



H/HM Versions Only
E176177

FEATURES

- * 3W Isolated Output
- * 24-Pin DIP Package
- * Efficiency to 82%
- * 2:1 Input Range
- * Regulated Outputs
- * Pi Input Filter
- * Continuous Short Circuit Protection
- * UL60950-1 Approval for H/HM Versions only
- * Safety Meets IEC/EN/UL 62368-1



MODEL NUMBER	INPUT VOLTAGE ⁽¹⁾	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF. ⁽²⁾	CAPACITOR LOAD MAX.
				NO LOAD	FULL LOAD		
EC3A01	4.5-6 VDC	5 VDC	600 mA	15 mA	800 mA	75	2200uF
EC3A02	4.5-6 VDC	12 VDC	250 mA	15 mA	759 mA	79	2200uF
EC3A03	4.5-6 VDC	15 VDC	200 mA	15 mA	779 mA	77	2200uF
EC3A04	4.5-6 VDC	±5 VDC	±300 mA	25 mA	779 mA	77	1000uF
EC3A05	4.5-6 VDC	±12 VDC	±125 mA	25 mA	789 mA	76	1000uF
EC3A06	4.5-6 VDC	±15 VDC	±100 mA	25 mA	800 mA	75	1000uF
EC3A07	4.5-6 VDC	3.3 VDC	600 mA	15 mA	582 mA	68	2200uF
EC3A11	9-18 VDC	5 VDC	600 mA	7.5 mA	325 mA	77	2200uF
EC3A12	9-18 VDC	12 VDC	250 mA	7.5 mA	313 mA	80	2200uF
EC3A13	9-18 VDC	15 VDC	200 mA	7.5 mA	316 mA	79	2200uF
EC3A14	9-18 VDC	±5 VDC	±300 mA	12 mA	325 mA	77	1000uF
EC3A15	9-18 VDC	±12 VDC	±125 mA	12 mA	325 mA	77	1000uF
EC3A16	9-18 VDC	±15 VDC	±100 mA	12 mA	316 mA	79	1000uF
EC3A17	9-18 VDC	3.3 VDC	600 mA	7.5 mA	229 mA	72	2200uF
EC3A21	18-36 VDC	5 VDC	600 mA	5 mA	158 mA	79	2200uF
EC3A22	18-36 VDC	12 VDC	250 mA	5 mA	156 mA	80	2200uF
EC3A23	18-36 VDC	15 VDC	200 mA	5 mA	152 mA	82	2200uF
EC3A24	18-36 VDC	±5 VDC	±300 mA	7.5 mA	162 mA	77	1000uF
EC3A25	18-36 VDC	±12 VDC	±125 mA	7.5 mA	158 mA	79	1000uF
EC3A26	18-36 VDC	±15 VDC	±100 mA	7.5 mA	154 mA	81	1000uF
EC3A27	18-36 VDC	3.3 VDC	600 mA	5 mA	111 mA	74	2200uF
EC3A31	36-72 VDC	5 VDC	600 mA	2 mA	78 mA	79	2200uF
EC3A32	36-72 VDC	12 VDC	250 mA	2 mA	78 mA	80	2200uF
EC3A33	36-72 VDC	15 VDC	200 mA	2 mA	78 mA	80	2200uF
EC3A34	36-72 VDC	±5 VDC	±300 mA	3 mA	80 mA	78	1000uF
EC3A35	36-72 VDC	±12 VDC	±125 mA	3 mA	80 mA	78	1000uF
EC3A36	36-72 VDC	±15 VDC	±100 mA	3 mA	80 mA	78	1000uF
EC3A37	36-72 VDC	3.3 VDC	600 mA	3 mA	57 mA	72	2200uF

NOTE:

1. Nominal Input Voltage is 5, 12, 24 or 48VDC.
2. Typical Value at Nominal Input Voltage and Full Load.

SPECIFICATIONS

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

INPUT SPECIFICATIONS:

Input Voltage Range	5V	4.5-6V
	12V	9-18V
	24V	18-36V
	48V	36-72V
Input Surge Voltage (100ms max.)	5V	10Vdc max.
	12V	25Vdc max.
	24V	50Vdc max.
	48V	100Vdc max.
Input Filter	Pi Type	

