

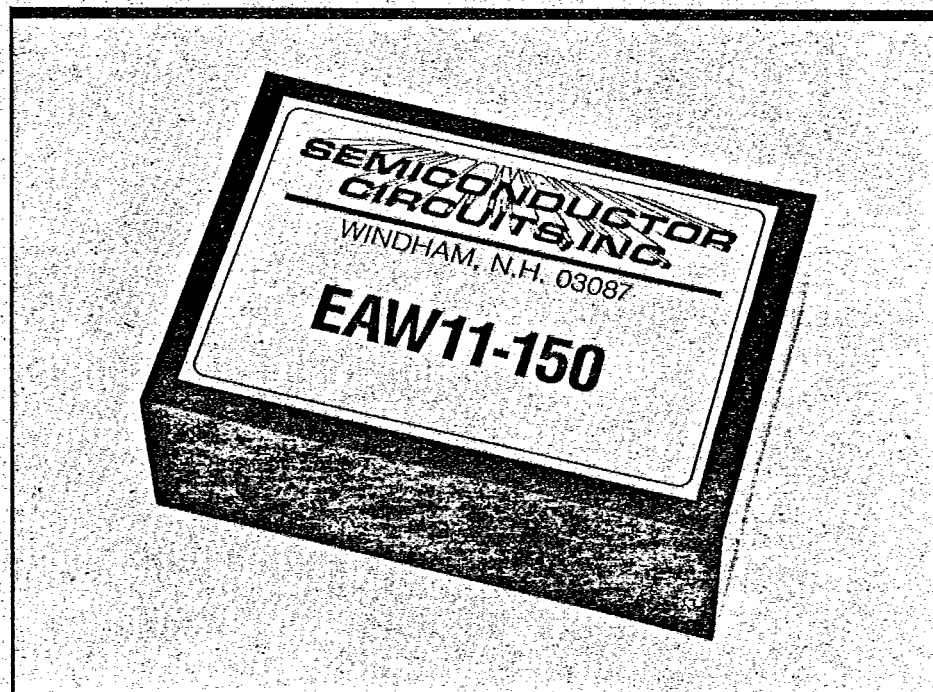
AC/DC Medical Approved Patient Contact Rated UL 544 Series

- Patient contact rated
- 2500 Vac breakdown
- Faraday shielded transformers

The UL 544 Series product listed have met the stringent requirements for Patient Contact rating as defined by Underwriters Laboratories, Inc., under UL544; STANDARD for SAFETY — MEDICAL and DENTAL EQUIPMENT. All models are recognized and listed accordingly under File E50975 of the U.L. Component Recognition Program. These units are based upon standard, reliable, product families which are specifically modified to meet the severe demands of UL544. All models utilize a Faraday shielded power transformer which holds AC leakage current down to well below the 10 μ A maximum. Effective isolation techniques give these units a higher-than-required Voltage Breakdown rating of 2500 Vac (min).

Applications

High voltage breakdown and low leakage current make these units ideally suited for medical and patient contact applications. Portable ultrasound scanners, electrocardiograph monitoring systems and microprocessor controlled blood analyzers are just a few of the many applications utilizing UL544 units. Although Underwriters Laboratories maintains strict requirements to ensure the safety of such equipment, UL544 recognized units are not limited to these applications. These units are also being incorporated in computer interface systems, copying machines (color analysis), and other applications requiring a high degree of isolation.



Specifications

INPUT

Voltage Range	105 - 125 Vac
Voltage Frequency	50 to 440 Hz
Ripple and Noise (PARD)	1 mV RMS (CM, P, PA Series) 7 mV RMS (ES, EA, EC Series)

OUTPUT

AC Leakage Current	10 μ Amps (Patient Contact rated)
Short Circuit Protection	Current Limiting (CM, P, PA Series) Power Foldback (ES, EA, EC Series)
Temperature Coefficient	0.02%/°C (typ.)

