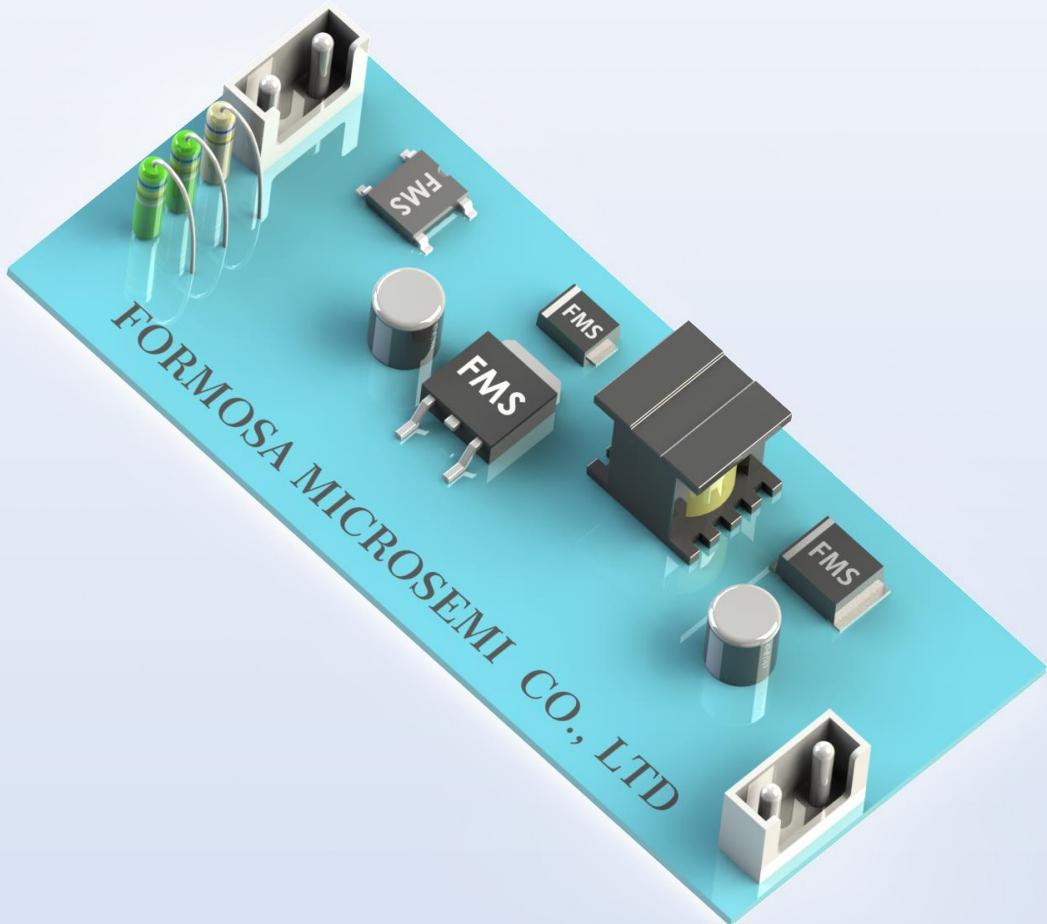


絕緣型返馳式轉換器電源 應用導引參考手冊





Formosa Microsemi CO.,LTD.

電源應用 導引手冊

- 品質至上
- 服務優先
- 顧客滿意
- 持續改善

成立時間： 1996 年 7 月

營運中心： 台北,台灣

主力研發： 功率/保護/整流/低功耗/快速切換/低導通

生產產品： MOSFETs/ESD/TVS/Diode/Zener

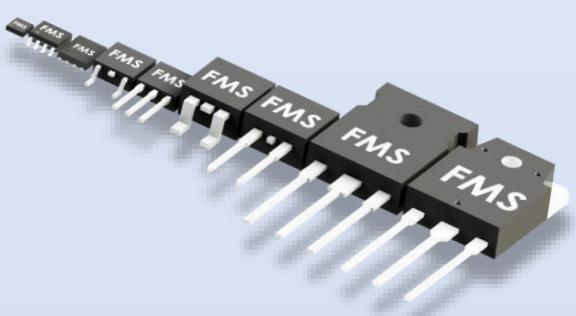
實施品質認證，創造顧客滿意

ISO 9001 Ceritification:

