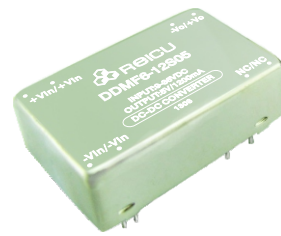


**Features**

- Efficiency up to 80%
- 1500VDC Isolation(Suffix H for 3000VDC)
- Singl/Double output
- Continuous short circuit protection
- Wide input voltage range
- Wide temperature -40 ~ to 85 °
- Low ripple and noise
- Short circuit protection



**Model Selection Guide**

Order Code	Vin(V)		Output		Recommend capacitive(uF)	Efficiency(%) (Typ)		
	Nominal	Range	Vo(V)	Io(mA)				
DDM6-05S05(P/H)	5	4.5-9.0	5	1200	220	76		
DDM6-05S09(P/H)			9	667	150	76		
DDM6-05S12(P/H)			12	500	150	77		
DDM6-12S3V3(P/H)	12	9-18	3.3	1818	220	75		
DDM6-12S05(P/H)			5	1200	220	78		
DDM6-12S09(P/H)			9	667	220	78		
DDM6-12S12(P/H)			12	500	100	82		
DDM6-12S15(P/H)			15	400	100	82		
DDM6-12S24(P/H)			24	250	100	82		
DDM6-12D05(P/H)			±5	±600	150	78		
DDM6-12D09(P/H)			±9	±333	150	79		
DDM6-12D12(P/H)			±12	±250	100	80		
DDM6-12D15(P/H)			±15	±200	100	82		
DDM(F)6-24S3V3(P/H)			24	18-36 (F)9-36	3.3	1818	220	76
DDM(F)6-24S05(P/H)					5	1200	220	80
DDM(F)6-24S09(P/H)	9	667			220	80		
DDM(F)6-24S12(P/H)	12	500			100	82		
DDM(F)6-24S15(P/H)	15	400			100	82		
DDM(F)6-24S24(P/H)	24	250			100	83		
DDM(F)6-24D05(P/H)	±5	±600			150	78		
DDM(F)6-24D09(P/H)	±9	±333			150	79		
DDM(F)6-24D12(P/H)	±12	±250			100	80		
DDM(F)6-24D15(P/H)	±15	±200			100	81		
DDM(F)6-48S3V3(P/H)	48	36-72 (F)18-72			3.3	1818	220	76
DDM(F)6-48S05(P/H)					5	1200	220	80
DDM(F)6-48S09(P/H)					9	667	220	81
DDM(F)6-48S12(P/H)					12	500	100	81
DDM(F)6-48S15(P/H)					15	400	100	82
DDM(F)6-48S24(P/H)					24	250	100	83
DDM(F)6-48D05(P/H)					±5	±600	150	80
DDM(F)6-48D09(P/H)					±9	±333	150	80
DDM(F)6-48D12(P/H)			±12	±250	100	81		
DDM(F)6-48D15(P/H)			±15	±200	100	82		

**Input Characteristics**

Parameter	Condition	Min	Typ	Max	Units
Input Surge Voltage (1 sec. Max.)	5V Input Models	-0.7	---	15	VDC
	12V Input Models	-0.7	---	25	
	24V Input Models	-0.7	---	50	
	48V Input Models	-0.7	---	90	
Input Filter Type	All Models	Internal Capacitor			

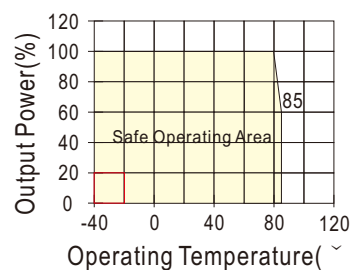
**Output Characteristics**

Parameter	Condition	Min	Typ	Max	Units
Output Voltage Accuracy	+Vo	---	1%	---	%
	-Vo	---	2%	3%	%
Load regulation	10% ~ 100% load	---	±0.5	±1	%
Line regulation	Vin(Min~Max)	±0.1	---	±0.5	%
Ripple and noise	BW=DC to 20MHz	---	50	100	mVp-p
Switching frequency	Full load,nominal input	---	300	400	KHz
Transient Recovery Time	25% Load Step Change	---	---	500	uS
Short circuit Protection	Continuous, Automatic Recovery				

