT	— INPUT
3	+ OUTPUT	+ OUTPUT
4	NO PIN*	COMMON
5	— OUTPUT	— OUTPUT

*TRIM FOR 10W, 15W SERIES



CASE JI

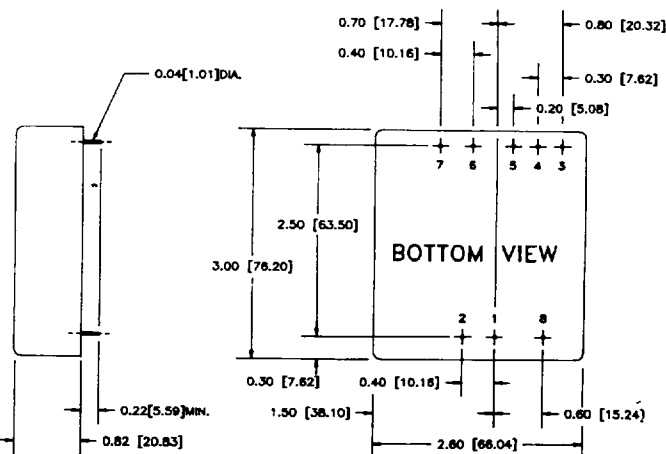


PIN	SINGLE OUTPUT	DUAL OUTPUT	TRIPLE
1	REMOTE ON/OFF	REMOTE ON/OFF	PIN
2	+ INPUT	+ INPUT	+ INPUT
3	— INPUT	— INPUT	— INPUT
4	NO PIN	NO PIN	NO PIN
5	NO PIN	+ OUTPUT	+ OUTPUT
6	OUTPUT TRIM	COMMON	COMMON
7	NO PIN	— OUTPUT	— OUTPUT
8	+ OUTPUT	OUTPUT TRIM	+5V OUTPUT
9	— OUTPUT	NO PIN	NO PIN
10	NO PIN	NO PIN	NO PIN

CASE JY

PIN CONNECTIONS

PIN	SINGLE	DUAL	TRIPLE
1	+ INPUT	+ INPUT	+ INPUT
2	— INPUT	— INPUT	— INPUT
3	NO PIN	+ OUTPUT	+ OUTPUT
4	OUTPUT TRIM	COMMON	COMMON
5	NO PIN	— OUTPUT	— OUTPUT
6	+ OUTPUT	NO PIN	+5V OUTPUT
7	— OUTPUT	NO PIN	NO PIN
8	REMOTE ON/OFF	REMOTE ON/OFF	REMOTE ON/OFF



BOTTOM VIEW