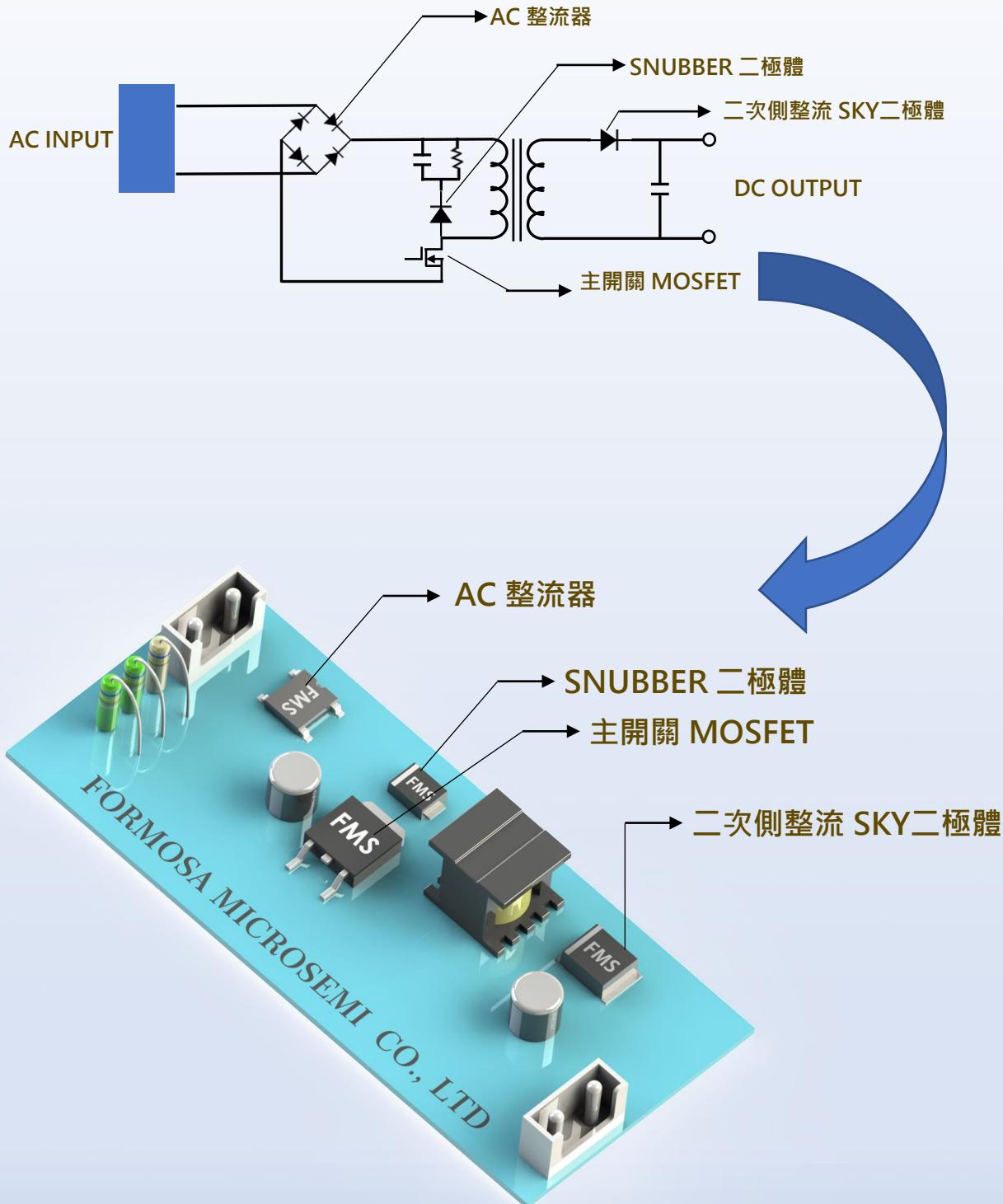
AEC-Q101

IATF 16949 PASS

ISO 14001 PASS



針對業界有關絕緣型返馳式轉換器電源的處理應用，美麗微公司
在支援上分為4大種類，有AC 整流功能、SNUBBER緩衝二極體、
主電流開關MOSFET、變壓器二次側整流用二極體。



