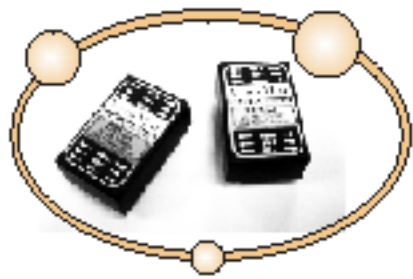




# 3Watt DC to DC Converters



## FEATURES

- 24-Pin DIP Package
- Efficiency to 80%
- 2:1 & 4:1 Input Range
- Regulated Output

## SPECIFICATIONS

All Specifications are Typical at Nominal Line, Full Load and 25°C Unless Otherwise Noted.

- Input Voltage Range:..... See Note
- Input Filter..... Pi Type
- Voltage Accuracy:.....  $\pm 2\%$  max.
- Voltage Balance (Dual):.....  $\pm 1\%$  max.
- Temperature Coefficient:.....  $\pm 0.05\%$  / °C
- Ripple and Noise, 20MHz BW 5V/3.3V 100mVp-p max  
..... 12/15V..... 1%p-p max
- Short Circuit Protection:..... Continuous
- Line Regulation, Single/Dual:.. (HL-LL).....  $\pm 0.5\%$  max
- Load Regulation, Single:.... (FL-10%FL).....  $\pm 0.5\%$  max  
Dual... (FL-25%FL).....  $\pm 1.0\%$  max
- Efficiency:..... See Table
- Isolation Resistance:..... 10<sup>9</sup>Ω min
- Switching Frequency:..... 100KHz, min
- Operating Temperature Range:..... -25°C to +71°C
- Storage Temperature Range:..... -40°C to +100°C
- EMI/RFI (optional)..... EMI meet EN55022 Class B
- Dimension:..... (31.8x20.3x10.2mm)  
(Class B Models)..... (31.8x20.3x12.7mm)
- Case Material.. Standard Model.. Black Plastic Optional  
Black Coated Copper With Non-Conductiv Base.

- Pi Input Filter
- Continuous Short Circuit Protection
- EMI meet En55022 Class B (Option)
- Remote On/off (Option)

## MODEL LIST

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	%EFF	CASE
E03-X0(B/M/M1/P 3/T)	See Note	3.3VDC	600mA	64 min	D
E03-X1(B/M/M1/P 3/T)	See Note	5VDC	600mA	73 min	D
E03-X2(B/M/M1/P 3/T)	See Note	12VDC	250mA	78 min	D
E03-X3(B/M/M1/P 3/T)	See Note	15VDC	200mA	78 min	D
E03-X4(B/M/M1/P 3/T)	See Note	$\pm 5$ VDC	$\pm 300$ mA	73 min	D
E03-X5(B/M/M1/P 3/T)	See Note	$\pm 12$ VDC	$\pm 125$ mA	78 min	D
E03-X6(B/M/M1/P 3/T)	See Note	$\pm 15$ VDC	$\pm 100$ mA	78 min	D

Note:

Input Voltage "x":

- X=0, Input Voltage: 5VDC  $\pm 10\%$
- X=1, Input Voltage: 9~18VDC, Nominal=12VDC
- X=2, Input Voltage: 18~36VDC, Nominal=24VDC
- X=3, Input Voltage: 36~72VDC, Nominal=48VDC
- X=4, Input Voltage: 9~36VDC, Nominal=24VDC
- X=5, Input Voltage: 18~72VDC, Nominal=48VDC

Model Number Suffix

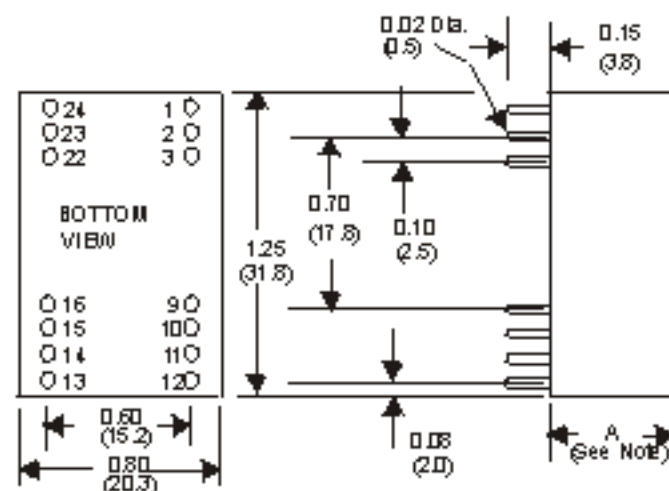
- "B": Optional for EN55022 Class B, For Input Range 2:1 Only.
- "M": Optional for 500V I/O Isolation With metal Case.
- "M1": Optional for 1.5KV I/O Isolation With metal Case.
- "P 3": Optional for 3KV I/O Isolation With Plastic Case.
- "T": Optional Remote On/Off For Class B version,  
M1/P 3 Models Only.
- Dual Output Models With Separate Output available.
- UL Approved Models Optional For Input Range 2:1 & Class B  
Version With Isolation 1.5KV/3KV Models Only.

## CASE D

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All Dimensions in Inches (mm)

PIN CONNECTION			PIN CONNECTION		
500VDC			1.5K/3K VDC		
PIN	SINGLE	DUAL	PIN	SINGLE	DUAL
1	+V Input	+V Input	1	NP	NP
2	NC	-V Output	2	-V Input	-V Input
3	NC	Common	3	-V Input	-V Input
5	NP	NP	5	NP or Remote On/Off	
9	NP	NP	9	NC	Common
10	-V Output	Common	10	NC	NC
11	+V Output	+V Output	11	NC	-V Output
12	-V Input	-V Input	12	NP	NP
13	-V Input	-V Input	13	NP	NP
14	+V Output	+V Output	14	+V Output	+V Output
15	-V Output	Common	15	NC	NC
16	NP	NP	16	-V Output	Common
22	NC	Common	22	+V Input	+V Input
23	NC	-V Output	23	+V Input	+V Input
24	+V Input	+V Input	24	NP	NP



Note:

- A=0.40(10.2) For Standard or Input Range 4:1 Models.
- A=0.50(12.7) For Class B Version.

All Dimensions in Inches (mm)

Remote On/Off Control	
Logic Compatibility.....	CMOS or Open Collector TTL
EC-On.....	>+5.5VDC or Open Circuit
EC-Off.....	<1.8VDC
Shutdown Idle Current.....	10mA
Input Resistance.....	100K ohms (Ein 0VDC to 9VDC)
Control Common.....	Referenced to Input Minus

