



DC-DC Converter DIP-Package

SDHV-10 SERIES, 10WATT, 2:1 INPUT RANGE

FEATURES:

- ✓ Wide input range(2:1)
- ✓ Six-side shielded metal case
- ✓ Low ripple and noise
- ✓ Over current and short circuit protection
- ✓ Typical efficiency up to 86%



Model	Input voltage (Vdc)	Output voltage (Vdc)	Output current (mA)	Efficiency Typ.
SDHV10-0511	5(4.5~9)	5	2000	78%
SDHV10-0515		9	111	81%
SDHV10-0512		12	833	82%
SDHV10-0513		15	667	82%
SDHV10-0514		24	417	84%
SDHV10-0521		±5	±1000	80%
SDHV10-0525		±9	±555	81%
SDHV10-0522		±12	±417	82%
SDHV10-0523		±15	±333	83%
SDHV10-0524		±24	±208	84%
SDHV10-1211	12(9~18)	5	2000	79%
SDHV10-1215		9	111	81%
SDHV10-1212		12	833	82%
SDHV10-1213		15	667	83%
SDHV10-1214		24	417	84%
SDHV10-1221		±5	±1000	80%
SDHV10-1225		±9	±555	81%
SDHV10-1222		±12	±417	83%
SDHV10-1223		±15	±333	83%
SDHV10-1224		±24	±208	84%
SDHV10-2411	24(18~36)	5	2000	80%
SDHV10-2415		9	111	82%
SDHV10-2412		12	833	84%
SDHV10-2413		15	667	84%
SDHV10-2414		24	417	85%
SDHV10-2421		±5	±1000	80%
SDHV10-2425		±9	±555	82%
SDHV10-2422		±12	±417	84%
SDHV10-2423		±15	±333	85%
SDHV10-2424		±24	±208	85%

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Model	Input voltage (Vdc)	Output voltage (Vdc)	Output current (mA)	Efficiency Typ.
SDHV10-4811	48(36~72)	5	2000	82%
SDHV10-4815		9	111	82%
SDHV10-4812		12	833	83%
SDHV10-4813		15	667	84%
SDHV10-4814		24	417	85%
SDHV10-4821		±5	±1000	81%
SDHV10-4825		±9	±555	86%
SDHV10-4822		±12	±417	85%
SDHV10-4823		±15	±333	85%
SDHV10-4824		±24	±208	86%

Notes:

1. Other input and output models may available on request;
2. Above models are default to metal case;
3. Add suffix "C" for CTRL pin function.

ELECTRICAL

Output voltage accuracy	+Vo	±2% max.
	-Vo	±3% max.
Output voltage adjustable	Special for "Trim" pin	±10% typ.
Line regulation	Nominal Load, full voltage	±0.5% max.
Load regulation	20% ~ 100% rated load	±1% max.
Ripple and noise	20MHz BM, full load	150mVp-p max.
Operating frequency	Typical value	300KHz typ.
Isolation voltage (<1mA/min)	Input to output	1500Vdc
Isolation resistance	---	1000mΩ
Temperature coefficient	---	±0.03%/°C max.
Operating temperature range	---	-40°C to +85°C
Storage temperature range	---	-55°C to +125°C
Short circuit protection	---	Continuous, auto-recovery
CTRL*	Turn on	Hang or connect high level(3.5-12Vdc)
	Turn off	Connect -Vin or low level(0-1.2Vdc)
	Shut off input current	1mA typ.
Cooling method	---	Cooling by air convection
Relative humidity	---	10%-90% max.
Weight	---	35g

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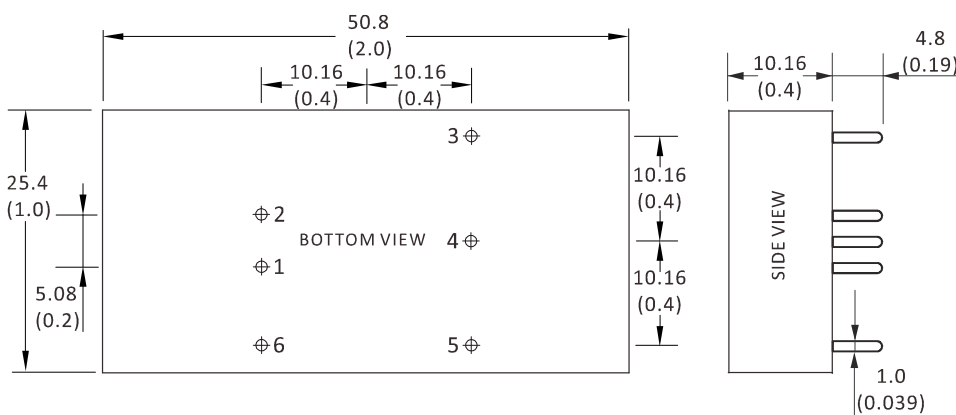
ELECTRICAL

MTBF Bellcore TR-332, 25°C 1000Hrs

Notes: Unless otherwise specified, all the parameters of the test conditions are as follows: ambient temperature 25°C, the nominal input voltage, pure resistive nominal load.