電源供應器不同功率下需求元件建議



OUTPUT: 5V 5~100W



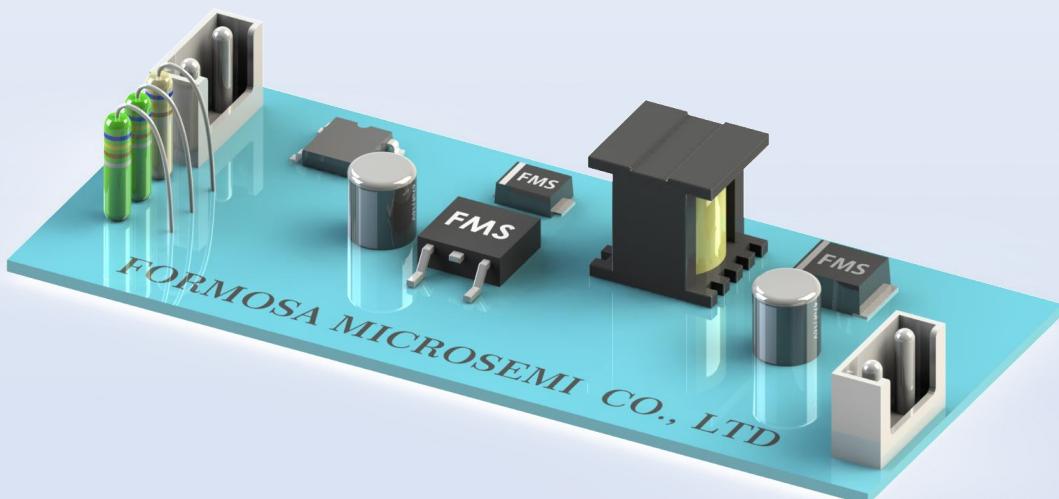
OUTPUT: 12V 5~100W



OUTPUT: 24V 10~150W

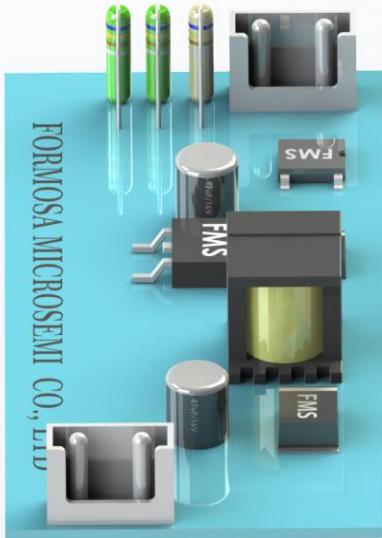


OUTPUT: 48V 50~200W





OUTPUT: 5V 5~100W



OUTPUT: 5V 5W

OUTPUT: 5V 10W

OUTPUT: 5V 20W

OUTPUT: 5V 30W

OUTPUT: 5V 50W

OUTPUT: 5V 75W

OUTPUT: 5V 100W

OUTPUT: 5V 5W

AC in(min)= 85	AC in(max)= 264	Pout(W)= 5	Vout(V)= 5	Iout(A)= 1	Duty= 0.42
Bridge		Snubber Diode	MOSFET	SKY Diode	
Vr > 813	Vr > 813		Vds > 813	Vr > 37	
Io > 0.20	Io -		Id > 0.20	Io > 1.20	
Ipk > 0.36	Ipk -		Ipk > 0.36	Ipk > 4.16	
Part Num	Package	Part Num	Package	Part Num	Package
B10S	MDS	HFM107-MS	SOD-123S	FMOSD01N80	TO-251
MB10S	MDS	HFM107-S	SMA-S	FMOSU01N80	TO-252
DF10S	DFS/DBS			FMOSD01N90	TO-251
FM4007-MS	SOD-123S			FMOSU01N90	TO-252
FM4007-S	SMA-S				



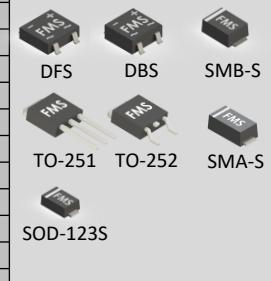
OUTPUT: 5V 10W

AC in(min)= 85	AC in(max)= 264	Pout(W)= 10	Vout(V)= 5	Iout(A)= 2	Duty= 0.42
Bridge		Snubber Diode	MOSFET	SKY Diode	
Vr > 813	Vr > 813		Vds > 813	Vr > 37	
Io > 0.40	Io -		Id > 0.40	Io > 2.40	
Ipk > 0.71	Ipk -		Ipk > 0.71	Ipk > 8.33	
Part Num	Package	Part Num	Package	Part Num	Package
B10S	MDS	HFM107-MS	SOD-123S	FMOSD01N80	TO-251
MB10S	MDS	HFM107-S	SMA-S	FMOSU01N80	TO-252
DF10S	DFS/DBS			FMOSD01N90	TO-251
