ED-2W Series

Features

- ★ Small Footprint
- ★ In-Out Isolation Voltage 3000 VDC
- ★ 14 PIN DIP Package
- ★ Temperature Range:-40℃ to +85℃
- ★ UL94V-0 Inflaming retarding package
- ★ MTBF>1million hours(25℃)

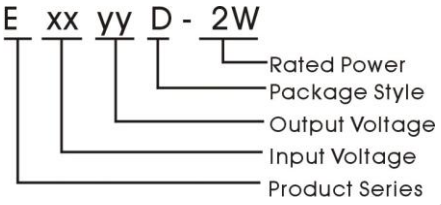
Applications

The E_D-2W Series are designed for application where isolated output is required from a distributed power system.

These products apply to where:

1) 3000 VDC input and output isolation;
2) Input voltage variation ≤ ±10%;
3) Regulated and low ripple noise is not required.

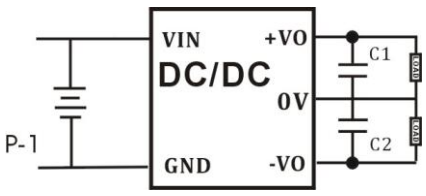
Such as: digital circuits, and IGBT power device driving circuits.



Model Detail List Specification

Model Number	Input Voltage range (nominal voltage)	Output Voltage	Output Current (mA)		Input Current Full load.(mA)		Efficiency	Max. Capacitive Load(μF)
			Min.	Max.	Max.	No.		
E0505D-2W	4.5~5.5VDC (5 VDC)	±5.0V	±20	±200	246	26	81%	200
E0509D-2W		±9.0V	±11	±111	240		83%	
E0512D-2W		±12.0V	±8	±83	237		84%	
E0515D-2W		±15.0V	±6	±67	236		85%	
E1205D-2W	10.8~13.2VDC (12 VDC)	±5.0V	±20	±200	101	22	82%	
E1209D-2W		±9.0V	±11	±111	100		83%	
E1212D-2W		±12.0V	±8	±83	98		84%	
E1215D-2W		±15.0V	±6	±67	98		85%	
E2405D-2W	21.6~26.4VDC (24 VDC)	±5.0V	±20	±200	50	18	82%	
E2409D-2W		±9.0V	±11	±111	49		84%	
E2412D-2W		±12.0V	±8	±83	48		85%	
E2415D-2W		±15.0V	±6	±67	48		86%	

Model test Circuit



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Output Specifications

Item	Test Conditions		Min.	Typ.	Max.	Unit
Output Power			0.2		2	W
Line Voltage Regulation	For Vin change of ±1%				±1.5	%
Load regulation	10% to 100% load	5V output		10	15	
		12V output		8	15	
		15V output		6	15	
		24V output		6	15	
Ripple	20MHz Bandwidth			50		mVp-p
Noise				75		
Temperature Drift	100% full load				±0.03	%/°C
Input Filter			C Filter			

Environmental Specifications

Item	Test Conditions	Min.	Typ.	Max.	Unit
Storage Humidity	Non condensing			95	%
Temp. rise at full load			25		℃
Operating Temperature	Power derating (above 85℃)	-40		+85	
Storage Temperature		-55		+125	
Soldering Temperature	1.5mm from case for 10 seconds			300	
Cooling		Free air convection			

Common Specifications

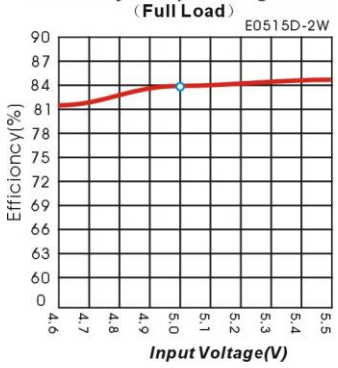
Item	Test Conditions	Min.	Typ.	Max.	Unit
Isolation Voltage	Tested for 1 minute and leakage current less than 1 mA	3000			VDC
Switching Frequency	Full load, nominal input		100	300	KHz
MTBF	MIL-HDBK-217F@25℃	1000			K hours
Isolation Resistance	Test at 500VDC	1000			MΩ
Weight			2.5		g

