DESCRIPTION

13W PD(Powered Device) Integrated Module (Isolation Type)

FEATURES

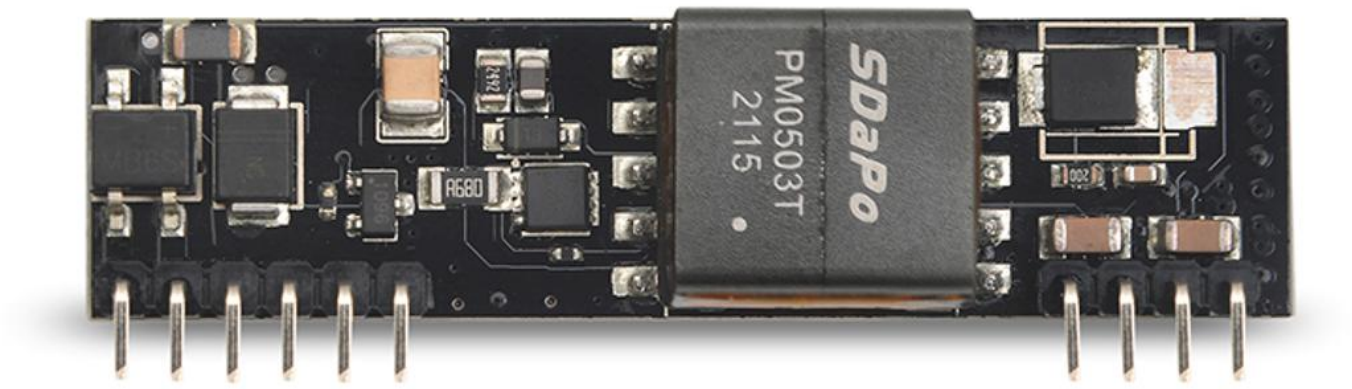
- EEE802.3af compliant.
- Low cost.
- Support PoE applications in both of Fast / Gigabit Ethernet environments.
- Support wide input voltage range 37Vdc to 57Vdc.
- Thermal cut off.
- Short circuit protection.
- Over current protection
- High DC/DC converting efficiency.
- Less external component one output decoupling capacitor.
- Isolation level 1.5KVrms.
- Enhanced surge protection
- Internal build in 2 channel bridge rectifiers

Product List

Part Number	Nominal Output Voltage / Current	Maximum Output Power	Nominal Input Voltage	Marking
DP9705	5Vdc / 2A	10W @ 25°C	48Vdc	DP9705
DP9712	12Vdc / 1A	12W @ 25°C	48Vdc	DP9712
DP9724	24Vdc/0.5A	12W @ 25°C	48Vdc	DP9724

