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Internal

Features

- 15 Watt output power
- 1x1” package
- 4:1 input voltage range
- Industry standard pin-out
- 1.6 KVDC isolation
- Operating temperature range -40°C to +105°C
- High efficiency up to 88%
- UL62368-1/ EN62368-1/ IEC62368-1 approval

Isolated DC-DC converter

RS Stock No.: 2853150



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Isolated DC-DC converter

Product Description

The DC-DC converter is specially designed for regulated and low ripple noise is required, industry control application, tele-communication application, energy battery power application.
OP temperature is full load from -40 ℃ to 80℃ and 1600Vdc isolation.
No minimum load required.

General Specifications

Type	15W Isolated DC-DC converter
Regulated/Unregulated	Regulated
Efficiency *1	Typ. 88%
Applications	Industry control application, tele-communication application, energy battery power application

Specifications

Output Voltage	5V dc
Input Voltage	9-36V dc Nom.24V dc
Output Current	3000 mA
Input Curren @ no load	7mA
Input Voltage Range	Min. 9V dc/ Max. 36V dc
Input Surge Voltage	Max. 50V dc (100ms max.)
Under Voltage Lockout	Typ. 7.5V dc
Start-up Voltage	Max. 9V dc
Start-up Time	Max. 25mS/ Typ. 20mS (100% load at nominal Vin)
Remote ON/OFF	DC-DC on Open or 3.5V < Vr < 15V
	DC-DC off Short or 0V < Vr < 1.2V
	Typ. 2mA Input current (remote off mode)
Output Voltage Accuracy	Max. ±1%
Capacitive Load *2	Max. 6400μF
Operating Frequency	Typ. 350KHz
Ripple and Noise *3	Max. 60mV pp
MTBF	Typ. 1000000hours (25°C)
Line Regulation	Max. 0.2% (LL-HL at 100% load)
Load Regulation	Max. 0.5% (10%-100% load)
Cross Regulation	Max. ±5%
Minimum Load	0%
Trim Range	Max. ±10%
Isolation Voltage	Min. 1600V dc/ 1 min., Input to Output

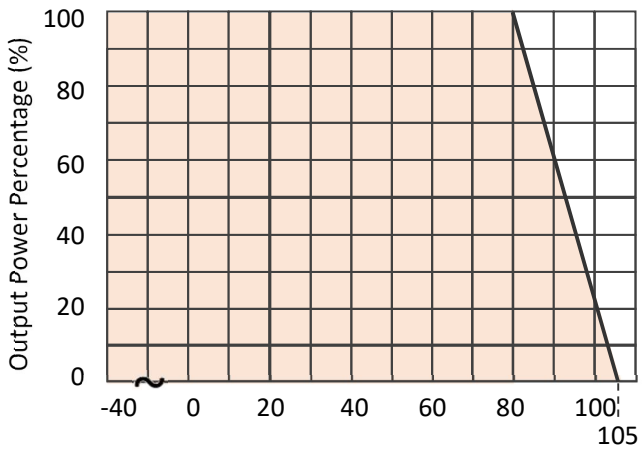
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Isolation Resistance	Min. 1000M Ω
Isolation Capacitance	Typ. 1200pF
Short Circuit Protection	Continuous, automatic recovery
Over Load Protection	Typ. 170% (Hiccup mode)
Safety Approvals	UL62368-1/ EN62368-1/ IEC62368-1
Vibration	MIL-STD-202G
Certificate	RoHS / REACH / CE

General Specifications

Operating Temperature *4	-40 to 105°C
Storage Temperature	-55 to 125°C
Max. Case Temperature	Max. 110°C

Derating



Operating Temperature (˚C)

Ambient temperature with natural convection

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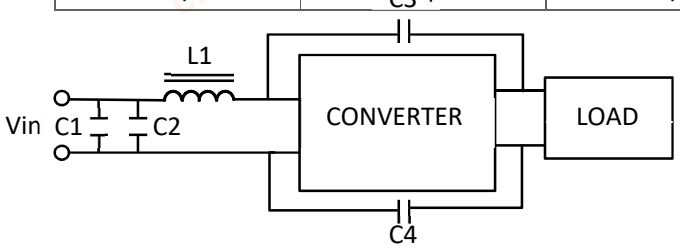
External Output Trimming

