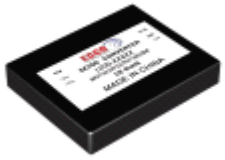
ECCO Electronics Technology Co.,ltd

20W DC-DC converter

Typical Performance

- ⊙Wide Input voltage range (2:1、4:1)
- ⊙Typical Efficiency:85%
- ⊙Switching frequency：300KHz ± 30 KHz
- ⊙Overcurrent/Short circuit protection,Self-furbish
- ⊙Input-output isolate
- ⊙PCB Board in-line type installs



Technology parameter Test condition:General Nominal Line,Tc=25℃，Rated resistant load unless other wisespecified

Input Feature	Min	Nom	Max	Notes
Input voltage(Vdc)	9	12	18	W 2:1
	18	24	36	W 2:1
	36	48	72	W 2:1
	72	110	144	W 2:1
	9	18	36	W 4:1
	18	36	72	W 4:1
Turn on voltage	3.5Vdc		+Vin	Converter guaranteed on when REM pin is left open
Turn off voltage	0		0.3Vdc	
Under voltage protect				

Output Feature

Voltage accuracy		Vo1;Vo2,Vo3	±1.0%, ±2.0%
Line regulation		Vo1;Vo2,Vo3	±0.2%, ±1.5%
Load regulation	20% ~ 100%	Vo1;Vo2,Vo3	±0.5%, ±4.0%
Ripple and noise	20MHz BM Vo≤5.0V, ≤50mVp-p; Vo≥48V, ≤180mVp-p; Other, ≤100mVp-p;		
Dynamic response	25%	△Vo1/△t	±4.0/500us%
Voltage adjust	Standard output voltage	TRIM	±10%(adjustable)
Start delay time	typical		≤200mS

General Feature

Efficiency	Normal input ， full load	Vo≤5.0V,80% typical	Vo>5.0V，87% typical
Switching frequency		300KHz typical	Max 330KHz
Operating temperature	Free air	Industrial level	-25℃ ~ +55℃
Storage temperature			-40℃ ~ +105℃
Max case temperature			+95℃
Relative humidity			10%~90%
case material			Metal case
Isolation Voltage	500Vdc ≤0.5mA/1min,500Vdc ≤0.5mA/1min		
MTBF	2X10^{5}Hrs		

Product Nomination Method

example	L D 25 – 48 S 05 I ① ② ③ ④ ⑤ ⑥ ⑦		
①	Wide input voltage：2：1	⑥	output voltage
②	Power adaptation mode：D（DC-DC）	⑦	I:Dual Route output Isolate
③	Output power(W)		W:Super Wide input voltage
④	Normal input voltage		
⑤	S=Single route output, D=Dual route output, T=Triple route output, Q=Quadruple output		

Product Program

PART #	Input voltage range	Output voltage / current					
		VO1		VO2		VO3	
		V	mA	V	mA	V	mA
LD20-12S3V3	12V(9~18V)	3.3V	4000mA				
LD20-12S05		5V	4000mA				
LD20-12S09		9V	2220mA				
LD20-12S12		12V	1660mA				
LD20-12S15		15V	1330mA				
LD20-12S24		24V	830mA				
LD20-12S48		48V	410 mA				
LD20-12D3V3		+3.3V	2000 mA	-3.3V	2000 mA		
LD20-12D05		+5V	2000 mA	-5V	2000 mA		
LD20-12D09		+9V	1110 mA	-9V	1110 mA		
LD20-12D12		+12V	830 mA	-12V	830 mA		

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LD20-12D15		+15V	660 mA	-15V	660 mA		
LD20-12D24		+24V	410 mA	-24V	410 mA		
LD20-18S3V3		3.3V	4000mA				
LD20-18S05		5V	4000mA				
LD20-18S09		9V	2220mA				
LD20-18S12		12V	1660mA				
LD20-18S15		15V	1330mA				
LD20-18S24		24V	830mA				
LD20-18S48	18V(9~36V)	48V	410 mA				
LD20-18D3V3		+3.3V	2000 mA	-3.3V	2000 mA		
LD20-18D05		+5V	2000 mA	-5V	2000 mA		
LD20-18D09		+9V	1110 mA	-9V	1110 mA		
LD20-18D12		+12V	830 mA	-12V	830 mA		
LD20-18D15		+15V	660 mA	-15V	660 mA		
LD20-18D24		+24V	410 mA	-24V	410 mA		
LD20-24S3V3		3.3V	4000mA				
LD20-24S05		5V	4000mA				
LD20-24S09	24V（18~36V）	9V	2220mA				
LD20-24S12		12V	1660mA				
LD20-24S15		15V	1330mA				
LD20-24S24		24V	830mA				
LD20-24D3V3		+3.3V	2000 mA	-3.3V	2000 mA		
LD20-24D05		+5V	2000 mA	-5V	2000 mA		
LD20-24D09		+9V	1110 mA	-9V	1110 mA		
LD20-24D12		+12V	830 mA	-12V	830 mA		
LD20-24D15		+15V	660 mA	-15V	660 mA		
LD20-24D24		+24V	410 mA	-24V	410 mA		
LD20-36S3V3		3.3V	4000mA				
LD20-36S05		5V	4000mA				
LD20-36S09		9V	2220mA				
LD20-36S12	36V（18~72V）	12V	1660mA				
LD20-36S15		15V	1330mA				
LD20-36S24		24V	830mA				