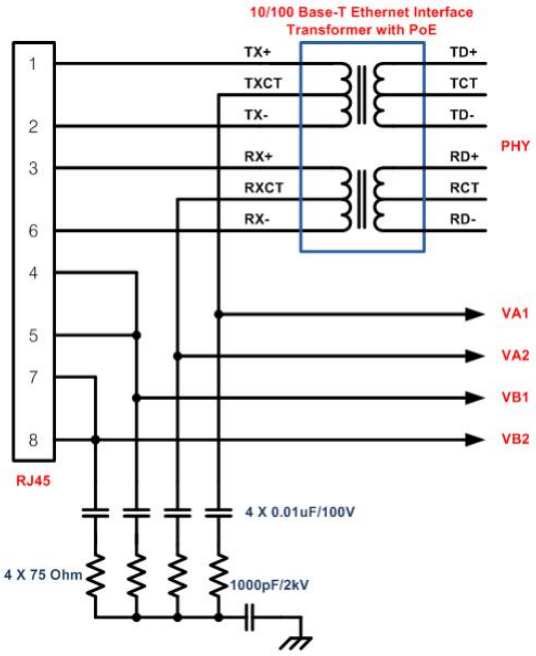
PIN ASSIGNMENT

Pin	Name	Description
1	VA1	**RX Input (1)**. This input pin is used in conjunction with VA2 and connects to the centre tap of the transformer connected to pins 1 & 2 of the RJ45 connector (RX) - it is not polarity sensitive.
2	VA2	**TX Input (2)**. This input pin is used in conjunction with VA1 and connects to the centre tap of the transformer connected to pins 3 & 6 of the RJ45 connector (TX) - it is not polarity sensitive.
3	VB1	**Direct Input (1)**. This input pin is used in conjunction with VB2 and connects to pin 4 & 5 of the RJ45 connector - it is not polarity sensitive.
4	VB2	**Direct Input (2)**. This input pin is used in conjunction with VB1 and connects to pin 7 & 8 of the RJ45 connector - it is not polarity sensitive.
5,6	NC	**No Connection**
7	-VDC	**DC Return.** This pin is the return path for the +VDC output.
8	+VDC	**DC Output.** This pin provides the regulated output from the DC/DC converter.
9,10	NC	**No Connection**