FM4007-MS	SOD-123S			FMOSU01N90	TO-252
FM4007-S	SMA-S				



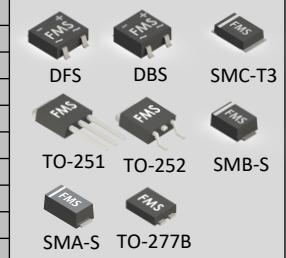
OUTPUT: 5V 20W

AC in(min)= 85		AC in(max)= 264		Pout(W)= 20		Vout(V)= 5		Iout(A)= 4	Duty= 0.42
Bridge		Snubber Diode		MOSFET		SKY Diode			
Vr > 813		Vr > 813		Vds > 813		Vr > 37			
Io > 0.79		Io -		Id > 0.79		Io > 4.80			
Ipk > 1.43		Ipk -		Ipk > 1.43		Ipk > 16.66			
Part Num	Package	Part Num	Package	Part Num	Package	Part Num	Package		
DF1510S	DFS	HFM107-MS	SOD-123S	FMOSD02N80	TO-251	FM5L40-AS	SMA-S		
DB157S	DBS	HFM107-S	SMA-S	FMOSU02N80	TO-252	FM5L40-AS	SMA-S		
DF210S	DFS			FMOSD02N90	TO-251				
DB207S	DBS			FMOSU02N90	TO-252				
FM207-BS	SMB-S								
FM207-S	SMA-S								



OUTPUT: 5V 30W

AC in(min)= 85		AC in(max)= 264		Pout(W)= 30		Vout(V)= 5		Iout(A)= 6	Duty= 0.42
Bridge		Snubber Diode		MOSFET		SKY Diode			
Vr > 813		Vr > 813		Vds > 813		Vr > 37			
Io > 1.19		Io -		Id > 1.19		Io > 7.20			
Ipk > 2.14		Ipk -		Ipk > 2.14		Ipk > 24.99			
Part Num	Package	Part Num	Package	Part Num	Package	Part Num	Package		
DF1510S	DFS	HFM207-S	SMA-S	FMOSD03N80	TO-251	FM1040-T3	SMC-T3		
DB157S	DBS	HFM207-BS	SMB-S	FMOSU03N80	TO-252	FM840-T7B	TO-277B		
DF210S	DFS			FMOSD03N90	TO-251				
DB207S	DBS			FMOSU03N90	TO-252				
FM207-BS	SMB-S								
FM207-S	SMA-S								



