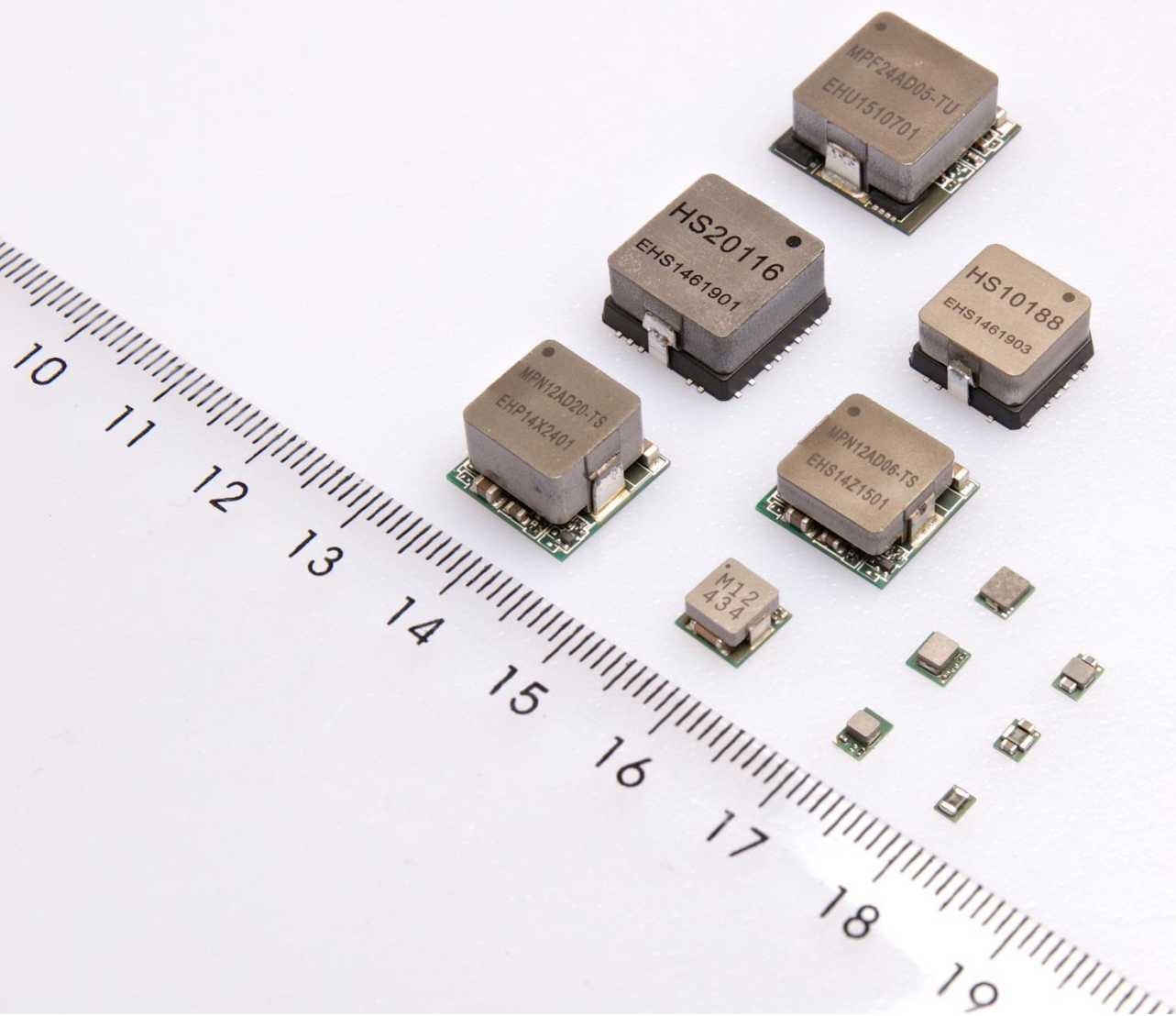


# Power Module Catalog





Cyntec Power Modules are Point of Load (POL) DC-DC converters integrating controller chips, chokes and I/O capacitors into a single power management package for step-down(buck) or step-up(boost) applications. The low profile and compact size enables significant saving of board space, high efficiency enhances application performance, and design structure allows automated assembly by standard surface mount equipment. In service, Cyntec provides strong and timely

design and development support for customized products and packages.