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LD20-36S48		48V	410 mA				
LD20-36D3V3		+3.3V	2000 mA	-3.3V	2000 mA		
LD20-36D05		+5V	2000 mA	-5V	2000 mA		
LD20-36D09		+9V	1110 mA	-9V	1110 mA		
LD20-36D12		+12V	830 mA	-12V	830 mA		
LD20-36D15		+15V	660 mA	-15V	660 mA		
LD20-36D24		+24V	410 mA	-24V	410 mA		
LD20-48S3V3	48V（36~72V）	3.3V	4000mA				
LD20-48S05		5V	4000mA				
LD20-48S09		9V	2220mA				
LD20-48S12		12V	1660mA				
LD20-48S15		15V	1330mA				
LD20-48S24		24V	830mA				
LD20-48S48		48V	410 mA				
LD20-48D3V3		+3.3V	2000 mA	-3.3V	2000 mA		
LD20-48D05		+5V	2000 mA	-5V	2000 mA		
LD20-48D09		+9V	1110 mA	-9V	1110 mA		
LD20-48D12		+12V	830 mA	-12V	830 mA		
LD20-48D15		+15V	660 mA	-15V	660 mA		
LD20-48D24		+24V	410 mA	-24V	410 mA		
LD20-110S3V3	110V（72~144V）	3.3V	4000mA				
LD20-110S05		5V	4000mA				
LD20-110S09		9V	2220mA				
LD20-110S12		12V	1660mA				
LD20-110S15		15V	1330mA				
LD20-110S24		24V	830mA				
LD20-110S48		48V	410 mA				
LD20-110D3V3		+3.3V	2000 mA	-3.3V	2000 mA		
LD20-110D05		+5V	2000 mA	-5V	2000 mA		
LD20-110D09		+9V	1110 mA	-9V	1110 mA		
LD20-110D12		+12V	830 mA	-12V	830 mA		
LD20-110D15		+15V	660 mA	-15V	660 mA		
LD20-110D24		+24V	410 mA	-24V	410 mA		

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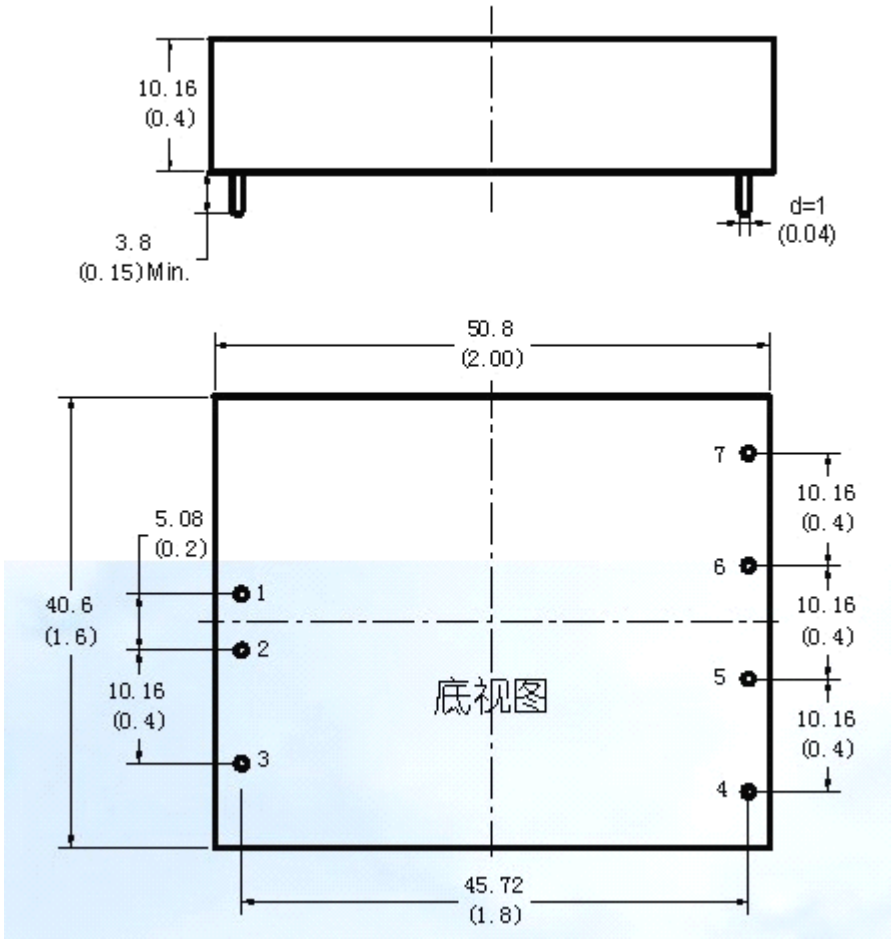
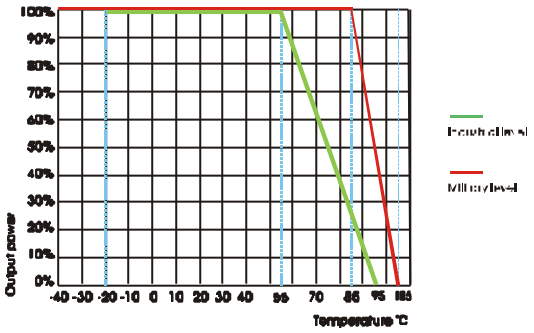
Mechanical Dimension



BOTTON VIEW

UNIT:mm(inch)

Temperature Curve



Mechanical Data

Packing code	L x W x H	Packing No.
20W	50.80 x 25.40 x 12.70mm(2*1*0.5inch)	

Pin Assignment

PIN NO.	1	2	3	4	5	6	7			
S	+Vin	-Vin	REM	TRIM	GND	Vo1	NP			

D	+Vin	-Vin	REM	TRIM	-Vo2	COM	+Vo1			
*Note：The power modules such as the definition of the pin does not match with the hand book,please refer to the actual item.										

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