OUTPUT: 5V 50W

AC in(min)= 85		AC in(max)= 264		Pout(W)= 50		Vout(V)= 5		Iout(A)= 10	Duty= 0.42
Bridge		Snubber Diode		MOSFET		SKY Diode			
Vr > 813		Vr > 813		Vds > 813		Vr > 37			
Io > 1.98		Io -		Id > 1.98		Io > 12.00			
Ipk > 3.57		Ipk -		Ipk > 3.57		Ipk > 41.65			
Part Num	Package	Part Num	Package	Part Num	Package	Part Num	Package		
DF210S	DFS	HFM207-S	SMA-S	FMOSD04N80	TO-251	FM1240-T7B	TO-277B		
DB207S	DBS	HFM207-BS	SMB-S	FMOSU04N80	TO-252	FM15L40-T7B	TO-277B		
FM207-BS	SMB-S			FMOSD04N90	TO-251				
FM207-S	SMA-S			FMOSU04N90	TO-252				

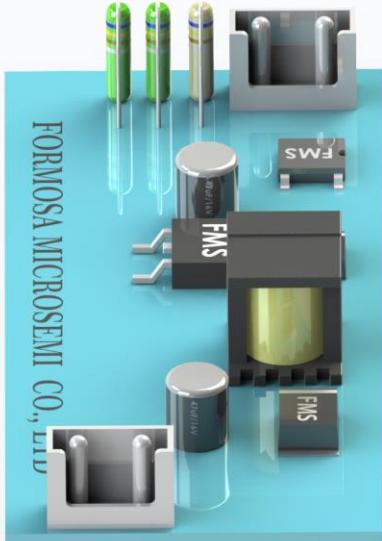


OUTPUT: 5V 75W

OUTPUT: 5V 100W



OUTPUT: 12V 5~100W



OUTPUT: 12V 5W

OUTPUT: 12V 10W

OUTPUT: 12V 20W

OUTPUT: 12V 30W

OUTPUT: 12V 50W

OUTPUT: 12V 75W

OUTPUT: 12V 100W

OUTPUT: 12V 5W

OUTPUT: 12V 10W

AC in(min)= 85	AC in(max)= 264	Pout(W)= 10	Vout(V)= 12	Iout(A)= 0.8	Duty= 0.42
Bridge	Snubber Diode	MOSFET	SKY Diode		
Vr > 813	Vr > 813	Vds > 813	Vr > 81		
Io > 0.40	Io -	Id > 0.40	Io > 1.00		
Ipk > 0.64	Ipk -	Ipk > 0.64	Ipk > 3.47		
Part Num	Package	Part Num	Package	Part Num	Package
B10S	MDS	HFM107-MS	SOD-123S	FMOSD01N80	TO-251
MB10S	MDS	HFM107-S	SMA-S	FMOSU01N80	TO-252
DF10S	DFS/DBS			FMOSD01N90	TO-251
FM4007-MS	SOD-123S			FMOSU01N90	TO-252

OUTPUT: 12V 20W

AC in(min)= 85		AC in(max)= 264		Pout(W)= 20		Vout(V)= 12		Iout(A)= 1.7 Duty= 0.42	
Bridge		Snubber Diode		MOSFET		SKY Diode			
Vr > 813		Vr > 813		Vds > 813		Vr > 81			
Io > 0.79		Io -		Id > 0.79		Io > 2.00			
Ipk > 1.29		Ipk -		Ipk > 1.29		Ipk > 6.94			
Part Num	Package	Part Num	Package	Part Num	Package	Part Num	Package		
B10S	MDS	HFM107-MS	SOD-123S	FMOSD02N80	TO-251	SL210-MS	SOD-123S		
MB10S	MDS	HFM107-S	SMA-S	FMOSU02N80	TO-252	FM2100-MS	SOD-123S		
DF10S	DFS/DBS			FMOSD02N90	TO-251	FM2100-S	SMA-S		
FM4007-MS	SOD-123S			FMOSU02N90	TO-252				