### **APPLICATION**

- Miniature portable (1A, 2A, 3A): SSD, Smartphone, USB, DSP, MCU, Wearable, Video Surveillance, Small Cell, Industrial Control Circuit
- Industrial (5A, 6A, 12A, 20A,40A,60A): video system, video surveillance, base-station, FPGA, networking, server, switching, storage, IPC, industrial, equipment

**PRODUCT SPECIFICATION**

	Cyntec P/N	Input Voltage(V)	Output Voltage(V)	Output Current(A)	Dimension XY(mm*mm)	Dimension Z(mm)	Pgood
<b>IC-Embedded</b>	MUN3C1HR6-FB	2.3-5.5	1.82	0.6	2.5*2.3	1.05	N
	MUN3C1DR6-SB	2.7-5.5	1.35	0.6	2.5*2.0	1.1	N
	MUN3C1BR6-SB	2.7-5.5	1.2	0.6	2.5*2.0	1.1	N
	MUN3C1HR6-SB	2.7-5.5	1.8	0.6	2.5*2.0	1.1	N
	MUN3C1ER6-SB	2.7-5.5	1.5	0.6	2.5*2.0	1.1	N
	MUN3C1CR6-SB	2.7-5.5	1.25	0.6	2.5*2.0	1.1	N
	MUN3CAD01-SC	2.7-5.5	0.8-4.0	1.0	2.9*2.3	1.05	N
	MUN3CAD01-SB	2.7-5.5	0.6-1.8	1.2	2.5*2.0	1.1	N
	MUN12AD01-SG	4.5-16.0	0.8-6.0	1.0	3.9*2.6	1.7	N
	MUN12AD01-SH	4.5-17.0	1.0-5.0	1.0	3.5*3.5	1.7	Y
	MUN24AD01-SH	4.5-28.0	2.0-8.5	1.0	3.5*3.5	1.7	N
	MUN123C01-SGB	4.5-16.0	3.3	1.0	3.9*2.6	1.7	N
	MMN12AD01-SG	4.5-16.0	0.8-16	1.0	3.9*2.6	1.5	N
	MUN12AD03-SEC	4.5-17.0	0.6-5.5	3	3.0*2.8	1.5	Y
	MUN3CAD03-SF	2.75-5.5	0.6-3.3	3.0	3.0*3.0	1.3	Y
	MUN3CAD03-SH	2.75-5.5	0.6-3.3	3.0	3.5*3.5	1.7	Y
	MUN12AD03-SH	4.5-16.0	0.6-5.5	3.0	3.5*3.5	1.7	Y
	MUN20AD03-SH	8.0-24.0	0.6-5.0	3.0	3.5*3.5	1.5	Y
	MUN12AD03-SM	4.5-16.0	0.6-5.5	3.0	6.0*6.0	3.5	Y
	MUN20AD03-SM	9.0-24	0.6-5.5	3.0	6.0*6.0	3.5	Y
	MUN24AD03-SM	8.0-34.0	5.0-12.0	3.0	6.0*6.0	3.5	N
	MUN12AD05-SMFH	4.5-20.0	1.9-5.0	5.0	6.0*6.0	3.5	Y
MUN12AD05-SMFL	4.5-20.0	0.6-1.8	5.0	6.0*6.0	3.5	Y	
MUN12AD06-SM	7.0-24.0	0.6-6.0	6.0	6.0*6.0	3.5	Y	
<b>Open Frame</b>	MPN12AD06-TS	4.5-16.0	0.6-5.5	6.0	12.19*12.19	5.4	Y
	MPN12AD12-TS	4.5-16.0	0.6-5.5	12.0	12.19*12.19	8.4	Y
	MPN12AD20-TS	4.5-14.5	0.6-5.0	20.0	12.19*12.19	8.4	Y
<b>Molding</b>	MMS0505R2-TT	4.5-5.5	5.0	0.2	19.6*6.0	10.2	N
	MSN24VD03-GR	5.1-24.0	5.1-20.0	3.0	9.4*8.6	6.3	Y
	HM10107A	1.0-15.0	0.6-5.5	10	15.0	15.0	N
	MSN12AD12-MP	4.5-16.0	0.6-5.5	12	8.6*7.5	6.5	Y
	HS20116	4.5-20.0	0.8-5.5	20.0	14.5*14.5	7.45	Y
	MSN12AD20-MQ	4.5-15.0	0.6-5.5	20.0	10.0*9.0	6.5	Y
	MSN12VD30-FR	4.5-14	0.5-2.5	30.0	14.2*7.8	6.35	
<b>Auto-Grade</b>	VUN12AD01-SH	4.5-28.0	2.0-8.5	1.0	3.5*3.5	1.7	N
	VUN12AD01-SHC	4.5-28	0.8-8.5	1.0	3.5*3.5	1.7	N
	VPN12AD02-FU	5.5-40.0	3.0-40	2.0	15.0*15.0	8.0	N
	VUN12AD03-KM	4.0~36.0	0.9~8.0	3.0	6.0*6.0	3.5	Y
	VUN12AD03-KMH	8.0~36.0	0.9~8.0	3.0	6.0*6.0	2.6	Y