GENERAL

I/O Isolation	2500 V RMS (Patient Contact rated)
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ENVIRONMENTAL

Operating Temperature Range	-25 °C to +71 °C - No Derating
Storage Temperature Range	-40 °C to +85 °C
Cooling	Free-air Convection

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All specifications are typical at nominal line and full load at 25 °C unless otherwise noted.

UL 544 Series Ordering Information

ASTEC AMERICA/SEMICON

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Output Voltage (Vdc)	Output Current (mA)	Regulation Line (%)	Regulation Load (%)	AC Pin Spacing Inches (mm)	Pkg. (Fig.)	Model Number
5V	1000	0.05	0.1	2.0 (51)	1-B	PW11-100
		0.05	0.1	2.2 (56)	1-B	PAW11-100
		0.05	0.1	—	2-C	CMW11-100
	1500	0.15	0.15	2.0 (51)	1-B	ESW11-150
		0.15	0.15	2.2 (56)	1-B	EAW11-150
		0.15	0.15	—	2-C	ECW11-150
	3000	0.15	0.15	2.0 (51)	1-C	ESW11-300
		0.15	0.15	2.2 (56)	1-C	EAW11-300
		0.15	0.15	—	2-D	ECW11-300
	800	0.15	0.15	2.0 (51)	1-B	ESW12-080
		0.15	0.15	—	2-C	ECW12-080
		0.15	0.15	2.0 (51)	1-D	ESW12-120
		0.15	0.15	—	2-D	ECW12-120
12V	1200	0.15	0.15	2.0 (51)	1-D	ESW13-065
15V	650	0.15	0.15	—	2-D	ECW13-065
19V	1000	0.15	0.15	2.0 (51)	1-D	ESW16-100
		0.15	0.15	—	2-D	ECW16-100
±12V	±100	0.01	0.05	2.0 (51)	1-A	PW22-020
		0.01	0.05	2.0 (51)	1-B	PW22-040
		0.01	0.05	2.2 (56)	1-B	PAW22-040
	±200	0.01	0.05	—	2-C	CMW22-040
		0.01	0.05	2.0 (51)	1-A	PW23-020
		0.01	0.05	2.2 (56)	1-A	PAW23-020
±15V	±200	0.01	0.05	2.0 (51)	1-B	PW23-040
		0.01	0.05	2.2 (56)	1-B	PAW23-040
		0.01	0.05	—	2-C	CMW23-040

Dimensions and Connections

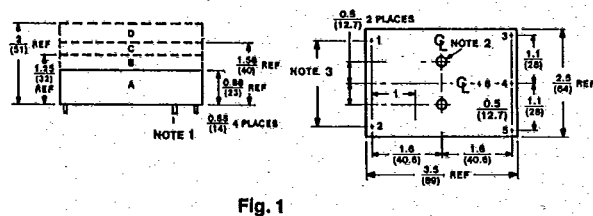


Fig. 1

Single Outputs (Fig. 1)

2.0" AC Pin Spacing

- PIN 1. AC in high
2. AC in neutral*
3. -Vdc out
4. Do not connect
5. +Vdc out

Dual Outputs

2.0" and 2.2" AC Pin Spacing

- PIN 1. AC in high
2. AC in neutral*
3. -Vdc out
4. Common out
5. +Vdc out

Single Outputs

2.2" AC Pin Spacing

- PIN 1. AC in high
2. AC in neutral*
3. Do not connect
4. -Vdc out
5. +Vdc out

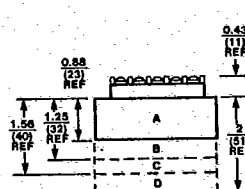


Fig. 2

Single Output (Fig. 2)

TERM

- PIN 1. AC in high
2. AC in neutral*
3. +Vdc out
4. Do not connect
5. -Vdc out

Dual Outputs

TERM

- PIN 1. AC in high
2. AC in neutral*
3. +Vdc out
4. Common out
5. -Vdc out

NOTES:

1. *Farraday shield connected internally.

*Measured with 33 MF 25V tantalum capacitor across each output.
Specifications subject to change without notice.

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