

SOA EVALUATION BOARD



Description

The Kamelian SOA evaluation board provides a versatile and user-friendly platform for customers to evaluate the capability of Kamelian's Pre-Amplifier and Power Booster products. Each unit comes with a comprehensive PC-based control program which allows easy control of the SOA operating conditions. The onboard processor and flexible analogue and digital I/O facilities enable the evaluation unit to be interfaced with other telecommunications equipment for systems-based evaluation trials.

Applications

Optical preamp: The high gain semiconductor optical amplifier is primarily intended for use as an optical pre-amplifier in high bit rate applications (10Gbit/s and 40 Gbit/s). This evaluation unit allows the user to evaluate the capability of the SOA within systems contexts relevant to their own applications.

Optical booster: The optical booster amplifier is intended for use within high bit-rate transmitters. Combining small footprint with high output power, the booster amplifier offers a cost effective solution to competing alternatives at the transmitter.

Features

The software interface included with the demonstration board allows easy control of the SOA in various operating modes.

- Constant Current – enables the user to define the drive current of the SOA using a simple slider control mechanism on the front panel display.
- TEC Setting – the set point of the temperature controller can be set between 10 °C and 40 °C through the interface.
- Real-time traces of the SOA drive parameters (current, forward voltage and temperature) are available on screen.

Specifications

| ITEM | MIN SPEC | TYPICAL SPEC | MAX SPEC | UNIT | COMMENT |
|-----------------------------|----------|--------------|----------|------|---------------------|
| Overall | | | | | |
| Supply voltage | 4.5 | 5.0 | 5.5 | V | |
| Supply current | | 0.7 | 2.5 | A | Depends on TEC draw |
| Modulation Bandwidth | 0.1 | | 100 | kHz | 5V peak-peak input |
| SOA drive subsystem | | | | | |
| SOA drive current | 0 | | 250 | mA | User adjustable |
| Analogue input range | 0 | | 4.0 | V | |
| TEC Subsystem | | | | | |
| Set-point | 10 | 20 | 40 | °C | User adjustable |
| Set-point resolution | | | 0.1 | °C | |
| Static accuracy | | | 0.1 | °C | |
| TEC Current | | | 2.5 | A | |
| Serial I/O Subsystem | | | | | |
| Protocol A | | RS-232 | | | Configured as DTE |
| Protocol B | | USB | | | Mini USB Connector |
| Operating Temperature | 0 | | 35 | °C | |
| Storage Temperature | -10 | | 60 | °C | |

Software requires a PC-compatible computer with Windows 98SE/NT4/2000/XP and a free serial/USB port.

Ordering Information

EVB - 250 - DB - U - NO - DL

Max drive current (250mA is standard)

ZIF socket for 14pin butterfly SOA/SLD

Interface (U = USB is standard; R = RS232 on request)

Detector (NO for None is standard; PD for FC receptacle InGaAs on request)

Power (DL for 1.5m DC plug lead is standard; PU for 5V power supply unit on request)

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