

# High frequency packages for high speed transmission – 25 Gbit/s and beyond

## Product Information

SCHOTT's high frequency packages can achieve bandwidth requirements of more than 25 Gbit/s, meeting the increasing market demand for faster transmission speeds. Housing variations such as transistor outlines (TOs) and hybrid packages are available. The TO consists of a header to supply power to the encapsulated components and a cap to ensure the smooth transmission of optical signals. The hybrid solutions (e.g. box package) are ideal for cooled systems such as XFP and XMD. Both solutions protect optical components (e.g. laser diodes and photodiodes) from humidity and other sources of performance degradation.

## Advantages

- **Hermetically sealed using established glass-to-metal and ceramic-to-metal sealing technology:** SCHOTT's TO headers and hybrid packages have been used in the market for decades because of their proven reliability and performance.
- **Excellent RF Performance:** With matched impedance, SCHOTT packages have low insertion and return losses for high data rates of 25 Gbit/s and beyond.
- **Hassle-free implementation:** Experts from SCHOTT work closely with end users for the refinement of existing package designs (material, pin placement, etc.) so that currently available manufacturing techniques and/or infrastructures can be utilized to achieve the desired high-speed transmission.
- **One-stop shopping due to SCHOTT's vertically integrated production**

## Preliminary Specifications

|            |                                |
|------------|--------------------------------|
| Platform:  | TO PLUS®, XFP form factor      |
| Outlines:  | TO56, Custom box type package  |
| Impedance: | TO56 – 50 Ω differential       |
|            | Box type – 25 Ω / 50 Ω / 100 Ω |
| S11 @ 25G  | Less than -1dB                 |
| S12 @ 25G  | Better than -20dB              |

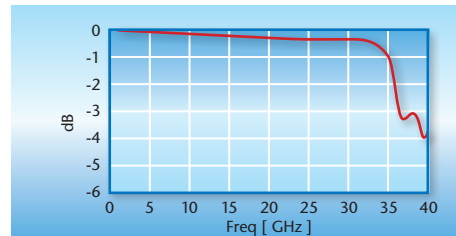
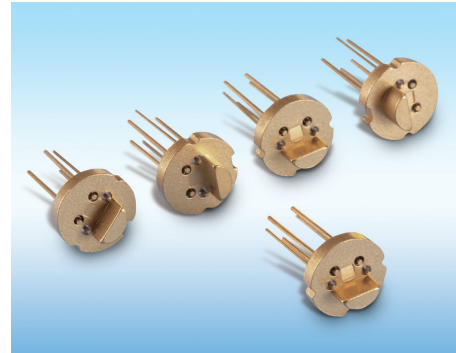
## Applications

|  |
|--|
| 10G headers for VCSELs in fiber channels 4G / 8G |
| LAN / Gigabit Ethernet applications              |
| 17G fiber channel                                |
| 25 x 4 = 100G LX4 applications                   |
| 17G fiber channel                                |

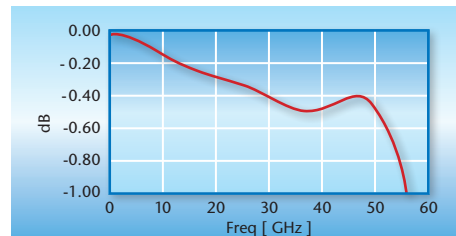
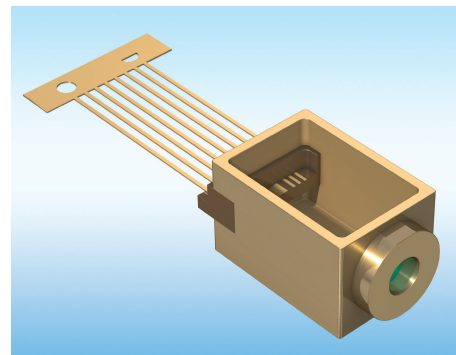
## For more information:

Electronic Packaging  
**SCHOTT North America, Inc.**  
 15 Wells Street  
 Southbridge, MA 01550  
 USA

Phone: +1 508 765-7450  
 Fax: +1 508 765-7410  
 epackaging@us.schott.com  
 www.us.schott.com/epackaging



*S<sub>12</sub> characteristics of TO56 PLUS®*



*S<sub>12</sub> characteristics of XFP package*

**SCHOTT**  
 glass made of ideas