

8 / 10 Watt

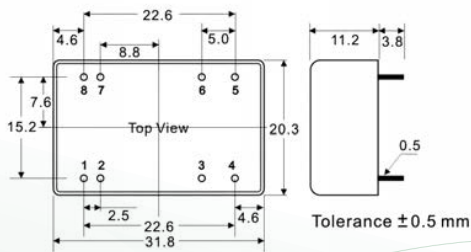
eSH08 / eSH10 Series



- ◆ Power Module for PCB Mountable
- ◆ Fully Encapsulated Plastic Case
- ◆ Regulated Output
- ◆ Low Ripple and Noise
- ◆ 3-Year Warranty

Input Specifications	eSH08	eSH10
Voltage Range	24v - 9-36 VDC 48V - 36-75 VDC	12v - 9-18 VDC 24v - 18-36VDC 48V - 18-75 VDC
Filter	π type	
Output Specifications	eSH08	eSH10
Output Power	8 Watt (max.)	10 Watt (max.)
Voltage Accuracy	$\pm 2\%$ (Full Load and Nominal Vin)	
Minimum Load	0% (at Full Load)	
Line Regulation	$\pm 0.5\%$ (LL to HL at Full Load) (typ.)	
Load Regulation (10% to 100% at Full Load)	$\pm 0.1\%$	3.3S: $\pm 0.3\%$ (typ.) others: $\pm 0.3\%$ (typ.)
Ripple (20MHz bandwidth) (Vp-p) (max.)	50mV	3.3S: 50mV 5S-24S: 1% Vout Dual: $< 0.2\%$ Vout + 20mV
Noise (20MHz bandwidth) (Vp-p) (max.)	Single 100mV Dual: $< 0.5\%$ Vout + 50mV	3.3S: 50mV 5S-24S: 1% Vout
Temperature Coefficient	$\pm 0.02\% / ^\circ\text{C}$ (max.)	
Short Circuit Protection	Current limit Auto-recovery	
General Specifications	eSH08	eSH10
Efficiency (see table list)	79% to 85%/79% to 85%	(typ.)
	300K Hz	(typ.)
Isolation Voltage	1600 VDC	(min.)
Isolation Resistance	$10^8 \Omega$ (Input to Output)	(min.)
Operating Temperature	-25°C to $+60^\circ\text{C}$ (with Derating)	
Storage Temperature	-55°C to $+105^\circ\text{C}$	
Humidity	95% RH	(max.)
Cooling	Free-air Convection	
Physical Specifications		
Dimension (Tolerance ± 0.5 mm)	31.8 x 20.3 x 11.2 mm 1.25 x 0.8 x 0.4 inches	
Weight	20 g	
Case Material	Nickel-Coated Copper with Non-Conductive Base, Six-side shielded	

Outline Dimensions & Pin Connections



Pin #	1	2	3	4	5	6	7	8
Single	-VIN	-VINNC	NC	+VOUT	-VOUT	+VIN	+VIN	+VIN
Dual	-VIN	-VIN	COMMON	-VOUT	+VOUT	COMMON	+VIN	+VIN

Model

►► eSB0B Single Output (4:1 Range)

Model & Ordering No	Input Voltage (V.AC)	Output Volgage (V.DC)	Output Current (m.A) max.	Eff (%)
eSH08-24F-3.3S	9~36	3.3	2200	79
eSH08-24F-5S	9~36	5	1600	82
eSH08-24F-12S	9~36	12	666	82
eSH08-24F-15S	9~36	15	533	81
eSH08-24F-24S	9~36	24	333	81
eSH08-48F-3.3S	18~75	3.3	2200	80
eSH08-48F-5S	18~75	5	1600	84
eSH08-48F-12S	18~75	12	666	84
eSH08-48F-15S	18~75	15	533	83
eSH08-48F-24S	18~75	24	333	83

►► eSB0B Dual Output (4:1 Range)

Model & Ordering No	Input Voltage (V.AC)	Output Volgage (V.DC)	Output Current (m.A) max.	Eff (%)
eSB08-24F-5D	9~36	± 5	± 800	82
eSB08-24F-12D	9~36	± 12	± 333	85
eSB08-24F-15D	9~36	± 15	± 267	85
eSB08-48F-5D	18~75	± 5	± 800	82
eSB08-48F-12D	18~75	± 12	± 333	85
eSB08-48F-15D	18~75	± 15	± 267	85

►► eSH10 Single Output (2:1 Range)

Model & Ordering No	Input Voltage (V.AC)	Output Volgage (V.DC)	Output Current (m.A) max.	Eff (%)
eSH10-12-3.3S	9~18	3.3	2500	82
eSH10-12-5S	9~18	5	2000	83
eSH10-12-12S	9~18	12	830	86
eSH10-12-15S	9~18	15	670	86
eSH10-12-24S	9~18	24	416	86
eSH10-24-3.3S	18~36	3.3	2500	82
eSH10-24-5S	18~36	5	2000	85
eSH10-24-12S	18~36	12	830	86
eSH10-24-15S	18~36	15	670	86
eSH10-24-24S	18~36	24	416	86
eSH10-48-3.3S	36~75	3.3	2500	82
eSH10-48-5S	36~75	5	2000	85
eSH10-48-12S	36~75	12	830	86
eSH10-48-15S	36~75	15	670	86
eSH10-48-24S	36~75	24	416	86

►► eSH10 Dual Output (2:1 Range)

Model & Ordering No	Input Voltage (V.AC)	Output Volgage (V.DC)	Output Current (m.A) max.	Eff (%)
eSH10-12-5D	9~18	± 5	± 1000	83
eSH10-12-12D	9~18	± 12	± 416	86
eSH10-12-15D	9~18	± 15	± 333	86
eSH10-24-50	18~36	± 5	± 1000	83
eSH10-24-12D	18~36	± 12	± 416	87
eSH10-24-15D	18~36	± 15	± 333	86
eSH10-48-5D	36~75	± 5	± 416	82
eSH10-48-12D	36~75	± 12	± 333	87
eSH10-48-15D	36~75	± 15	± 1000	86

Derating