Input Specifications

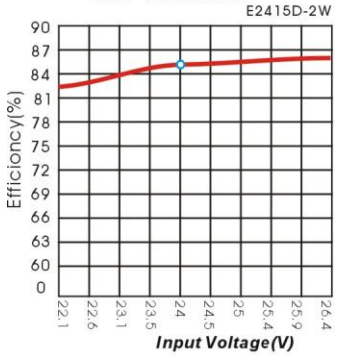
Item	Test Conditions	Min.	Typ.	Max.	Unit
Input Max. voltage	5 VDC Input (4.5~5.5V)			6	VDC
	12 VDC Input (10.8~13.2V)			14.4	
	24 VDC Input (21.6~26.4V)			28.8	
Input surge voltage (1 sec. Max.)	5 VDC Input (4.5~5.5V)	-0.8		10	
	12 VDC Input (10.8~13.2V)	-0.8		20	
	24 VDC Input (21.6~26.4V)	-0.8		32	

Product typical Curve

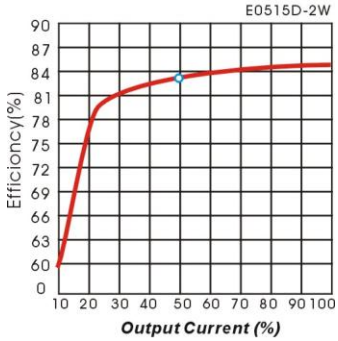
Efficiency VS Input Voltage curve
(Full Load)



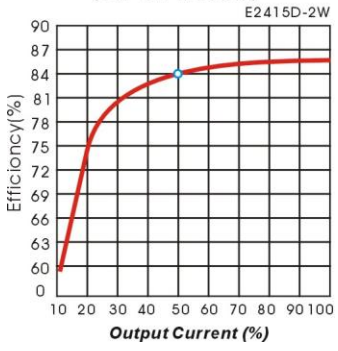
Efficiency VS Output Voltage curve
(Vin=Vin-nominl)



Output Load VS Efficiency curve
(Vin=Vin-nominal)

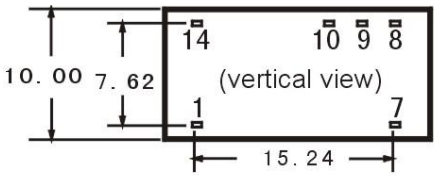


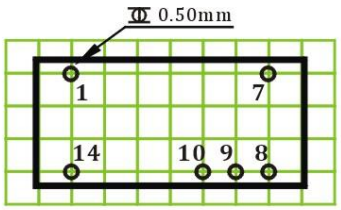
Efficiency VS Output Load curve
(Vin=Vin-nominal)

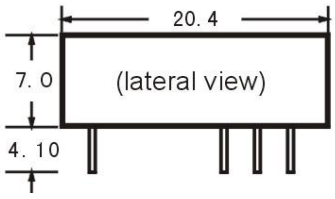


ED-2W Series

Mechanical Dimensions & Recommended Footprint



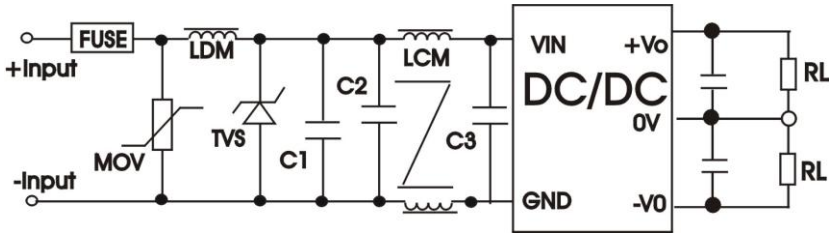




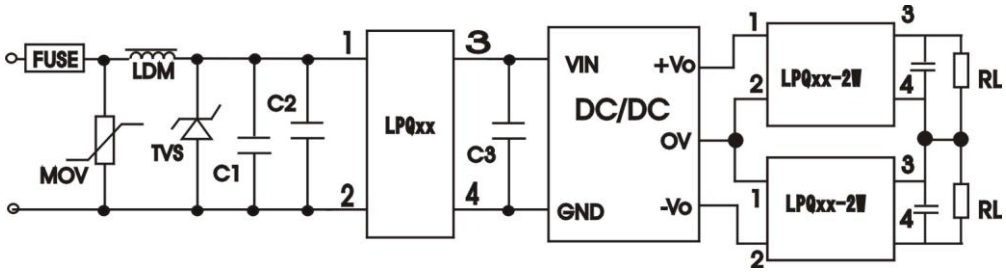
Note: Grid 2.54*2.54mm
Unit: mm
General tolerances : 0.20mm

Package	Vin	GND	-Vo	0V	+Vo	NC
ED	14	1	10	9	8	7

EMC Recommended Circuit



EMC Module Application Circuit



Tolerance Envelope Curve & Temperature Derating Graph