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Features

- DIP 24 package with international standard pinout
- 4:1 wide input range
- Low patient leakage current <5µA
- Wide operating temperature range -40 ~ +90°C
- Medical safety approved (2xMOPP) according to IEC60601-1
- Protections: Short circuit (Continuous) / Overload / UVLO
- 6KVDC or 4.2KVAC high I/O isolation (Reinforced isolation)
- 3 years warranty



Applications

- Medical devices
- Medical oxygen monitor
- CT scanning
- · Medical carts
- Oral care equipment
- Industrial control system

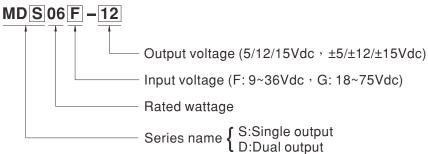
GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

Description

MDS06 and MDD06 series are 6W isolated and regulated module type medical grade DC-DC converter with DIP 24 package. It features international standard pins, a high efficiency up to 84%, wide working temperature range -40~+90°C, 6KVDC or 4.2KVAC I/P-O/P high isolation voltage, compliance with IEC60601-1 medical standard, continuous-mode short circuit protection, etc. The models account for different input voltage 9~36V and 18~75V 4:1 wide input range, and various output voltage, 5V/12V/15V for single output and $\pm 5V/\pm 12V/\pm 15V$ for dual output. Which are suitable for medical systems, ultra low leakage current.

Model Encoding





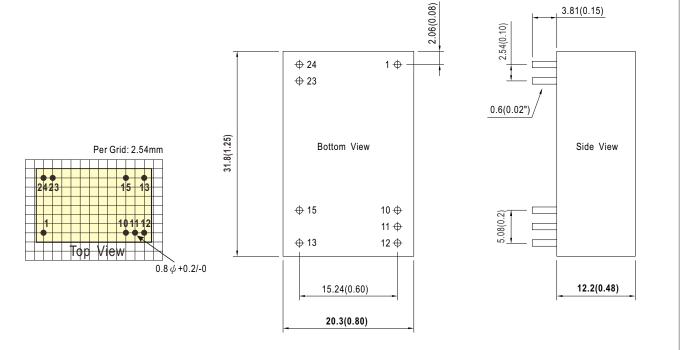
MODEL SELECTION TABLE							
ORDER NO.	INPUT			OUT	ГРИТ		
	INPUT VOLTAGE (RANGE)	INPUT CURRENT		OUTPUT	OUTPUT	EFFICIENCY (TYP.)	CAPACITOR LOAD (MAX.)
		NO LOAD	FULL LOAD	VOLTAGE	CURRENT	(,	(IVIAA.)
MDS06F-05	Normal 12V,24V (9 ~ 36V)	20mA	625mA	5V	0 ~ 1200mA	80%	330µF
MDS06F-12		22mA	620mA	12V	0 ~ 500mA	81%	120µF
MDS06F-15		20mA	602mA	15V	0 ~ 400mA	83%	100μF
MDD06F-05		20mA	625mA	±5V	±60~600mA	80%	*330µF
MDD06F-12		28mA	617mA	±12V	±25 ~ 250mA	81%	*47µF
MDD06F-15		30mA	612mA	±15V	±20 ~ 200mA	82%	*47µF
MDS06G-05	Normal 24V,48V (18 ~ 75V)	10mA	315mA	5V	0 ~ 1200mA	80%	330µF
MDS06G-12		12mA	305mA	12V	0 ~ 500mA	84%	120µF
MDS06G-15		12mA	300mA	15V	0 ~ 400mA	84%	100µF
MDD06G-05		10mA	313mA	±5V	±60 ~ 600mA	80%	*330µF
MDD06G-12		15mA	315mA	±12V	±25 ~ 250mA	81%	*47µF
MDD06G-15		15mA	310mA	±15V	±20 ~ 200mA	82%	*47µF