Vref	R1	R2	R3
2.50V	10.0K Ω	10.0K Ω	35.7K Ω

EMC Compliance Circuit

■ EN55032 CLASS B

C1	C2	L1	C3	C4
2.2μF	2.2μF	4.7μH	1500pF	1500pF



EMC Specifications

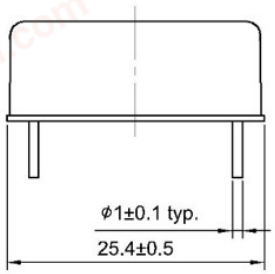
EMI *4	CLASS A/ B EN 55032
ESD	Perf. Criteria A EN 61000-4-2, Air±8kV; Contact±6kV
RS *5	Criteria A EN 61000-4-3
EFT *5	Criteria A EN 61000-4-4, ±2kV
Surge *5	Criteria A EN 61000-4-5, ±2kV
CS *5	Criteria A EN 61000-4-6
PFMF	Criteria A EN 61000-4-8

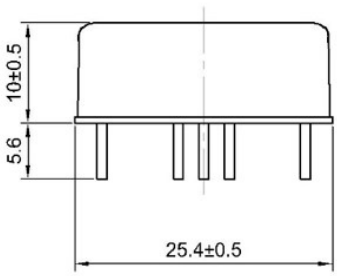
Mechanical Specifications

Case Material	Nickel plated metal with FR-4 base
Potting Material	Silicone
Dimensions	25.40 x 25.40 x 10.00 mm
Weight	17g
Cooling	Free air convection

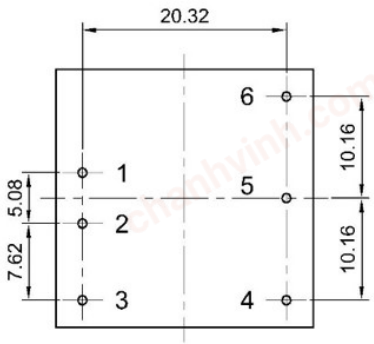
Isolated DC-DC converter

Dimension & Pinning





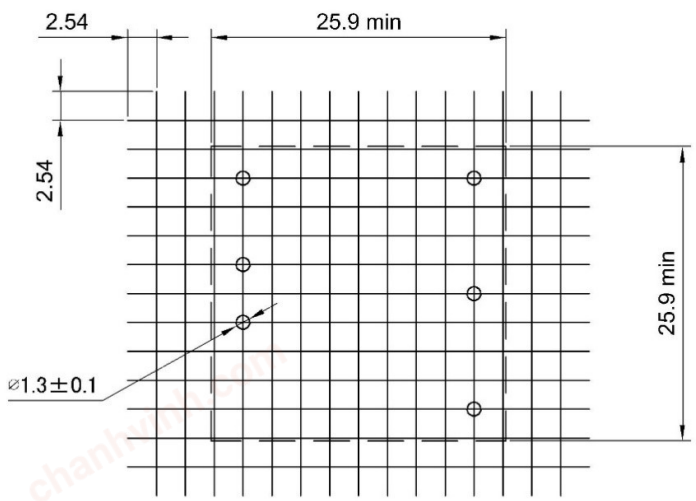
Pin	Pin-Out
1	+Vin
2	-Vin
3	CTRL
4	-Vout
5	Trim
6	+Vout



Bottom view

Tolerance : ±0.25mm

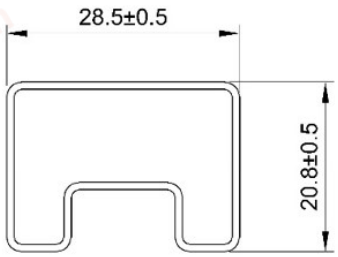
■ Recommend Footprint



Footprint (Top view)

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Package



UNIT:mm
1 Tube = 8 pcs
Length:260±2mm

1. *1 The efficiency is test by nominal input and full load at 25˚C.
2. *2 The capacitive load is test by minimum input and constant resistive load.
3. *3 Ripple& noise: 20MHZ BW at Vin range 0%-100% load with a 1μF MLCC.
4. *4 EMI class A without external circuit, and class B suggestion circuit, please check suggestion circuit.
5. *5 Test with E-CAP 220μF/100V at input terminal.
6. All specifications valid at nominal input voltage, full load and 25˚C after warm-up time unless otherwise stated.