

2-Line EMI-Filter with ESD -Protection

Features

- Space saving LLP package
- EMI/RFI filtering with integrated ESD protection for two data lines
- ESD protection to **IEC 61000 - 4 - 2 Level 4**
- ESD protection to **IEC 61000 - 4 - 5 (4 A)**
- Low insertion loss up to 10 MHz
- Good attenuation of high frequency signals
- Low operating voltage (5 V)
- Low clamping voltage
- Low leakage current
- Thin film-on-silicon technology
- Ideal for cell phones, RF communication, and laptop computer applications

Mechanical Data

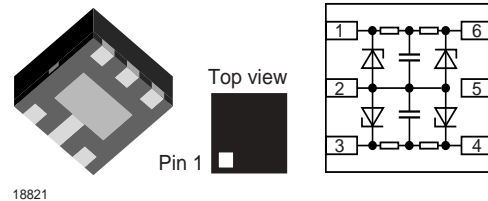
Case: LLP75-6A Plastic case

Molding Compound Flammability Rating:

UL 94 V-0

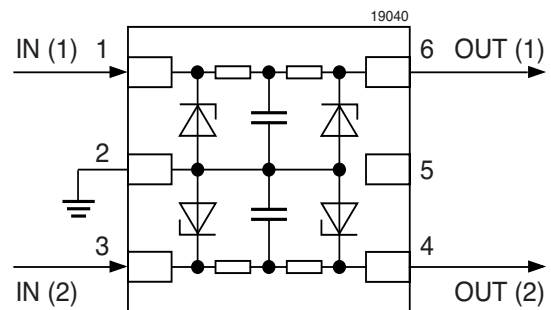
Terminals: High temperature soldering guaranteed:
260 °C/10 sec. at terminals

Weight: approx. 5.2 mg



Pinning:

- 1 = Input (Output) 1
- 2 = Ground
- 3 = Input (Output) 2
- 4 = Output (Input) 2
- 5 = not connect
- 6 = Output (input) 1



Parts Table

Part	Ordering code	Marking	Remarks
GTF701-HS3	GTF701-HS3-GS08	T1	Tape and Reel

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Steady -state power		P	100	mW
ESD Air discharge per IEC 61000-4-2		V_{pp}	15	kV
ESD Contact discharge per IEC 61000-4-2		V_{pp}	8	kV
Max. peak pulse current	8/20 μ s waveform	I_{PPM}	4	A

Thermal Characteristics

Ratings at 25 °C, ambient temperature unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Operating temperature		T_j	- 40 to + 125	°C
Storage temperature		T_{STG}	- 55 to + 150	°C

Electrical Characteristics

Ratings at 25 °C, ambient temperature unless otherwise specified

Parameter	Test condition	Symbol	Min	Typ.	Max	Unit
Reverse stand-off voltage		V_{RWM}			5	V
Reverse breakdown voltage	$I_R = 1$ mA	V_{BR}	6			V
Reverse leakage current	$V_R = 5$ V	I_R			1	μ A
	$V_R = 3.3$ V	I_R			0.4	μ A
Total series resistance	$I_M = 1$ mA	R	45	50	55	Ω
Total capacitance	$V_R = 0$ V, f = 1 MHz btw. I/O and GND	C_{tot}		120		pF
Clamping voltage	$I_{PP} = 4$ A, 8/20 μ s waveform	V_C			15	V

Typical Characteristics ($T_{amb} = 25$ °C unless otherwise specified)

