S1-3R305S05

ISSUE DATE : 12.APR,2016 Rev.1

0.5 W Dual Output Non-Regulated DC/DC Converter

Note: This data sheet only for reference.

ALL SPECIFICATIONS ARE TYPICAL AT 25°C, NOMINAL INPUT AND FULL LOAD UNLESS OTHERWISE NOTED.

OUTPUT SPECIFICATIONS

Output Voltage	± 5Vdc ,±3%
Output Current	±50mA ,max.
Line Regulation	±1.2% / Per 1% Vin Change
Load Regulation	(From 20% to 100% Load) ±8%
Ripple&Noise (20 Mhz bandwidth)(1)	±75mV pk-pk, max.
Temperature Coefficient	±0.02%/°C
Capacitive Load(2)	±100uF, max.

INPUT SPECIFICATIONS

Input Voltage Range	3.3 Vdc ,±10%
Input Current(No-Load)	25mA, max.
Input Current(Full-Load)	216.45mA, typ.
Input Filter	Capacitors
Input Reflected Ripple Current(3)	20mA pk-pk

ABSOLUTE SPECIFICATIONS(4)

These are stress ratings. Exposure of devices to any of these conditions may adversely affect long-term reliability.

Input Surge Voltage(100mS)	6 Vdc ,max.
Soldering Temperature (1.5mm from case 10sec max.)	260°C ,max.

PHYSICAL SPECIFICATIONS

Case Material	Non-conductive Black Plastic(UL94V-0 rated)
Pin Material	0.5mm Alloy42 Solder-coated
Potting Material	Epoxy (UL94V-0 rated)
Weight	2.3g
Dimensions	Case 0.76"x0.24"x0.39"

ENVIRONMENTAL SPECIFICATIONS

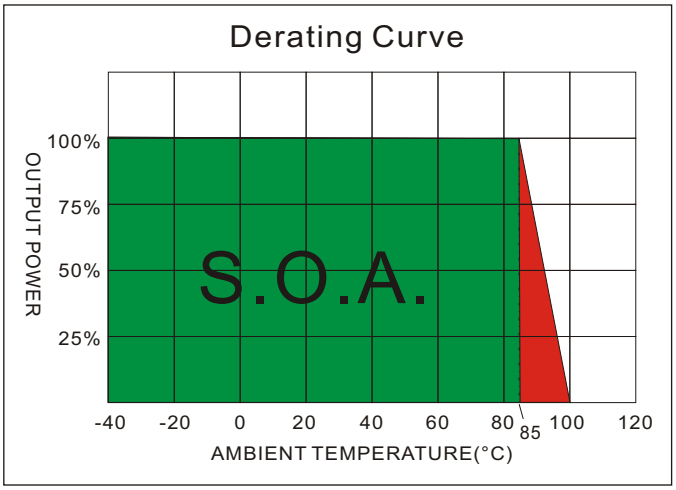
Operating Temperature	-40°C ~ +85°C
Maximum Case Temperature	100°C
Storage Temperature	-40°C ~ +125°C
Cooling	Nature Convection

GENERAL SPECIFICATIONS

Efficiency	70%, min.
I/O Isolation Voltage(60sec)	1000 Vdc
I/O Isolation Resistance	1000 MΩ, min.
I/O Isolation Capacitance	60 pF, typ.
Switching Frequency	50kHz, typ.
Humidity	95% rel H
Reliability Calculated MTBF(MIL-HDBK-217 F)	>1.121 Mhrs
Safety Standard(designed to meet)	IEC 60950-1

NOTE

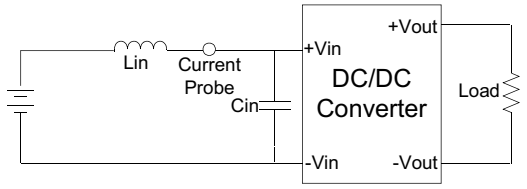
1.Ripple/Noise measured with 20MHz bandwidth.
2.Tested by minimal Vin and constant resistive load.
3.Measured Input reflected ripple current with a simulated source inductance of 12μH.
4.Exceeding the absolute ratings of the unit could cause damage. It is not allowed for continuous operating.
5.Operation under no-load conditions will not damage these devices, however they may not meet all listed specifications.



TEST CONFIGURATIONS

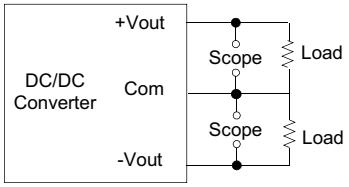
Input Reflected Ripple Current Test Step

Input reflected ripple current is measured through a source inductor Lin(12μH) and a source capacitor Cin(47μF, ESR<1.0Ω at 100KHz) at nominal input and full load.

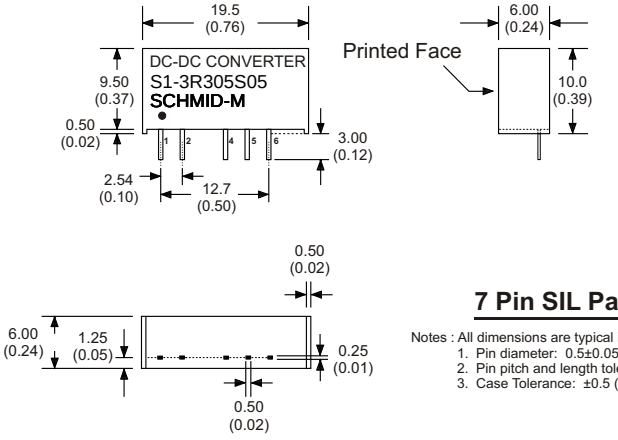


Output Ripple & Noise Measurement Test

The Scope measurement bandwidth is 20MHz.



MECHANICAL DIMENSION



7 Pin SIL Package

Notes : All dimensions are typical in millimeters (inches).
1. Pin diameter: 0.5±0.05 (0.02±0.002)
2. Pin pitch and length tolerance: ±0.35 (±0.014)
3. Case Tolerance: ±0.5 (±0.02)

Pin	CONNECTIONS
#	Dual
1	+V Input
2	-V Input
4	-V Output
5	Common
6	+V Output