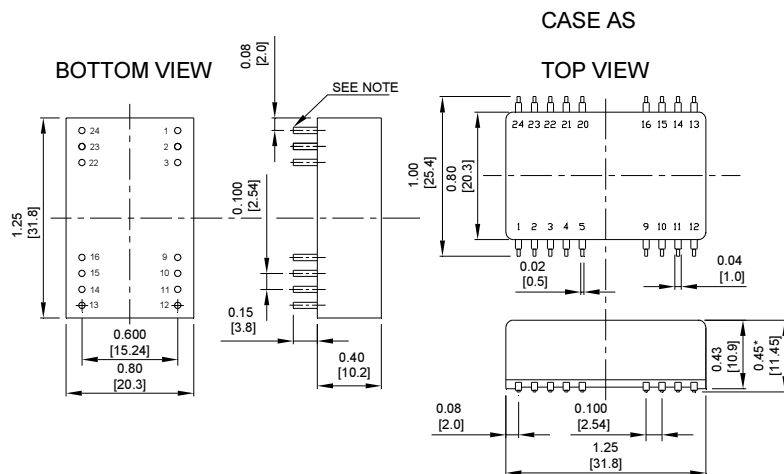
OUTPUT SPECIFICATIONS:

Voltage Accuracy	±2.0% max.	
Voltage Balance (Dual)	±1.0% max.	
Temperature Coefficient	±0.05%/°C	
Ripple & Noise, 20MHz BW	3.3V/5V	100mV pk-pk, max.
	12V/15V	1% pk-pk max.
Short Circuit Protection	Continuous	
Line Regulation	Single/Dual (note1)	±0.5% max.
Load Regulation	Single (note2)	±0.5% max.
	Dual (note2)	±1.0% max.

NOTE:

1. Measured from high line to low line.
2. Measured from full load to 10% load.
3. Measured from full load to 1/4 load.
4. Maximum case temperature under any operating condition should not be exceed 95°C (plastic case), 100°C (copper case).

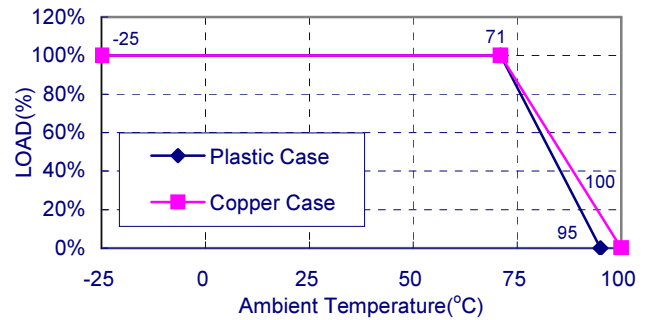
Case A Dimensions:



GENERAL SPECIFICATIONS:

Efficiency	See Table	
Isolation Voltage:	500 VDC min. Standard Models	
	3K VDC min. (Non-Conductive Black Plastic Only) Suffix "H" Models	
	1.5K VDC min. Suffix "HM" Models	
Isolation Resistance	10 ⁹ Ohm min.	
Switching Frequency	100KHz min.	
Operating Ambient Temperature Range	-25°C to +71°C	
Power De-Rating Curve	See Figure1	
Case Temperature (note4) ... Plastic/Copper case	95°C/100°C max.	
Cooling	Natural Convection	
Storage Temperature Range	-40°C to +100°C	
Humidity	95% RH max. Non Condensing	
MTBF	MIL-HDBK-217F 2000Khrs typ.	
Dimensions ... DIP	1.25×0.80×0.40 inches (31.8×20.3×10.2 mm)	
	SMD 1.25×0.80×0.45 inches (31.8×20.3×11.4 mm)	
Case Material:	Standard Models Non-Conductive Black Plastic	
	Suffix "M" Models .. Black Coated Copper with Non-Conductive Base	
	Suffix "S" Models SMD Package	
Weight	12.5g	

Figure1. Typical Derating curve for Natural Convection



PIN CONNECTION							
500 VDC				1.5K & 3K VDC			
Pin	Single Output	Dual Output		Pin	Single Output	Dual Output	
	DIP	SMD			DIP	SMD	
1,24	+V Input	+V Input		1,24	NP	NC	NP
2,23	NC	-V Output		2,3	-V Input		-V Input
3,22	NC	Common		4,5	NP	NC	NP
4	NP	NC	NP	9	NC		Common
5	NP	NC	NP	10,15	NC		NC
9	NP	NC	NP	11	NC		-V Output
10,15	-V Output	Common		12,13	NP	NC	NP
11,14	+V Output	+V Output		14	+V Output		+V Output
12,13	-V Input	-V Input		16	-V Output		Common
16	NP	NC	NP	20,21	NP	NC	NP
20,21	NP	NC	NP	22,23	+V Input		+V Input

* NP-NO PIN

* NC-NO CONNECTION WITH PIN

NOTE: Pin Size is 0.02 ±0.002 Inch (0.5±0.05 mm) DIA
All Dimensions in Inches (mm)
Tolerances: Inches: X.XX= ±0.02, X.XXX= ±0.010
Millimeters: X.X= ±0.5, X.XX= ±0.25