MEAN WELL

30W DC-DC Single Output

SDM30 series

■ Features :

- Wide 2:1 DC input range
- In/out capacitance1000pF
- Protections: Short circuit / Overload / Over voltage
- 1000VDC I/O isolation for D/D
- Cooling by free air convection
- Built-in remote ON-OFF control
- 100% full load burn-in test
- Fixed switching frequency at 225KHz
- Lost cost
- High reliability
- 1 year warranty

CE

SPECIFICATION

MODEL		SDM30-12S3	SDM30-24S3	SDM30-48S3	SDM30-12S5	SDM30-24S5	SDM30-48S5
OUTPUT	DC VOLTAGE	3.3V			5V		
	RATED CURRENT	5A			5A		
	CURRENT RANGE	0 ~ 5A			0 ~ 5A		
	RATED POWER	16.5W			25W		
	RIPPLE & NOISE (max.) Note.2	75mVp-p			75mVp-p		
	VOLTAGE TOLERANCE Note.3	±3.0%			±2.0% max.		
	LINE REGULATION	±1.0%			±1.0%		
	LOAD REGULATION	±1.0%			±1.0%		
	TRIM OUTPUT	±13%(Typ.) output voltage			±10%(Typ.) output voltage		
INPUT	RATED DC INPUT	12S: 12VDC 24S: 24VDC 48S: 48VDC					
	VOLTAGE RANGE	12S: 9.2 ~ 18VDC 24S: 18~ 36VDC 48S: 36~ 72VDC					
	EFFICIENCY (Typ.)	77%	79%	80%	77%	79%	80%
	DC CURRENT	12S:3.6A 24S:2A 48S:1A					
	IDLE CURRENT	12S:35mA 24S/48S:30mA					
PROTECTION	OVERLOAD	Above 105% rated output power					
		Protection type : Over power limiting, recovers automatically after fault condition is removed					
	OVER VOLTAGE	3.8 ~ 4.95V			5.75 ~ 7.5V		
		Protection type : Shut off o/p voltage, clamping by zener diode					
	SHORT CIRCUIT	Protection type : Constant current limiting, recovers automatically after fault condition is removed					
FUNCTION	ON/OFF CONTROL	Logic "1" or open: power on Logic "0" short to Vin-: power off					
ENVIRONMENT	WORKING TEMP.	-25 ~ +85℃ (Refer to output load derating curve)					
	STORAGE TEMP., HUMIDITY	-25 ~ +85℃, 0 ~ 95% RH					
	TEMP. COEFFICIENT	±0.03%/℃ (0~50℃)					
SAFETY & EMC (Note 6)	SAFETY STANDARDS	Design refer to LVD					
	ISOLATION VOLTAGE	I/P-O/P:1KVDC					
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms/500VDC					
	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22) Class B					
	EMS IMMUNITY	Compliance to EN61000-2,3,4,6,8; ENV50204, EN55024, light industry level, criteria A					
OTHERS	MTBF	322.4K hrs min. MIL-HDBK-217F (25℃)					
	DIMENSION	50.8*50.8*16mm (2"*2"*0.63") (L*W*H)					
	PACKING	0.1Kg; 150pcs/15.8Kg/0.97CUFT					
NOTE	1. All parameters NOT specially mentioned are measured at 12,24,48VDC input, rated load and 25℃ of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. Short circuit not more than 60 second. 5. DC source wires ≧5cm, an input external al capacitor 47 ~ 100uF is required. 6. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.						

File Name:SDM30-SPEC 2007-05-24

MEAN WELL

30W DC-DC Single Output

SDM30 series

■ Features :

- Wide 2:1 DC input range
- In/out capacitance1000pF
- Protections: Short circuit / Overload/ Over voltage
- 1000VDC I/O isolation for D/D
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CE

SPECIFICATION

MODEL		SDM30-12S12	SDM30-24S12	SDM30-48S12	SDM30-12S15	SDM30-24S15	SDM30-48S15
OUTPUT	DC VOLTAGE	12V			15V		
	RATED CURRENT	2.1A	2.5A		1.7A	2A	
	CURRENT RANGE	0 ~ 2.1A	0 ~ 2.5A		0 ~ 1.7A	0 ~ 2A	
	RATED POWER	25.2W	30W		25.5W	30W	
	RIPPLE & NOISE (max.) Note.2	100mVp-p			100mVp-p		
	VOLTAGE TOLERANCE Note.3	±2.0% max.			±2.0% max.		
	LINE REGULATION	±1.0%			±1.0%		
	LOAD REGULATION	±1.0%			±1.0%		
	TRIM OUTPUT	±10%(Typ.) output voltage					
INPUT	RATED DC INPUT	12S: 12VDC 24S: 24VDC 48S: 48VDC					
	VOLTAGE RANGE	12S: 9.2 ~ 18VDC 24S: 18~ 36VDC 48S: 36~ 72VDC					
	EFFICIENCY (Typ.)	80%	82%	84%	80%	83%	85%
	DC CURRENT	12S:3.6A 24S:2A 48S:1A					
	IDLE CURRENT	12S:35mA 24S/48S:30mA					
PROTECTION	OVERLOAD	Above 105% rated output power					
		Protection type : Over power limiting, recovers automatically after fault condition is removed					
	OVER VOLTAGE	13.8 ~ 18V			17.25 ~ 22.5V		
		Protection type : Shut off o/p voltage, clamping by zener diode					
	SHORT CIRCUIT	Protection type : Constant current limiting, recovers automatically after fault condition is removed					
FUNCTION	ON/OFF CONTROL	Logic "1" or open: power on Logic "0" short to Vin-: power off					
ENVIRONMENT	WORKING TEMP.	-25 ~ +85℃ (Refer to output load derating curve)					
	STORAGE TEMP., HUMIDITY	-25 ~ +85℃, 0 ~ 95% RH					
	TEMP. COEFFICIENT	±0.03%/℃ (0~50℃)					
SAFETY & EMC (Note 6)	SAFETY STANDARDS	Design refer to LVD					
	ISOLATION VOLTAGE	I/P-O/P:1KVDC					
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms/500VDC					
	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22) Class B					
	EMS IMMUNITY	Compliance to EN61000-2,3,4,6,8; ENV50204, EN55024, light industry level, criteria A					
OTHERS	MTBF	322.4K hrs min. MIL-HDBK-217F (25℃)					
	DIMENSION	50.8*50.8*16mm (2"*2"*0.63") (L*W*H)					
	PACKING	0.1Kg; 150pcs/15.8Kg/0.97CUFT					
NOTE	1. All parameters NOT specially mentioned are measured at 12,24,48VDC input, rated load and 25℃ of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. Short circuit not more than 60 second. 5. DC source wires ≧5cm, an input external al capacitor 47 ~ 100uF is required. 6. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.						

