

- **2W REGULATED OUTPUT POWER**
- **2:1 WIDE INPUT VOLTAGE RANGE**
- **REGULATED OUTPUT VOLTAGE**
- **NO HEAT SINK REQUIRED**
- **SMALL FOOT PRINT**
- **PCB MOUNTING**
- **HIGH ACCURACY REGULATED OUTPUT**
- **OVER CURRENT AND SHORT CIRCUIT PROTECTION**
- **INTERNATIONAL STANDARD DIP 24 PACKAGE**


RoHS COMPLIANT

The DKW2 series DC-DC converter offers 2 watts regulated power from a 24 PIN international standard DIP package. The series are especially designed for the application of telecommunication, industry control, instrumentation and measurements. With its features, the product can be used where the wider input, regulated output and isolation needed.

ELECTRICAL SPECIFICATIONS:

(All specifications tested typically @ 25°C, humidity<75%, nominal input and rated output unless otherwise noted.)

OUTPUT SPECIFICATIONS

Items:	Testing condition	Min	Typ.	Max
Output accuracy:	At full load and nominal V_{in}			$\pm 1\%$
Output power:				2W
Line regulation:	Input voltage from low to full load			$\pm 0.2\%/\pm 0.5\%$
Load regulation:	From 0% to full load, 0.5%~1.0%			
Ripple and noise:	$V_o \leq 5V, V_{p-pmax} \leq 50mV, V_o \geq 48V, V_{p-pmax} \leq 200mV, others: V_{p-pmax} \leq 100mV_{p-p}$			
Temperature drift:				$\pm 0.02\%/^{\circ}C$
Switching frequency			400K HZ	
Short circuit protection	Continuous and automatic recovery			

INPUT SPECIFICATIONS

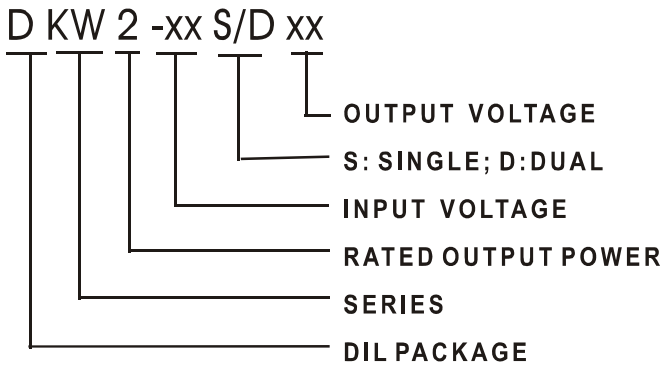
Items:	Testing condition	Min	Typ.	Max
Input voltage range	12VDC nominal input		9-18VDC	
	24VDC nominal input		18-36VDC	
	48VDC nominal input		36-72VDC	
Input filter		Pi		

COMMON SPECIFICATIONS				
Items		Min	Typ.	Max
Operating temperature range		-25°C		+60°C
Storage temperature range		-45°C		+105°C
Humidity		10%		90%
Cooling	Free Air Convection			
Isolation voltage (VDC)	Input to Output	1000		1500
Isolation resistance (ohms)			10 ⁹	
Isolation capacitance (pF)				1000
Efficiency (%)	See Product List			85
Case material	Non-conductive black copper			
Potting material	Epoxy Resin UL94-V0			
Packing material	Tube			
Dimension (mm)	30.8x20.3x10.14mm			
Weight (g)	6g			
MTBF (Hrs)		1X10 ⁶		