SPECIFICA ^T	TION							
	VOLTAGE RANGE	F: 9 ~ 36Vdc , G: 18 ~ 75Vdc						
INDUT	SURGE VOLTAGE (100ms max.)	F models : 50Vdc ; G models : 100Vdc						
INPUT	FILTER	Pitype						
	PROTECTION (Typ.)	Fuse recommended. F models: 2A slow-blow Type, G models: 1A slow-blow Type						
	VOLTAGE ACCURACY	±2%						
ОИТРИТ	RATED POWER	6W						
	RIPPLE & NOISE Note.2	100mVp-p						
	LINE REGULATION Note.3	• • • • • • • • • • • • • • • • • • • •						
	LOAD REGULATION Note.4	±0.5%						
	SWITCHING FREQUENCY (Typ.)	280KHz						
	SHORT CIRCUIT	Protection type : Continuous, automatic recovery						
		110 ~ 250% rated outpu						
PROTECTION	OVERLOAD	<u> </u>	rs automatically after fault con	dition is removed				
	UNDER VOLTAGE	Start-up voltage	8.8Vdc					
	LOCKOUT	Shutdown voltage 8Vdc						
	COOLING	Free-air convection						
	WORKING TEMP.	-40 ~ +90°C (Refer to "Derating Curve")						
	CASE TEMPERATURE	+105°C max.						
	WORKING HUMIDITY	20% ~ 90% RH non-condensing						
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-55 ~ +125°C, 10 ~ 95% RH non-condensing						
	TEMP. COEFFICIENT	-55~+125 €, 10~95% KH non-condensing 0.05% / °C (0~71°C)						
	SOLDERING TEMPERATURE	1.5mm from case of 3 ~ 5sec./265°C max.						
	VIBRATION	1.5mm from case of 3 ~ 5sec./265 € max. 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes						
	SAFETY STANDARDS	IEC60601-1(LVD) 3 rd edition, EAC TP TC 020/2011(EAC TP TC 004 for 48Vin type only) approved						
	WITHSTAND VOLTAGE	I/P-O/P:6KVDC or 4.2KVAC						
	ISOLATION RESISTANCE	I/P-O/P:1000M Ohms / 500VDC / 25°C / 70% RH						
	ISOLATION CAPACITANCE (Typ.)							
	ISOLATION LEVEL	Primary-secondary: 2xMOPP when system input voltage is with 250VAC, 50/60Hz						
	EMC EMISSION	Parameter	Standard	go 10 With 200 V/10,	Test Level / Note			
045577		Conducted	BS EN/EN55011		N/A			
SAFETY &		Radiated	BS EN/EN55011		Class A without external components			
EMC (Note.5)		Parameter	Standard		Test Level / Note			
(,	EMC IMMUNITY	ESD	BS EN/EN61000	1_1_2	±15KV air			
		Radiated Susceptibility	BS EN/EN61000		10V/m			
		EFT/Bursts	BS EN/EN61000		±2KV			
		Surge	BS EN/EN61000		±2KV Line-Line			
		Conducted	BS EN/EN61000					
					10Vrms(e.m.f.)			
	MTDF	Magnetic Field BS EN/EN61000-4-8 30A/m						
	MTBF	>454Khrs MIL-HDBK-217F(25°C)						
OTHERS	DIMENSION (L*W*H) CASE MATERIAL	31.8*20.3*12.2mm (1.25*0.8*0.48 inch)						
		UL94V-0 plastic case						
	1 All parameters are spec	17g; 15pcs/per tube, 750pcs/50 tube max./carton						
NOTE	Ripple & noise are mea Line regulation is meas Load regulation is meas The final equipment murefer to "EMI testing of a second secon	eters are specified at normal input(F: 12Vdc, G: 24Vdc), rated load, 25°C 70% RH ambient. noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1µf & 47µf capacitor. lation is measured from low line to high line at rated load. ulation is measured from 10% to 100% rated load for MDD06. equipment must be re-confirm that it still meet EMC directives. For guidance on how to perform these EMC tests, please EMI testing of component power supplies."(as available on http://www.meanwell.com) Liability Disclaimer: For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx						



■ Mechanical Specification

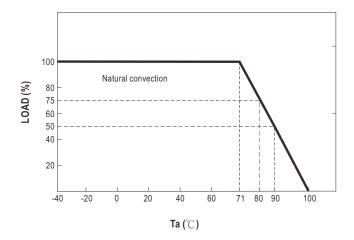
- All dimensions in mm(inch)
- Tolerance:xx or x.xx±0.5mm(x.xx±0.02")
 Pin size is:0.6±0.10mm (0.02"±0.004")



■ Plug Assignment

Pin-Out					
Pin No.	MDS06 (Single output)	MDD06 (Dual output)			
1	+Vin	+Vin			
10	No pin	No pin			
11	No pin	Common			
12	-Vout	No pin			
13	+Vout	-Vout			
15	No pin	+Vout			
23,24	-Vin	-Vin			

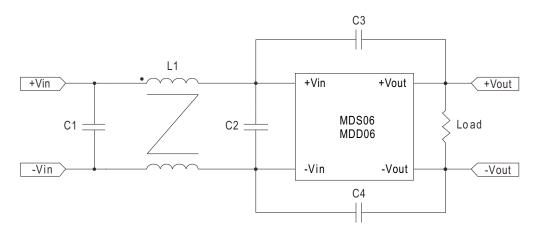
■ Derating Curve





■ EMC Suggestion Circuit

**Required external components to meet BS EN/EN55011 class B emission are as below:



	C1	C2	C3	C4	L1
MDS06F	10µF/50V MLCC	10µF/50V MLCC	X	Х	450µH Common Mode Choke
MDS06G	4.7µF/100V MLCC	4.7μF/100V MLCC	Х	Х	450µH Common Mode Choke



■ Packing

Standard Tube Packing	MPQ Per Tube (PCS)	One Tube G.W.	Max. Q'TY/ Carton(PCS)	One Carton G.W.
Tube Plugs Tube pattern Tube value of the control	15	310g	750	16.1Kg

■ Installation Manual

Please refer to : http://www.meanwell.com/manual.html