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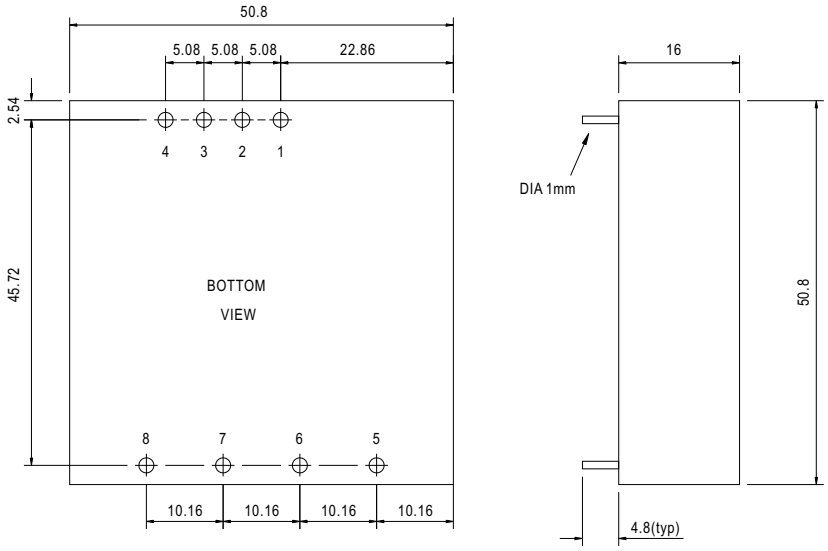
■ Mechanical Specification

Case No. SDM-30 Unit:mm

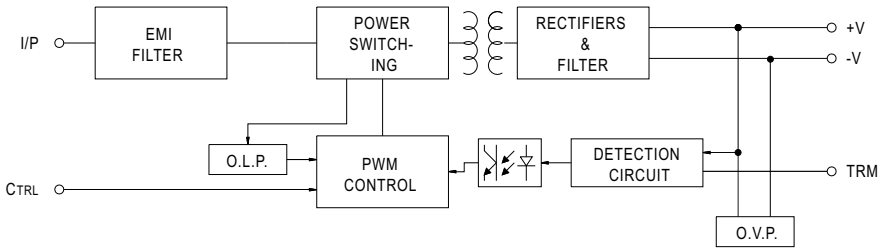


Pin No. Assignment

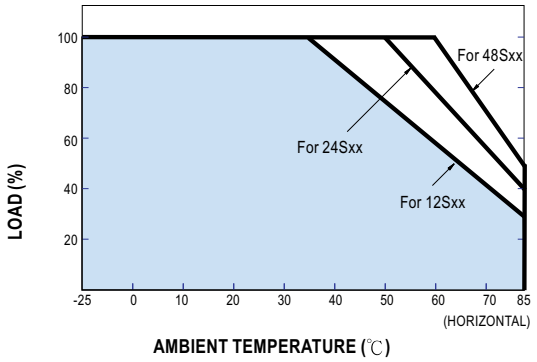
Pin No.	Assignment	Pin No.	Assignment
1	+Vin	6	+Vout
2	-Vin	7	-Vout
3,5	No pin	8	Trim
4	Control ON/OFF		

■ Block Diagram

fosc : 225KHz



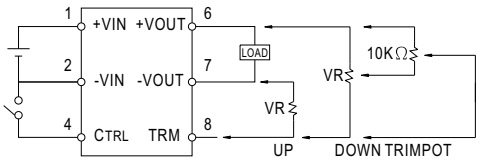
■ Derating Curve



■ External Output Trimming

OUTPUT MAY OPTIONALLY BE EXTERNALLY TRIMMED(±10%)

A FIXED RESISTER OR AN EXTERNAL TRIMPOT AS SHOWN



■ ON/OFF Control Pin

CONTROL INPUT.....PIN4
CONTROL COMMON.....PIN2
LOGIC COMPATIBILITY.....CMOS OR OPEN COLLECTOR TTL
CONTROL VOLTAGE
ON.....+5.5VDC min OR OPEN CIRCUIT
OFF.....+2.5VDC max. OR SHORT TO PIN2

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