DC-DC Converter

H78S_-1.0/2.0 Series

HenLv

Features

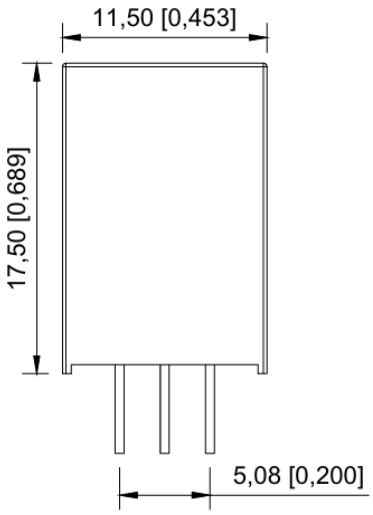
- Wide voltage input:4.75-36VDC
- Non-isolated voltage regulator output
- SIP
- Internal SMD design
- Operating temperature range：-40℃～+85℃
- High flame retardant plastic shell
- Heat dissipation mode: natural air cooling
- Output short-circuit protection

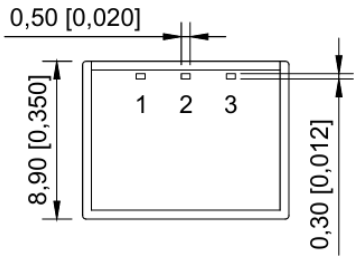
Product Picture

Dimensions

H78S_-1.0/2.0 Series Dimensions

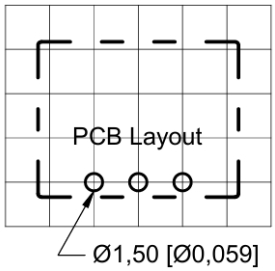
Front View





Bottom View

Top View



Note: The grid distance:2.54*2.54mm

Pin mode	
Pin	Function
1	Vin
2	GND&0V
3	+XXVDC

Note:
Size unit: mm[inch]
Pin section tolerance: ±0.1[±0.004]
Unmarked tolerance: ±0.25[±0.01]

Application

Communication interface converter (RS232/485) Cellular phone, semiconductor laser, operational amplifier power supply, portable instrument, automatic control device, etc.

Selection Guide

Model	Input (VDC)	Output (Vo±2%)	Current (mA)	Efficiency (%)
H78S3.3-1.0/2.0	24(4.75-36)	3.3	1000/2000	⩾80
H78S05-1.0/2.0	24(6.5-36)	5	1000/2000	⩾84
H78S09-1.0/2.0	24(12-36)	9	1000/2000	⩾90
H78S12-1.0/2.0	24(15-36)	12	1000/2000	⩾91
H78S15-1.0/2.0	24(18-36)	15	1000/2000	⩾93

Note: Our company can customize the module power supply with any input and output for customers. If you have special needs, please call our company. Unless otherwise specified, the input = Vi. The specifications of the module power supply should comply with the provisions of Table 1 and be applicable to the full temperature range (-40°C⩽Tc⩽85°C)

Electrical Specifications

Specifications	Symbol	Conditions Vi ,-40°C⩽Tc⩽85 (Unless otherwise specified)	Min	Max	Unit
Output Voltage	Vo	Full Load	Vo-2%	Vo+2%	V
Output Current	Iomax	—	—	P(Power)/ U(Output voltage)	A
Output Ripple Noise Voltage	Vp-p	Full Load，Vi，BW=20MHz，Normal Temperature	—	80	mV
Voltage Regulation	Sv	Vimin、Vi、Vimax，Full Load	—	⩽±0.4	%
Load Adjustment	Si	Vi，Io=(10%~100%)Iomax	—	⩽±0.6	%
Efficiency	η	Vi，Full Load，Normal Temperature	80	—	%

