



Models

Model	Input Voltage (DC V)	Input Voltage range (DC V)	Output voltage (DC V)	Output current (mA)
MSD15-2412	24	18~36	±12	±600
MSD15-2415	24		±15	±500
MSD15-4812	48	36~75	±12	±600
MSD15-4815	48		±15	±500

Specification

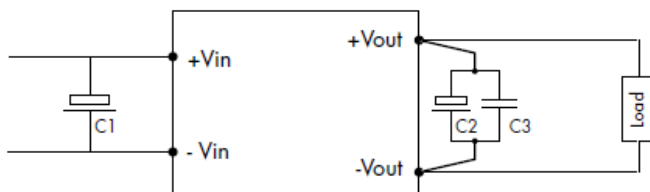
Input Specifications	
Input current (no load)	24 Vin models: 50 mA typ. 48 Vin models: 30 mA typ.
Input current (full load)	24 Vin; 3.3 Vout models: 570 mA typ. 24 Vin; other output models: 730 mA typ. 48 Vin; 3.3 Vout models: 280 mA typ. 48 Vin; other output models: 360 mA typ.
Start-up voltage /under voltage shut down	24 Vin models: 17 VDC /16.5 VDC 48 Vin models: 34.0 VDC /32.5 VDC
Surge voltage(100 msec. max.)	24 Vin models: 50 V max.. 48 Vin models: 100 V max.

Output Specifications		
Voltage set accuracy		$\pm 1 \%$
Regulation	- Input variation V_{in} min. to V_{in} max - Load variation 10 – 100 %	0.5% max.
	dual output models unbalanced:	2.0 % max.
	dual output models unbalanced:	5.0 % max.
Ripple and noise (20 MHz Bandwidth)		100 mVpk-pk max. (with external output capacitor, see Note 1)
Temperature coefficient		$\pm 0.02 \%$ /K
Output current limitation		>105% of I_{out} max., foldback
Short circuit protection		indefinite (automatic recovery)
Start-up time		30ms max.
Max. capacitive load		1200 μ F
General Specifications		
Temperature ranges	- Operating - Derating - Case temperature - Storage	-25 ° C ... +71° C 2.5%/K above 50° C +100 ° C max. -40 ° C ... +110 ° C
Humidity (non condensing)		85 % rel H max.
Reliability, calculated MTBF (MIL-HDBK-217F ground be		> 190' 000h @ +25° C
Isolation voltage (60sec	- Input/Output	1' 500 VDC
Isolation capacity	- Input/Output	235 pF typ.
Isolation resistance	- Input/Output (500 VDC	>100 M Ohm
Switching frequency (fixed)		330 kHz typ. (Pulse width modulation PWM)
Remote On/Off	- On: - Off:	open circuit on pin RC short circuit between pin RC and pin -Vin

Physical Specifications	
Case material	plastic PBT (UL94V-0 rated)
Baseplate	non conductive FR4
Potting material	silicon (UL94V-0 rated)
Weight	12 g (0.41 oz)
Soldering temperature	max. 265 ° C / 10sec.

Note 1

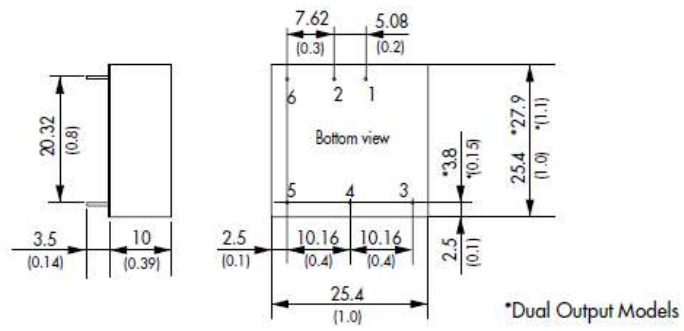
Recommended circuit to reduce conducted noise and output ripple & noise:



For dual output models use capacitors for each output

C1: 33 μ F low ESR electrolytic capacitor
 C2: 10 μ F low ESR electrolytic capacitor
 C3: 1 μ film capacitor

Outline Dimensions mm



() = Inch

Pin-Out

- 1 +Vin (Vcc)
- 2 -Vin (GND)
- 3 +Vout
- 4 Common
- 5 -Vout
- 6 Remote On/Off