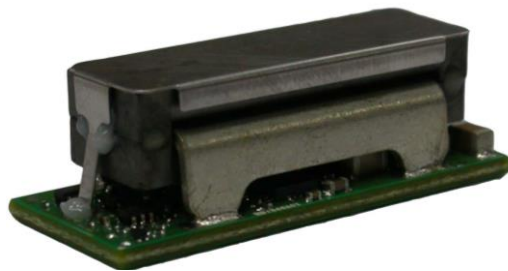


SLAN-40E1 Ax Series Non-Isolated DC-DC Converter

The SLAN-40E1Ax modules are non-isolated DC-DC converters that can deliver up to 40A of output current. These modules operate over a wide range of input voltage ($V_{IN} = 4.5 \text{ VDC} - 14.4 \text{ VDC}$) and provide a precisely regulated output voltage from 0.6 to 2.0 VDC, programmable via an external resistor.

Features include remote On/Off, adjustable output voltage, over current and overtemperature protection. The module also includes the Tunable Loop™ feature that allows the user to optimize the dynamic response of the converter to match the load with reduced amount of output capacitance leading to savings on cost and PWB area.



Key Features & Benefits

- 4.5 VDC – 14.4 VDC Input
- 0.6 VDC – 2.0 VDC / 40 A Outputs
- Power Good signal
- Remote On/Off
- Over temperature protection
- Compliant to IPC-9592 (September 2008), Category 2, Class II
- Compliant to RoHS EU Directive 2002/95/EC
- Compatible in a Pb-free or SnPb reflow environment
- Output voltage programmable from 0.6 VDC to 2.0 VDC via external resistor
- Tunable Loop™ to optimize dynamic output voltage response
- Output overcurrent protection (non-latching)
- Wide operating temperature range [-40°C to 85°C]
- Wide Input voltage range (4.5VDC-14.4VDC).
- UL 60950-1 2nd Ed. Recognized, CSA C22.2 No. 60950-1-07 Certified, and VDE (EN60950-1 2nd Ed.) Licensed
- Small size: 33.02 × 13.46 × 10.9 mm (1.3 × 0.53 × 0.429 in)
- Cost efficient open frame design
- Ability to sink and source current
- Fixed switching frequency with capability of external synchronization

Applications

- Distributed power architectures
- Servers and storage applications
- Intermediate bus voltage applications
- Networking equipment
- Telecommunications equipment
- Industrial equipment

1. MODEL SELECTION

OUTPUT VOLTAGE	INPUT VOLTAGE	MAX. OUTPUT CURRENT	MAX. OUTPUT POWER	TYPICAL EFFICIENCY 51VDC	MODEL NUMBER ACTIVE LOW	MODEL NUMBER ACTIVE HIGH
0.6 – 2.0 VDC	4.5VDC – 14.VDC	40A	80W	91.5%	SLAN-40E1AL	SLAN-40E1A0

- NOTE:** 1. Add “R” suffix at the end of the model number to indicate tape and reel packaging (Standard).
 2. Add “G” suffix at the end of the model number to indicate tray packaging (Option).
 3. For the SLAN-40E1A0, please contact your local Bel representative for availability.

PART NUMBER EXPLANATION

S	LAN	-	40	E	1A	0	x
Mounting type	Series code		Output current	Wide input voltage range	sequencing	Logic status	Package
Surface mount	SLAN series		40 A	4.5 - 14.4 V	With sequencing	0 – active high L – active low	G – tray R – tape&reel

2. ABSOLUTE MAXIMUM RATINGS

PARAMETER	DESCRIPTION	MIN	TYP	UNITS
Continuous Input Voltage		-0.3	15	V
Operating Ambient Temperature	see Thermal Considerations section	-40	85	°C
Storage Temperature		-55	125	°C
Altitude		-	2000	m

NOTE: Stresses in excess of the absolute maximum ratings can cause permanent damage to the device. These are absolute stress ratings only, functional operation of the device is not implied at these or any other conditions in excess of those given in the operations sections of the data sheet. Exposure to absolute maximum ratings for extended periods can adversely affect the device reliability.

3. INPUT SPECIFICATIONS

PARAMETER	DESCRIPTION	MIN	TYP	MAX	UNIT
Operating Input Voltage		4.5	-	14.4	V
Input Current	VIN=4.5V to 14V, IO= IOmax	-	-	24	A
Input Current (no load)	VO,set = 0.6 VDC VO,set = 2 VDC	-	54.7 104	-	mA
Input Stand-by Current	VIN = 12V, module disabled	-	12.5	-	mA
Input Reflected Ripple Current (pk-pk)	5Hz to 20MHz, 1µH source impedance; VIN =0 to 14V, IO= IOmax ; See Test Configurations	-	90	-	mAp-p
I2t Inrush Current Transient		-	-	1	A ² s
Input Ripple Rejection (120Hz)		-	-60	-	dB

NOTE: Unless otherwise indicated, specifications apply over all operating input voltage, resistive load, and temperature conditions.