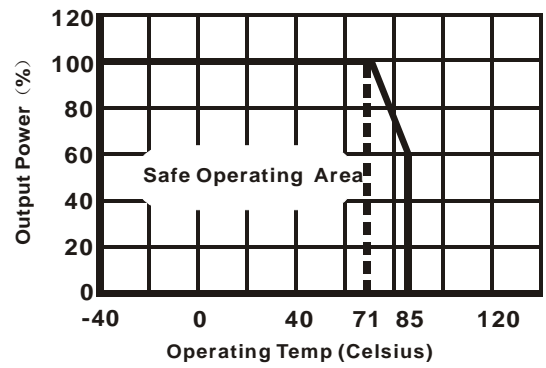
PRODUCT LIST								
Part Number	Input Voltage (VDC)			Output		Efficiency (%, Typ.)	Package	Capacitor Load Max (uF)
	Range	Nominal	Max.	Current (mA)	Voltage (VDC)			
DKW2-12S3R3	9-18	12	20	600	3.3	75	DIP	2200
DKW2-12S05		12	20	400	5	78	DIP	1200
DKW2-12S12		12	20	166	12	80	DIP	220
DKW2-12S15		12	20	133	15	80	DIP	150
DKW2-12D05		12	20	±200	±5	78	DIP	±680
DKW2-12D12		12	20	±83	±12	80	DIP	±100
DKW2-12D15		12	20	±66	±15	80	DIP	±68
DKW2-24S3R3	18-36	24	40	600	3.3	70	DIP	2200
DKW2-24S05		24	40	400	5	80	DIP	1200
DKW2-24S12		24	40	166	12	80	DIP	220
DKW2-24S15		24	40	133	15	80	DIP	150
DKW2-24D05		24	40	±200	±5	78	DIP	±680
DKW2-24D12		24	40	±83	±12	80	DIP	±100
DKW2-24D15		24	40	±66	±15	80	DIP	±68
DKW2-48S3R3	36-72	48	80	600	3.3	75	DIP	2200
DKW2-48S05		48	80	400	5	78	DIP	1200
DKW2-48S12		48	80	166	12	80	DIP	220
DKW2-48S15		48	80	133	15	80	DIP	150
DKW2-48D05		48	80	±200	±5	78	DIP	±680
DKW2-48D12		48	80	±83	±12	80	DIP	±100
DKW2-48D15		48	80	±66	±15	80	DIP	±68

- Note:**(1) A minimum 10% load is required on the output to meet the published specifications. Even though working at no load condition will not damage the device, it is not adoptable.
(2) If the output power needed is smaller than rated, please connect a proper value resistor at output end in parallel to increase the load or contact us for a lower power product.
(3) For lower noise and ripple, please connect a "LC" filter at the output. The capacitance must be 100uF or more in case of start-up problems.

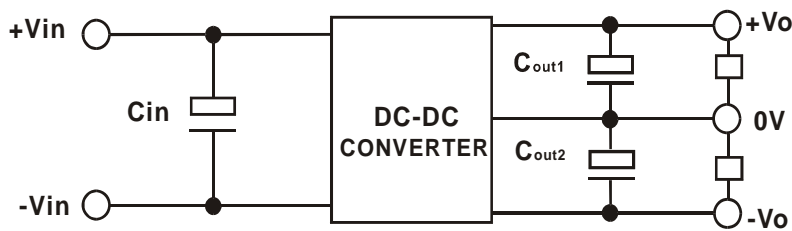
NOMENCLATURE



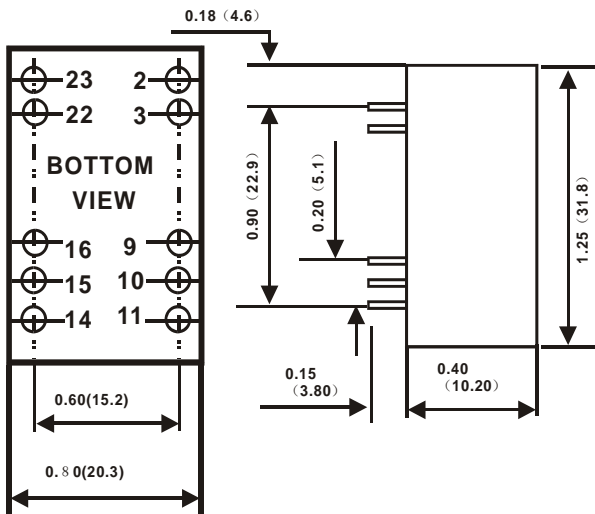
TEMPERATURE DERATING GRAPH



TYPICAL CONNECTION



OUTLINE DIMENSION



PINS DESCRIPTION

PIN	SINGLE	DUAL	PIN	SINGLE	DUAL
2	-Vin	-Vin	23	+Vin	+Vin
3	-Vin	-Vin	22	+Vin	+Vin
9	NC	COMMON	16	-Vout	COMMON
10	NC	NC	15	NC	NC
11	NC	-Vout	14	+Vout	+Vout

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