**General Characteristics**

Parameter	Condition	Min	Typ	Max	Units
Operating Temperature	All output types	-40	---	+85	°
Storage		-55	---	+125	°
Storage humidity		---	---	+95	%
Cooling	Free air convection	---	---	---	
Isolation voltage	1mA ~ 1minute	1500	---	---	VDC
		3000	---	---	VDC
Isolation resistance	500VDC	1000	---	---	MΩ
MTBF	2 ~ 10 <sup>6</sup>				K hours
Case material					Metal
	/P				Plastic

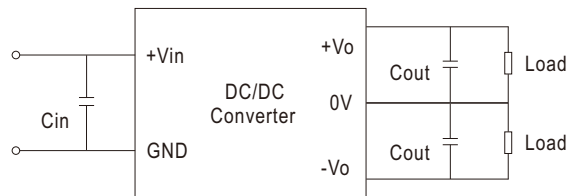
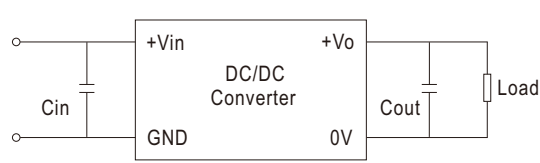
**Temperature Derating Graph Curve**



**Design & Feature Considerations**

**1. Input/Output Ripple Reduction**

Reduce output ripple, it is recommended to use capacitors at the input/output. It is recommended to use 10uF~100uF capacitors at the input; 47~220uF capacitors at the output.



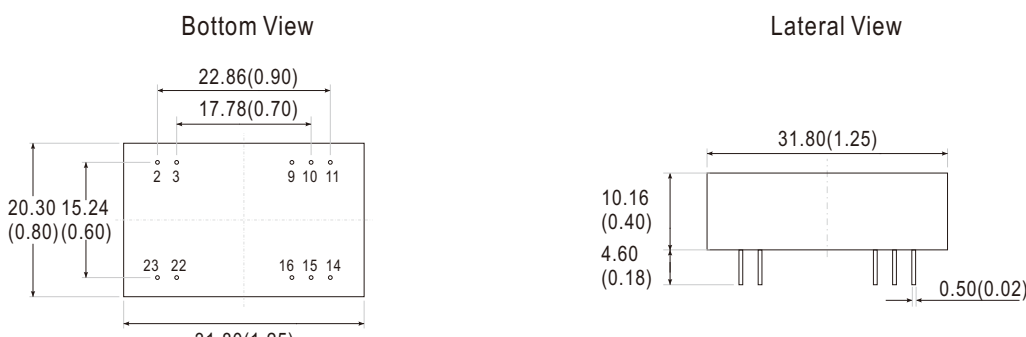
**2. Overload Protection**

The products provide protection against overload, the unit is equipped with internal current limiting circuitry.

**Note**

- 1.All the specifications typical at Ta=+25°C resistive load, nominal input voltage and rated output current unless otherwise noted.
- 2.Operation under no-load condition will not damage these modules; however they may not meet all specifications listed.
- 3.Ripple & Noise measurement bandwidth is 0-20MHz.
- 3.Other input and output voltage may be available, please
- 4.To order the converter with 4:1 input voltage range, add letter F (e.g:DDF6-24S05) in the order code.
- 5.All DC/DC converters should be externally fused at the front end for protection.
- 6.Specifications subject to change without notice

**Mechanical Dimension & Pin Connections**



Pin	2,3	9	10	11	14	15	16	22,23
Single	-Vin	NC	NP	NC	+Vo	NP	-Vo	+Vin
Double	-Vin	COM	NP	-Vo	+Vo	NP	COM	+Vin

Note:  
Unit:mm(inch)