*** The voltage of "CTRL" pin is almost equal to input "-Vin" pin**

MECHANICAL



CONNECTION

PIN #	SINGLE	DUAL
1	GND	GND
2	+Vin	+Vin
3	+Vo	+Vo1
4	No Pin	0V
5	0V	-Vo2
6	No Pin	No Pin

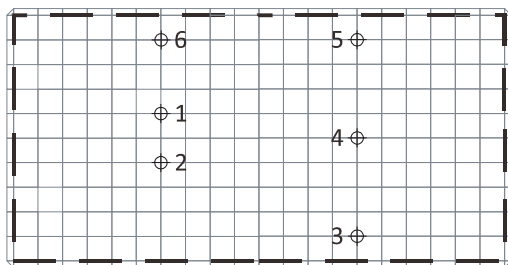
CONNECTION - "CTRL"

1	-Vin	-Vin
2	+Vin	+Vin
3	+Vo	+Vo1
4	TRIM	0V
5	GND	-Vo2
6	CTRL	CTRL

Note:

* Unit is mm(inch).

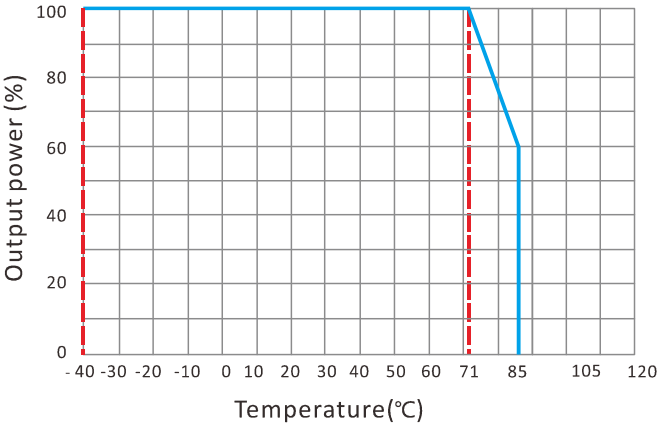
LAYOUT



Unit: mm(inch)
PCB vertical view
Grid spacing: 2.54mm(0.1 inch)

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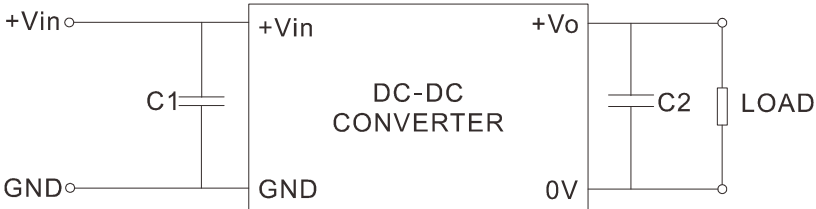
ELECTRICAL CURVE



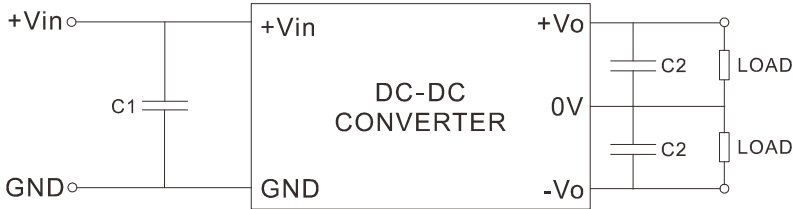
NOTES

RECOMMENDED TEST AND APPLICATION CIRCUIT

SINGLE OUTPUT



DUAL OUTPUT



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NOTES

CAPACITOR SELECTION

INPUT VOLTAGE	C1	SINGLE OUTPUT	C2	DUAL OUTPUT	C2
5VDC	100 μ F	5VDC	1000 μ F	\pm 5VDC	470 μ F
12VDC	100 μ F	9VDC	470 μ F	\pm 9VDC	220 μ F
24VDC	47 μ F	12VDC	220 μ F	\pm 12VDC	100 μ F
48VDC	10 μ F	15VDC	220 μ F	\pm 15VDC	100 μ F
--	--	24VDC	100 μ F	\pm 24VDC	47 μ F