**0.2A 0.6A 1A 3A 5A 6A 10A 12A 20A 30A Auto-Grade**
**0.2A**

Part Number	Input Voltage (V)	Output Voltage (V)	Dimension			$\eta$ %/De-rating	
			L (mm)	W (mm)	T (mm)		
MMS0505R2-TT	4.5-5.5	5.0	19.6	6.0	10.2	5Vi/5Vo	76%Peak 85 <sup>0</sup> @0.2A

**0.6A**

Part Number	Input Voltage (V)	Output Voltage (V)	Dimension			$\eta$ %/De-rating	
			L (mm)	W (mm)	T (mm)		
MUN3C1HR6-FB	2.3~5.5	1.82	2.5	2.3	1.05	3.8Vi/1.82Vo	89.5%Peak No De-rating @ 0.6A
MUN3C1DR6-SB	2.7~5.5	1.35	2.5	2.0	1.1	3.3Vi/1.35 Vo	87.3%Peak No De-rating @ 0.6A
MUN3C1BR6-SB	2.7~5.5	1.2	2.5	2.0	1.1	3.3Vi/1.2Vo	85.5%Peak No De-rating @ 0.6A
MUN3C1HR6-SB	2.7~5.5	1.8	2.5	2.0	1.1	3.3Vi/1.8Vo	89.5%Peak No De-rating @ 0.6A
MUN3C1ER6-SB	2.7~5.5	1.5	2.5	2.0	1.05	3.3Vi/1.5Vo	88%Peak No De-rating @ 0.6A
MUN3C1CR6-SB	2.7~5.5	1.25	2.5	2.0	1.1	3.3Vi/1.25Vo	88%Peak No De-rating @ 0.6A

**1A**

Part Number	Input Voltage (V)	Output Voltage (V)	Dimension			$\eta$ %/De-rating	
			L (mm)	W (mm)	T (mm)		
MUN3CAD01-SC	2.7~5.5	0.8~4.0 Adjustable	2.9	2.3	1.05	3.3Vi / 2.5Vo	94% Peak 77 <sup>0</sup> @ 1A
MUN3CAD01-SB	2.7~5.5	0.6~1.8 Adjustable	2.5	2.0	1.1	3.3Vi/ 2.5V	92%Peak De-rating 80 °C @1.2A
MUN12AD01-SG	4.5~16.0	0.8~6.0 Adjustable	3.9	2.6	1.7	12.0Vi / 5Vo	94.5% Peak No De-rating @ 1A
MUN12AD01-SH	4.5~17.0	1.0~5.0 Adjustable	3.5	3.5	1.7	12.0Vi / 3.3Vo	89% Peak No De-rating @ 1A
MUN24AD01-SH	4.5~28.0	2.0~8.5 Adjustable	3.5	3.5	1.7	12.0Vi / 5.0Vo	91% Peak No De-rating @ 1A

