

# D15

MAX. Power 15W Isolated DC-DC Converter

## D15 Series Encapsulated PCB Type DC-DC Converter



### Features

- Encapsulated Compact Size
- High Efficiency
- Isolated Input - Output
- 300kHz fixed frequency and Current mode Control
- Low output Ripple & Noise
- Built-in over current protection circuit
- Wide 2 :1 input range
- Adjustable output voltage
- Safety : Meets UL/CE Standard (Approvals pending)
- RoHS compatible design
- 3-years warranty

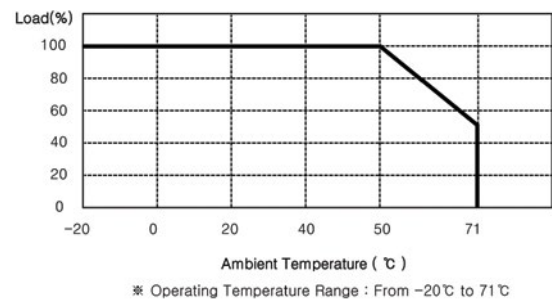
### Environment

- Operating Temperature : -20°C ~ 71°C
- Operating Humidity : 20% ~ 90% RH (Non condensing)
- Storage Temperature : -40°C ~ 105°C
- Cooling : Free-Air Convection
- MTBF : 5.3 x 10<sup>5</sup> hrs

### Applications

- Data and telecommunication
- Datacommunication electronic equipments
- FA control

### Derating Curve



### General Specifications

Input	Input Voltage Range	5V(4.8~7.2), 12V(8~16.5), 24V(18~32), 48V(32~63)
	Efficiency	77% ~ 87%
Output	Output Voltage	3.3V, 5V, 9V, 12V, 15V, 24V, ±5V, ±12V, ±15V
	Line Regulation	± 0.5%
	Load Regulation	± 1.0%
	Output Voltage Accuracy	± 2.0%
	Output Voltage adj. Range	± 10%
Protection Circuit	Over Current Protection	Works at over 105% of rating and recovers automatically
	Over Voltage Protection	Works at 115% ~ 140% of rating, re-power on to recover
Electrically Isolated	High Pot	Input / Output, Input / Case, Output / Case : AC500V 1minute
	Isolation	Input / Output, Input / Case, Output / Case : DC500V 100MΩ

### DS15 Series Ordering Information (Single Output)

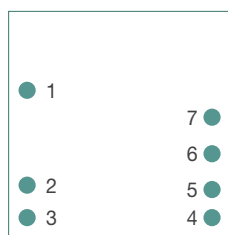
MODEL	DS15-05-3R3	DS15-05-05	DS15-05-12	DS15-05-15	DS15-12-3R3	DS15-12-05	DS15-12-09	DS15-12-12	DS15-12-15	DS15-12-24	
Input Voltage (V)	5 (4.8 ~ 7.2)				12 (8 ~ 16.5)						
Output	Vout (V)	3.3	5	12	15	3.3	5	9	12	15	24
	Iout (A)	2.4	2.2	1	0.8	2.4	2.8	1.6	1.25	1	0.63
Maximum Power (W)	7.92	11	12	12	7.92	14	14.4	15	15	15.12	
Ripple & Noise (mVp-p)	70	70	120	150	70	70	100	120	150	200	
Efficiency Typ. (%)	77	80	81	81	82	85	85	86	86	86	

MODEL	DS15-24-3R3	DS15-24-05	DS15-24-09	DS15-24-12	DS15-24-15	DS15-24-24	DS15-48-3R3	DS15-48-05	DS15-48-09	DS15-48-12	DS15-48-15	DS15-48-24	
Input Voltage (V)	24 (18 ~ 32)						48 (32 ~ 63)						
Output	Vout (V)	3.3	5	9	12	15	24	3.3	5	9	12	15	24
	Iout (A)	2.4	2.8	1.6	1.25	1	0.63	2.4	2.8	1.6	1.25	1	0.63
Maximum Power (W)	7.92	14	14.4	15	15	15.12	7.92	14	14.4	15	15	15.12	
Ripple & Noise (mVp-p)	70	70	100	120	150	200	70	70	100	120	150	200	
Efficiency Typ. (%)	83	86	86	87	87	87	78	86	87	87	87	87	

### DD15 Series Ordering Information (Dual Output)

MODEL	DD15-12-0505	DD15-12-1212	DD15-12-1515	DD15-24-0505	DD15-24-1212	DD15-24-1515	DD15-48-0505	DD15-48-1212	DD15-48-1515	
Input Voltage (V)	12 (8 ~ 16.5)			24 (18 ~ 32)			48 (32 ~ 63)			
Output	Vout (V)	±5	±12	±15	±5	±12	±15	±5	±12	±15
	Iout (A)	1.5	0.6	0.5	1.5	0.6	0.5	1.5	0.6	0.5
Maximum Power (W)	15	14.4	15	15	14.4	15	15	14.4	15	
Ripple & Noise (mVp-p)	120/120	150/150	150/150	120/120	150/150	150/150	120/120	150/150	150/150	
Efficiency Typ. (%)	85	86	86	86	87	87	86	87	87	

### Pin assignments



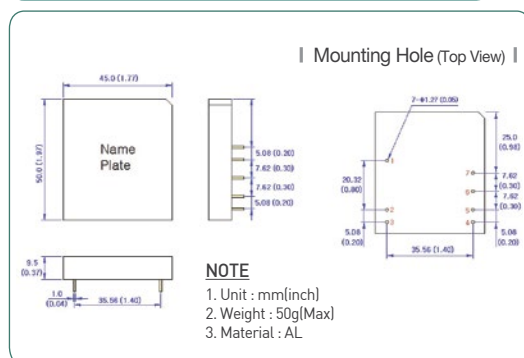
Pin No.	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
3	CNT	CNT
4	TRM	TRM
5	-Vout	-Vout
6	No Pin	Com
7	+Vout	+Vout

#### Function Pin

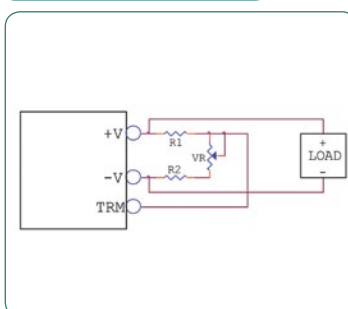
**Pin No.3 CNT** : Remote on/off Control  
 on : 0~1.2VDC or short -Vin  
 off : 2.4~5.5VDC or open

**Pin No.4 TRM** : Output Voltage Trimmable (±10%)

### Outline Dimensions : (Unit : mm (inch))



### Trim method



### External parts

	Output	R1	R2	VR
Single	3.3V	150 Ω	240 Ω	1kΩ
	5V	1kΩ	680 Ω	1kΩ
	9V	3kΩ	680 Ω	1kΩ
	12V	3.9kΩ	680 Ω	1kΩ
	15V	5.6kΩ	750 Ω	1kΩ
Dual	±5(10)V	3.3kΩ	680 Ω	1kΩ
	±12(24)V	12kΩ	1kΩ	1kΩ
	±15(30)V	15kΩ	1kΩ	1kΩ