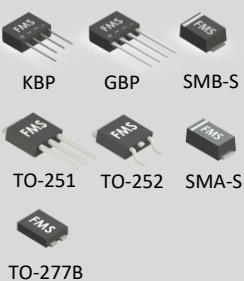
OUTPUT: 12V 30W

AC in(min)= 85		AC in(max)= 264		Pout(W)= 30		Vout(V)= 12		Iout(A)= 2.5 Duty= 0.42	
Bridge		Snubber Diode		MOSFET		SKY Diode			
Vr > 813		Vr > 813		Vds > 813		Vr > 81			
Io > 1.19		Io -		Id > 1.19		Io > 3.00			
Ipk > 1.93		Ipk -		Ipk > 1.93		Ipk > 10.41			
Part Num	Package	Part Num	Package	Part Num	Package	Part Num	Package		
KBP210G	KBP	HFM207-S	SMA-S	FMOSD02N80	TO-251	FM3100-AS	SMA-S		
GBP2M	GBP	HFM207-BS	SMB-S	FMOSU02N80	TO-252	FM3L100-AS	SMA-S		
				FMOSD02N90	TO-251				
				FMOSU02N90	TO-252				



OUTPUT: 12V 50W

AC in(min)= 85		AC in(max)= 264		Pout(W)= 50		Vout(V)= 12		Iout(A)= 4.2 Duty= 0.42	
Bridge		Snubber Diode		MOSFET		SKY Diode			
Vr > 813		Vr > 813		Vds > 813		Vr > 81			
Io > 1.98		Io -		Id > 1.98		Io > 5.00			
Ipk > 3.22		Ipk -		Ipk > 3.22		Ipk > 17.35			
Part Num	Package	Part Num	Package	Part Num	Package	Part Num	Package		
KBP210G	KBP	HFM207-S	SMA-S	FMOSD03N80	TO-251	FM5L100-AS	SMA-S		
GBP2M	GBP	HFM207-BS	SMB-S	FMOSU03N80	TO-252	FM5100-AS	SMA-S		
				FMOSD03N90	TO-251	FM5100-T7B	TO-277B		
				FMOSU03N90	TO-252	FM5L100-T7B	TO-277B		
						SKFM5200Y-D	TO-252		

