



### 3 Watts DIP Type DC - DC Converter

#### FEATURES

- ◆ 24-Pin DIP Package
- ◆ Efficiency 70 ~ 87%
- ◆ 2:1 & 4:1 Input Range
- ◆ Regulated Output
- ◆ Remote On/off (Option)
- ◆ Pi Input Filter
- ◆ Continuous Short Circuit Protection
- ◆ Meet EMI EN55022 Class B, Conducted (Option)
- ◆ Wide range temp. range (-E model)

#### SPECIFICATIONS

Input Voltage Range.....See Note  
 Input Filter..... Pi Type  
 Voltage Accuracy..... ± 2% max.  
 Voltage Balance(Dual)..... ± 1% max.  
 Temperature Coefficient..... ± 0.05%/°C  
 Ripple and Noise, 20MHz BW ..... (3.3V/5V) ..... 100mVp-p max.  
 (12/15V) ..... 1% pk-pk max.  
 Short Circuit Protection.....Continuous  
 Line Regulation.....Single/Dual.....(HL-LL)..... ± 0.5% max.  
 Load Regulation.....Single.....(FL-10%FL)..... ± 0.5% max.  
 Dual.....(FL-25%FL)..... ± 1.0% max.  
 Isolation Resistance..... 10<sup>9</sup> Ω min.  
 Switching Frequnc.....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  
 Case Material.....Non-Conductive Black Plastic  
 Dimension:(Standard): 31.8x20.3x10.2 mm / SMD : 31.8x20.3x11.4 mm  
 (Class B model) :31.8x20.3x12.7 mm / SMD : 31.8x20.3x14.0 mm  
 Weight .....12.5g

Model Number	Input Voltage	Output Voltage (VDC)	Output Current (mA)
E03-x0 (B/M/M1/P3/T/S/E)	See Note	3.3	600
E03-x1 (B/M/M1/P3/T/S/E)	See Note	5	600
E03-x2 (B/M/M1/P3/T/S/E)	See Note	12	250
E03-x3 (B/M/M1/P3/T/S/E)	See Note	15	200
E03-x4 (B/M/M1/P3/T/S/E)	See Note	± 5	± 300
E03-x5 (B/M/M1/P3/T/S/E)	See Note	± 12	± 125
E03-x6 (B/M/M1/P3/T/S/E)	See Note	± 15	± 100

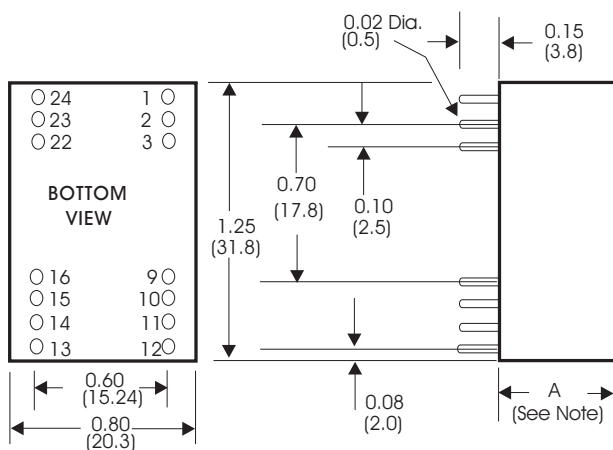
**Note:**

- (1) x=0, Input Voltage: 4.5~6VDC
- (2) x=1, Input Voltage: 9~18VDC, Nominal=12VDC
- (3) x=2, Input Voltage: 18~36VDC, Nominal=24VDC
- (4) x=3, Input Voltage: 36~72VDC, Nominal=48VDC
- (5) x=4, Input Voltage: 9~36VDC, Nominal=24VDC
- (6) x=5, Input Voltage: 18~72VDC, Nominal=48VDC

**Model Number Suffix:**

- (1) "B": Optional for EN55022 Class B, For Input Range 2:1 Only.
- (2) "M": Optional for 500V I/O Isolation With metal Case.
- (3) "M1": Optional for 1.5KV I/O Isolation With metal Case.
- (4) "P3": Optional for 3KV I/O Isolation With Plastic Case.
- (5) "T": Remote On/Off for Class B version, M1/P3 models only.
- (6) "S": for SMD type
- (7) "E": for -40°C to +85°C operating temperature
- (8) UL Approved Models Optional For Input Range 2:1 & Class B Version With Isolation 1.5KV/3KV Models Only.

#### MECHANICAL DRAWING (Unit: inch(mm))



**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)

PIN CONNECTION 500VDC		
PIN	SINGLE	DUAL
1	+Vi	+Vi
2	NC	-Vo
3	NC	Com.
5	NP	NP
9	NP	NP
10	-Vo	Com.
11	+Vo	+Vo
12	-Vi	-Vi
13	-Vi	-Vi
14	+Vo	+Vo
15	-Vo	Com.
16	NP	NP
22	NC	Com.
23	NC	-Vo
24	+Vi	+Vi

PIN CONNECTION 1.5K/3K VDC		
PIN	SINGLE	DUAL
1	NP	NP
2	-Vi	-Vi
3	-Vi	-Vi
5	NP or Remote On/Off	
9	NC	Com.
10	NC	NC
11	NC	-Vo
12	NP	NP
13	NP	NP
14	+Vo	+Vo
15	NC	NC
16	-Vo	Com.
22	+Vi	+Vi
23	+Vi	+Vi
24	NP	NP

**Remote On/Off Control**

Logic Compatibility.....CMOS or Open Collector TTL, ref. to -Vin  
 EC-On.....> +5.5VDC or Open Circuit  
 EC-Off.....< 1.8VDC  
 Shutdown Idle Current.....10mA  
 Control Common..... Referenced to Input Minus