MUN123C01-SGB	4.5~16.0	3.3	3.9	2.6	1.7	5Vi/3.3Vo 94%Peak No De-rating @ 1.0A-0LFM
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MMN12AD01-SG	4.5~16.0	0.8~6.0 Adjustable	3.9	2.6	1.5	
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### 3A

Part Number	Input Voltage (V)	Output Voltage (V)	Dimension			$\eta$ /De-rating
			L (mm)	W (mm)	T (mm)	
MUN12AD03-SEC	4.5-17.0	0.6-5.5 Adjustable	3.0	2.8	1.5	12.0Vi / 3.3Vo 88% Peak 480 @ 3A
MUN3CAD03-SF	2.7~5.5	0.6~3.3 Adjustable	3.0	3.0	1.3	5.0Vi / 3.3Vo 94% Peak No De-rating @ 3A
MUN3CAD03-SH	2.75~5.5	0.6~3.3 Adjustable	3.5	3.5	1.7	5.0Vi / 3.3Vo 95% Peak No De-rating @ 3A
MUN12AD03-SH	4.5~16.0	0.6~5.0 Adjustable	3.5	3.5	1.7	12.0Vi / 5.0Vo 91% Peak 62 <sup>0</sup> @ 3A
MUN20AD03-SH	8.0~24.0	8.0~24.0 Adjustable	3.5	3.5	1.5	12.0Vi / 5.0Vo 93% Peak De-rating 77°C@3A
MUN12AD03-SM	4.5~16.0	0.6~5.0 Adjustable	6.0	6.0	3.5	12.0Vi / 5.0Vo 92% Peak 82 <sup>0</sup> @ 3A
MUN20AD03-SM	9.0~24.0	0.6~5.5 Adjustable	6.0	6.0	3.5	20.0Vi / 5.0Vo 93% Peak 76 <sup>0</sup> @ 3A
MUN24AD03-SM	8.0~34.0	5.0~12.0 Adjustable	6.0	6.0	3.5	24.0Vi / 5.0Vo 91% Peak 62 <sup>0</sup> @ 3A
MSN24VD03-GR	5.1~24	5.1~15	9.4	8.6	6.3	12.0Vi / 5.0Vo 96% Peak No De-rating @ 3A

### 5A

Part Number	Input Voltage (V)	Output Voltage (V)	Dimension			$\eta$ /De-rating
			L (mm)	W (mm)	T (mm)	
MUN12AD05-SMFL	4.5~20.0	0.6~1.8 Adjustable	6.0	6.0	3.5	12Vi/1.8Vo 86%Peak 83C @ 5A
MUN12AD05-SMFH	4.5~20.0	1.9~5.0 Adjustable	6.0	6.0	3.5	12Vi/5Vo 92%Peak 53C @ 5A

**6A**

Part Number	Input Voltage (V)	Output Voltage (V)	Dimension			$\eta$ %/De-rating
			L (mm)	W (mm)	T (mm)	
MUN12AD06-SM	7.0~24.0	0.6~6.0 Adjustable	6.0	6.0	3.5	12.0Vi / 5.0Vo 93% Peak 72° @ 6A
MPN12AD06-TS	4.5~16.0	0.6~5.5 Adjustable	12.19	12.19	5.4	12.0Vi / 5.0Vo 96% Peak 79° @ 6A