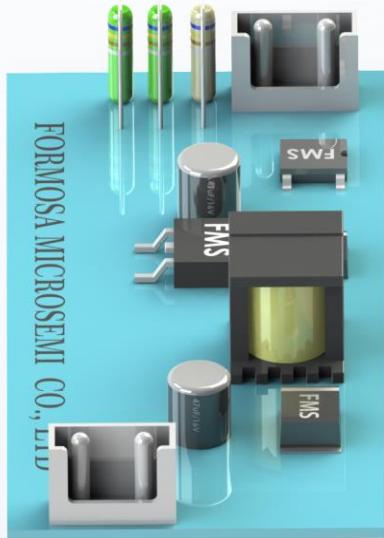


OUTPUT: 12V 75W

OUTPUT: 12V 100W



OUTPUT: 24V 10~150W



OUTPUT: 24V 10W

OUTPUT: 24V 25W

OUTPUT: 24V 35W

OUTPUT: 24V 50W

OUTPUT: 24V 75W

OUTPUT: 24V 100W

OUTPUT: 24V 150W

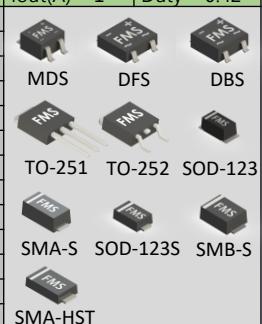
OUTPUT: 24V 10W

AC in(min)= 85	AC in(max)= 264	Pout(W)= 10	Vout(V)= 24	Iout(A)= 0.4	Duty= 0.42
Bridge	Snubber Diode	MOSFET	SKY Diode		
Vr > 813	Vr > 813	Vds > 813	Vr > 156		
Io > 0.40	Io -	Id > 0.40	Io > 0.50		
Ipk > 0.62	Ipk -	Ipk > 0.62	Ipk > 1.74		
Part Num	Package	Part Num	Package	Part Num	Package
B10S	MDS	HFM107-MS	SOD-123S	FMOSD01N80	TO-251
MB10S	MDS	HFM107-S	SMA-S	FMOSU01N80	TO-252
DF10S	DFS/DBS			FMOSD01N90	TO-251
FM4007-MS	SOD-123S			FMOSU01N90	TO-252
				FM1200-M	SOD-123
				FM1200-MS	SOD-123S
				FM1200-S	SMA-S



OUTPUT: 24V 25W

AC in(min)= 85	AC in(max)= 264	Pout(W)= 25	Vout(V)= 24	Iout(A)= 1	Duty= 0.42
Bridge	Snubber Diode	MOSFET	SKY Diode		
Vr > 813	Vr > 813	Vds > 813	Vr > 156		
Io > 0.99	Io -	Id > 0.99	Io > 1.25		
Ipk > 1.55	Ipk -	Ipk > 1.55	Ipk > 4.34		
Part Num	Package	Part Num	Package	Part Num	Package
B10S	MDS	HFM107-MS	SOD-123S	FMOSD02N80	TO-251
MB10S	MDS	HFM107-S	SMA-S	FMOSU02N80	TO-252
DF10S	DFS/DBS			FMOSD02N90	TO-251
FM4007-MS	SOD-123S			FMOSU02N90	TO-252
				FM2200-S	SMA-S
				FM2200-HST	SMA-HST
				FM2200-BS	SMB-S



OUTPUT: 24V 35W

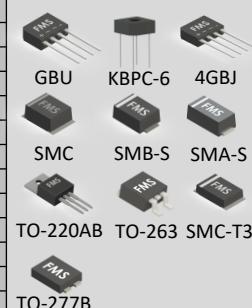
OUTPUT: 24V 50W

OUTPUT: 24V 75W

OUTPUT: 24V 100W

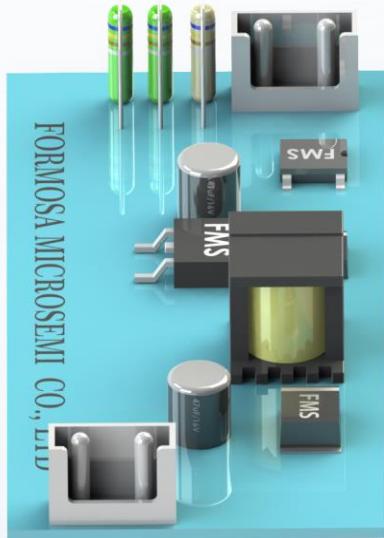


OUTPUT: 24V 150W





OUTPUT: 48V 50~200W



OUTPUT: 48V 50W

OUTPUT: 48V 75W

OUTPUT: 48V 100W

OUTPUT: 48V 125W

OUTPUT: 48V 150W

OUTPUT: 48V 175W

OUTPUT: 48V 200W

OUTPUT: 48V 50W

AC in(min)= 85		AC in(max)= 264		Pout(W)= 50		Vout(V)= 48		Iout(A)= 1	Duty= 0.42
Bridge		Snubber Diode		MOSFET		SKY Diode			
Vr > 813		Vr > 813		Vds > 813		Vr > 307			
Io > 1.98		Io -		Id > 1.98		Io > 1.25			
Ipk > 3.04		Ipk -		Ipk > 3.04		Ipk > 4.34			
Part Num	Package	Part Num	Package	Part Num	Package	Part Num	Package		
KBP210G	KBP	HFM107-MS	SOD-123	FMOSD03N80	TO-251	MBR10L300CT	TO-220AB		
GBP2M	GBP	HFM107-S	SMA-S	FMOSU03N80	TO-252	MBR10L300FCT	ITO-220AB		
				FMOSD03N90	TO-251				
				FMOSU03N90	TO-252				