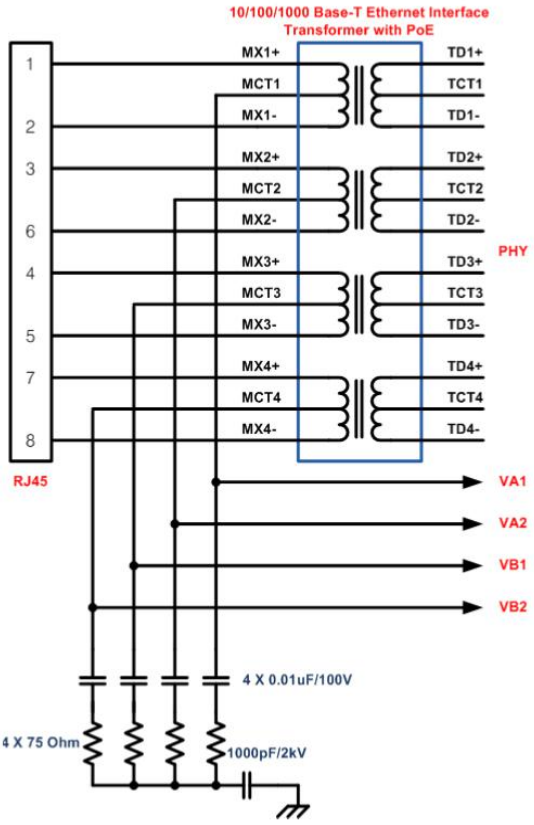


Typical Application

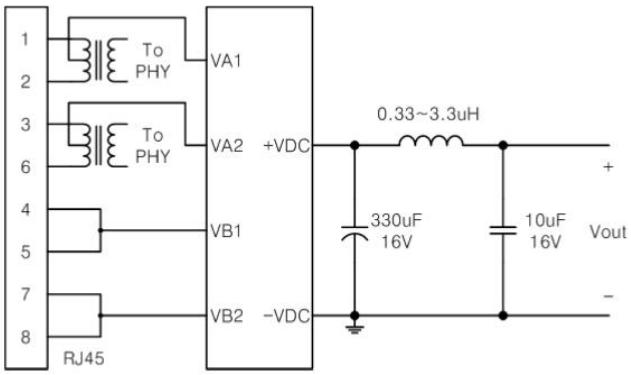
10/100 Base-T APPLICATION



10/100/1000 Base-T APPLICATION



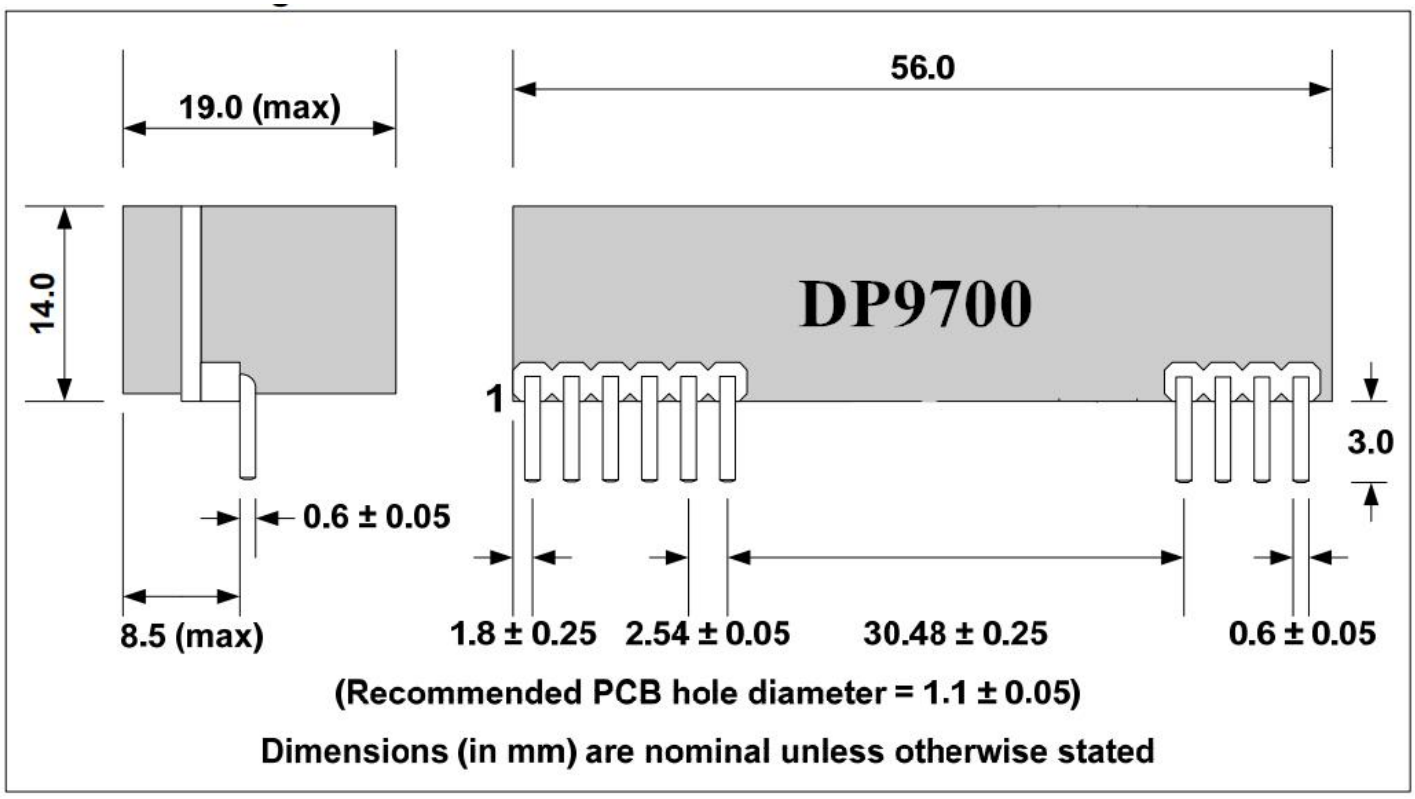
OPTIONAL EXTERNAL LC FILTER FOR LOWER RIPPLE AND NOISE

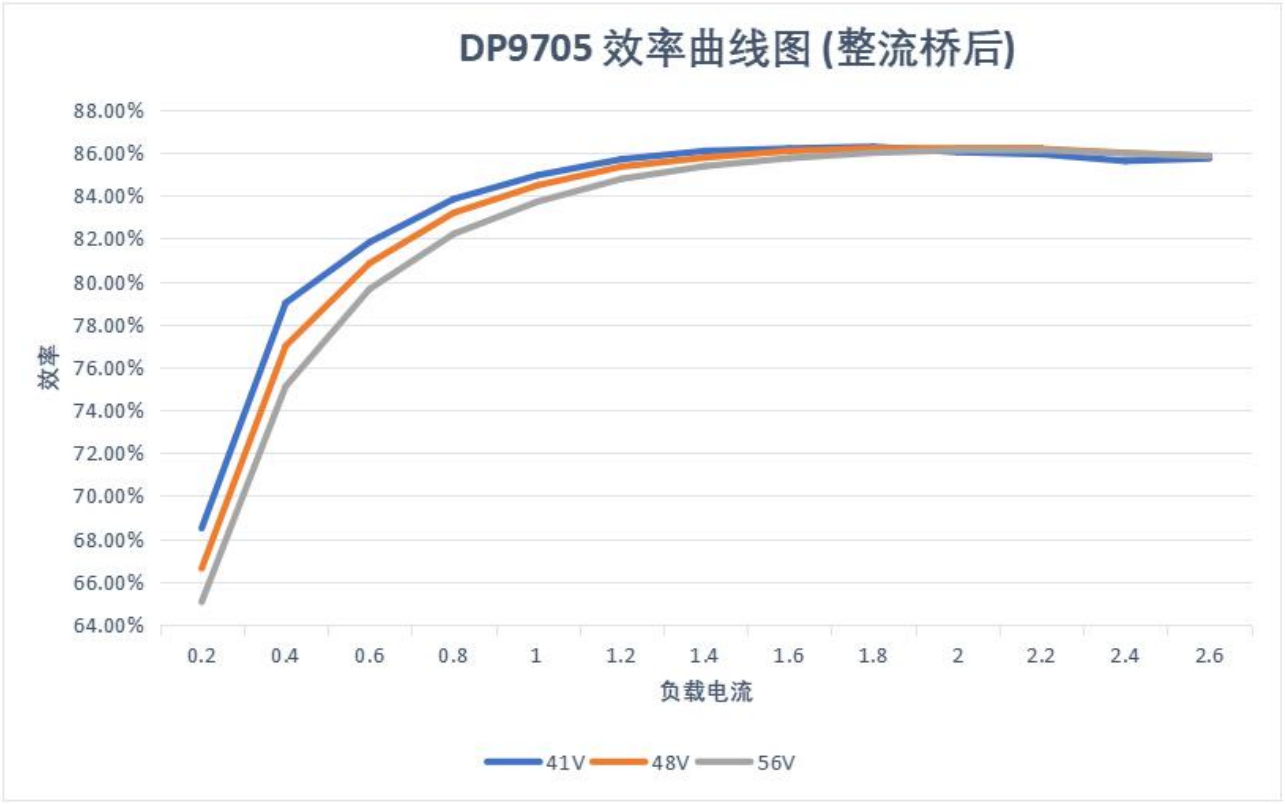


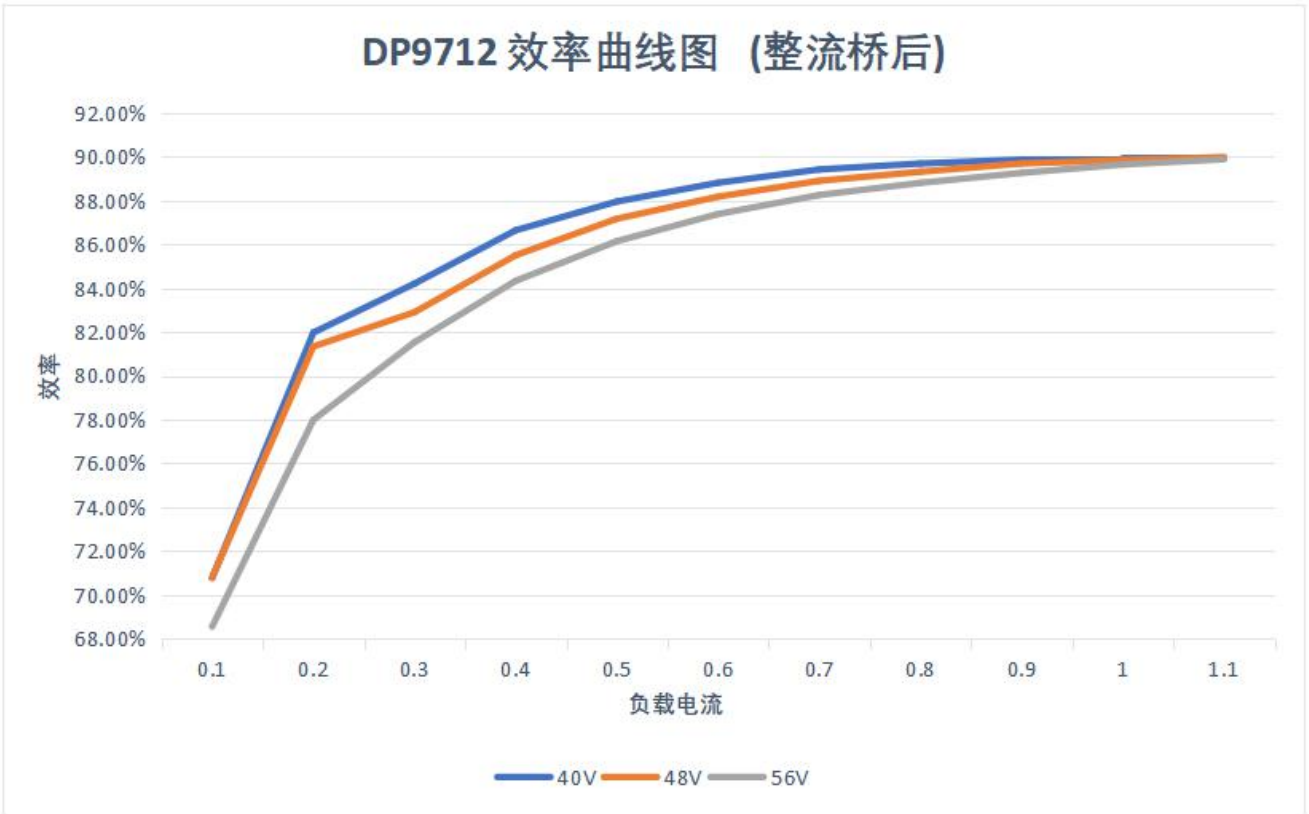
ELECTRICAL SPECIFICATIONS

No	Item	Specification	Comment
1	Input Voltage	37~57V	
2	Output Voltage	5V Typ.	DP9705
		12V Typ.	DP9712
		24V Typ.	DP9724
3	Output Current (Vin=56V)	2.4A Max.	DP9705
		1.2A Max.	DP9712
		0.55A Max.	DP9724
4	Line Regulation	1%	
5	Load Regulation	1%	
6	Ripple & Noise	200mVp-p max.	
7	Efficiency	83% max.	DP9705
		87% max.	DP9712
		85% max	DP9724
8	Input to Output Isolation	1.5 KV	
9	Type of DC/DC Converter	Flyback Type	
10	Operating Temperature	-40 ~ +85 ℃	

Package




DP9705 效率曲线图 (整流桥后)
88.00%
86.00%
84.00%
82.00%
80.00%
78.00%
76.00%
74.00%
72.00%
70.00%
68.00%
66.00%
64.00%
效率
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2
2.2
2.4
2.6
负载电流
41V
48V
56V


DP9712 效率曲线图 (整流桥后)
92.00%
90.00%
88.00%
86.00%
84.00%
82.00%
80.00%
78.00%
76.00%
74.00%
72.00%
70.00%
68.00%
效率
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
1.1
负载电流
40V
48V
56V