**10A**

Part Number	Input Voltage (V)	Output Voltage (V)	Dimension			$\eta$ %/De-rating
			L (mm)	W (mm)	T (mm)	
HM10107A	1.0~15.0	0.6~5.5 Adjustable	15.0	15.0	3.7	12.0Vi / 3.3Vo 93% Peak De-rating 65°C@10A

**12A**

Part Number	Input Voltage (V)	Output Voltage (V)	Dimension			$\eta$ %/De-rating
			L (mm)	W (mm)	T (mm)	
MSN12AD12-MP	4.5~16.0	0.6~5.5 Adjustable	8.6	7.5	6.5	12.0Vi / 5.0Vo 96% Peak No De-rating @ 12A
MPN12AD12-TS	4.5~16.0	0.6~5.5 Adjustable	12.19	12.19	8.4	12.0Vi / 5.0Vo 96.5% Peak 78° @ 12A

**20A**

Part Number	Input Voltage (V)	Output Voltage (V)	Dimension			$\eta$ %/De-rating
			L (mm)	W (mm)	T (mm)	
MSN12AD20-MQ	4.5~15.0	0.6~5.5	10.0	9.0	6.5	12.0Vi / 5.0Vo 96% Peak 49° @ 20A
MPN12AD20-TS	4.5~14.5	0.6~5.0 Adjustable	12.19	12.19	8.4	12.0Vi / 5.0Vo 96.5% Peak 53° @ 20A
HS20116	4.5~20	0.8~5.5 Adjustable	14.5	14.5	7.45	12.0Vi / 5.0Vo 96.0% Peak 43° @ 20A

30A

Part Number	Input Voltage	Output Voltage	Dimension			$\eta$ %/De-rating
	(V)	(V)	L (mm)	W (mm)	T (mm)	
<b>MSN12VD30-FR</b>	4.5~14.0	0.5~2.5	14.2	7.8	6.35	12.0Vi / 1.0Vo 91% Peak De-rating 70°C@ 30A

**Auto-Grade**

**1A**

Part Number	Input Voltage (V)	Output Voltage (V)	Dimension			$\eta$ %/De-rating
			L (mm)	W (mm)	T (mm)	
VUN12AD01-SH	4.5~28.0	3.0~8.5	3.5	3.5	1.7	12.0Vi / 5.0Vo 91% Peak De-rating @ 0.53A
VUN12AD01-SHC	4.5~28.0	0.8~8.5	3.5	3.5	1.7	12.0Vi / 3.3Vo 89% Peak De-rating @ 0.8A

**2A**

Part Number	Input Voltage (V)	Output Voltage (V)	Dimension			$\eta$ %/De-rating
			L (mm)	W (mm)	T (mm)	
VPN12AD02-FU	5.5~40.0	3.0~40.0	15.0	15.0	8.0	12Vi / 12.0Vo 97% Peak De-rating @ 2A

**3A**

Part Number	Input Voltage (V)	Output Voltage (V)	Dimension			$\eta$ %/De-rating
			L (mm)	W (mm)	T (mm)	
VUN12AD03-KM	4.0~36.0	0.9~8.0	6.0	6.0	3.5	12.0Vi / 5Vo 95% Peak De-rating @ 3A
VUN12AD03-KMH	8.0~36.0	0.9~8.0	6.0	6.0	3.5	12.0Vi / 5Vo 91% Peak De-rating @ 3A



## CONTACT US

Beside the standard products, we also make customize products according to your different request and specifications. If you have any question or request, please contact us. We will reply to you as soon as possible.

**Contact Window:** [Eliot-Huang](#)

**Tel:** +886 3 579 9829 Ext.1203

**Fax:** +886 3 579 9827

**Email:** [Eliot-Huang@cyntec.com](mailto:Eliot-Huang@cyntec.com) or [service@cyntec.com](mailto:service@cyntec.com)

**More detail information in** <http://www.cyntec.com>



MAKING THINGS SMALLER AND SMARTER