General Specifications

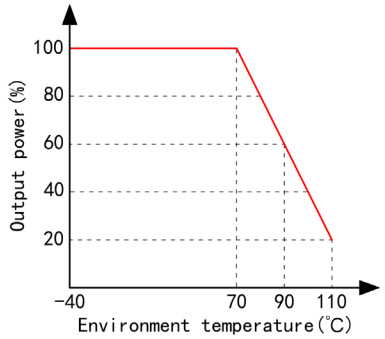
EMC Specifications	Magnetic Field Sensitivity Test	GB6833.2-87
	Electrostatic Discharge Sensitivity Test	GB6833.3-87
	Radiation Sensitivity Test	GB6833.5-87
	Conduction Sensitivity Test	GB6833.6-87
Temperature Drift	⩽±0.03%/°C	
Storage Temperature	-40°C~125°C	
Input Frequency	80KHz~200KHz	
Humidity	10%-90%	
MTBF	＞300000H	

Mechanical Specifications

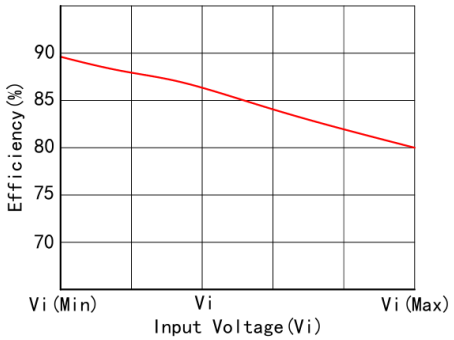
Size	11.50*8.90*17.50 mm

Typical SpecificationsCurves

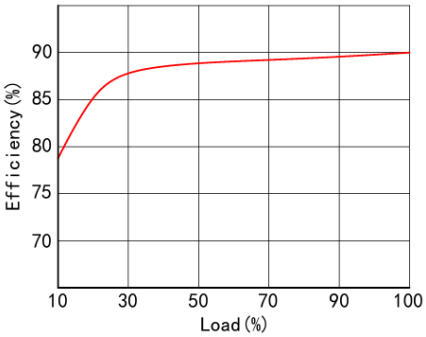
Temperature Curve



Efficiency/Input Voltage Curve

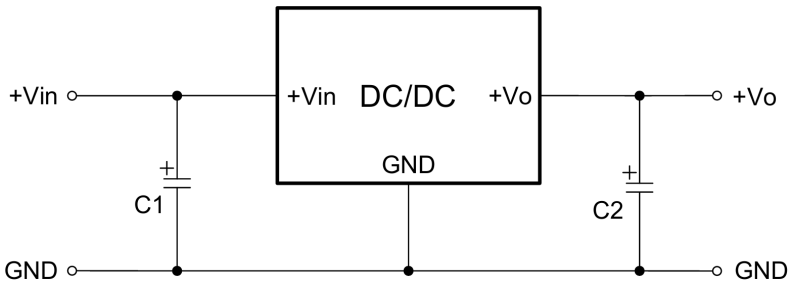


Efficiency/Output LoadCurve



Typical Application

Design Reference



Model	C1(Ceramic Capacitor)	C2(Ceramic Capacitor)
H78S3.3-0.5	10uF/50V	22uF/10V
H78S05-0.5		22uF/10V
H78S09-0.5		22uF/16V
H78S12-0.5		22uF/25V
H78S15-0.5		22uF/25V

Note:

1. Under normal circumstances, external capacitors C1 and C2 can be connected according to the use environment of the product, and the position of the capacitor should be close to the pin end of the product.
2. The capacity values of C1 and C2 can be increased according to the above table, or low ESR tantalum capacitors and electrolytic capacitors can be used.
3. The product does not support hot swap, and the output terminals cannot be used in parallel.

Precautions

Package

This series of modules are packed in shockproof and anti-static foam.

Transport

The package containing the module is allowed to be transported by any means of transport, which should avoid direct rain and snow and mechanical damage.

Storage

The module should be stored in a warehouse where the ambient temperature is -40 degrees ~ 125 degrees, the relative humidity is 20%~95%, and the surrounding environment is free from acidic, alkaline and other harmful gases.

Note: The above are the performance indicators of the product series listed in this manual. Some indicators of non-standard products may exceed the above requirements, so if there is any inconsistency between the manual and the product specification documents, please refer to the specification documents. If you have special needs, please contact us directly.