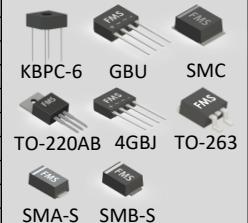
OUTPUT: 48V 75W

AC in(min)= 85		AC in(max)= 264		Pout(W)= 75		Vout(V)= 48		Iout(A)= 1.6	Duty= 0.42
Bridge		Snubber Diode		MOSFET		SKY Diode			
Vr > 813		Vr > 813		Vds > 813		Vr > 307			
Io > 2.97		Io -		Id > 2.97		Io > 1.88			
Ipk > 4.56		Ipk -		Ipk > 4.56		Ipk > 6.51			
Part Num	Package	Part Num	Package	Part Num	Package	Part Num	Package		
KBP310G	KBP	HFM207-MS	SOD-123	FMOSD05N80	TO-251	MBR10L300CT	TO-220AB		
BR310	KBP-3	HFM207-S	SMA-S	FMOSU05N80	TO-252	MBR10L300FCT	ITO-220AB		
				FMOSD05N90	TO-251				
				FMOSU05N90	TO-252				

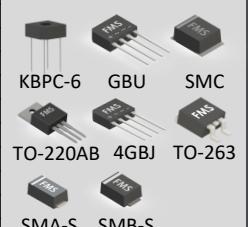
OUTPUT: 48V 100W



OUTPUT: 48V 125W

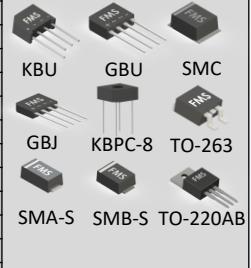


OUTPUT: 48V 150W



OUTPUT: 48V 175W

AC in(min)= 85	AC in(max)= 264	Pout(W)= 175	Vout(V)= 48	Iout(A)= 3.6	Duty= 0.42
Bridge	Snubber Diode	MOSFET	SKY Diode		
Vr > 813	Vr > 813	Vds > 813	Vr > 307		
Io > 6.94	Io -	Id > 6.94	Io > 4.38		
Ipk > 10.63	Ipk -	Ipk > 10.63	Ipk > 15.18		
Part Num	Package	Part Num	Package	Part Num	Package
GBU8M	GBU	HFM307	SMC	FMOSPF10N80	TO-263
GBJ8M	GBJ	HFM307-BS	SMB-S	FMOSP10N80	TO-220AB
BR810	KBPC-8	HFM307-AS	SMA-S	FMOSPF10N90A	TO-263
KBU810	KBU			FMOSPF10N90B	TO-263



OUTPUT: 48V 200W

AC in(min)= 85	AC in(max)= 264	Pout(W)= 200	Vout(V)= 48	Iout(A)= 4.2	Duty= 0.42
Bridge	Snubber Diode	MOSFET	SKY Diode		
Vr > 813	Vr > 813	Vds > 813	Vr > 307		
Io > 7.93	Io -	Id > 7.93	Io > 5.00		
Ipk > 12.15	Ipk -	Ipk > 12.15	Ipk > 17.35		
Part Num	Package	Part Num	Package	Part Num	Package
GBU8M	GBU	HFM307	SMC	FMOSP13NM80	TO-263
GBJ8M	GBJ	HFM307-BS	SMB-S	FMOSP13NM90	TO-263
BR810	KBPC-8	HFM307-AS	SMA-S	MBR10L300FCT	ITO-220AB
KBU810	KBU				