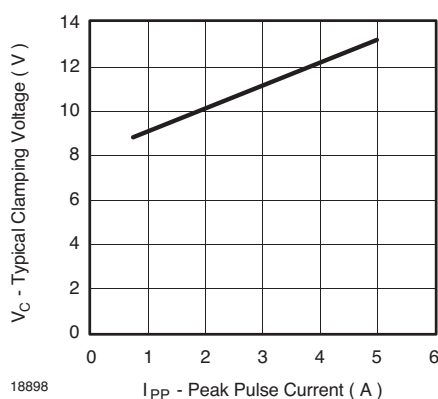


Figure 1. Typical Clamping Voltage vs. Peak Pulse Current

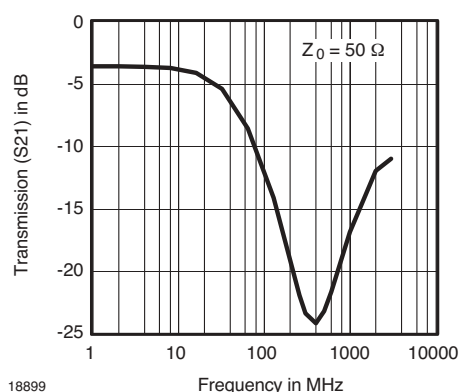


Figure 2. Typical Insertion Loss Characteristic

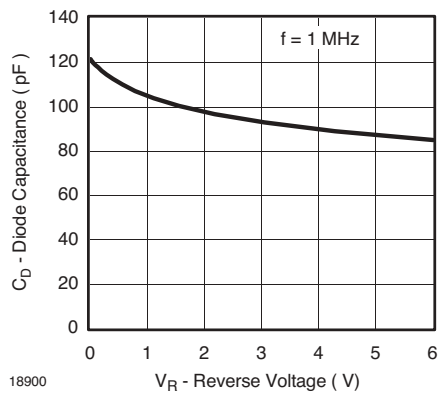


Figure 3. Typical Capacitance vs. Reverse Voltage

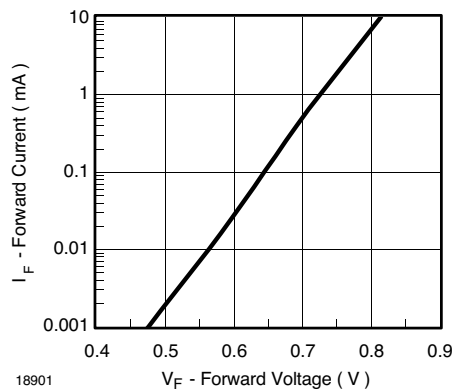


Figure 4. Forward Current vs. Forward Voltage

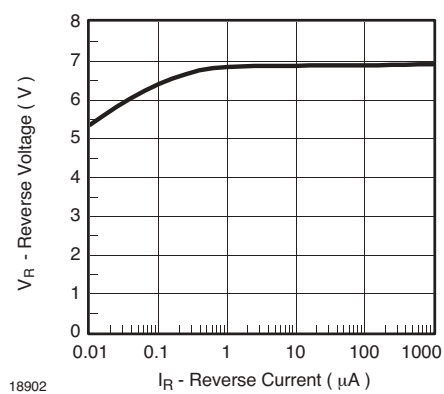
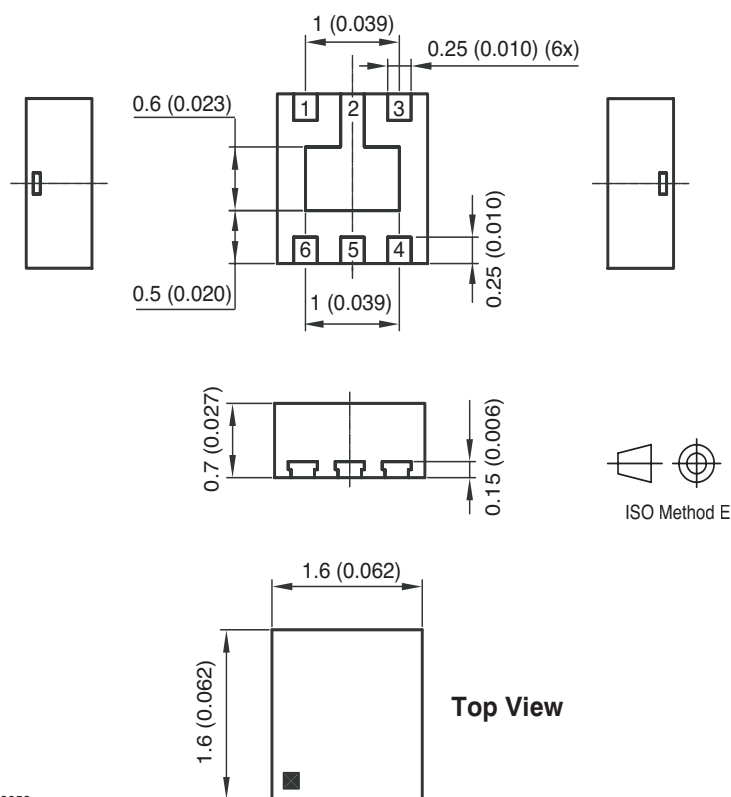


Figure 5. Typical Reverse Voltage vs. Reverse Current

Package Dimensions in mm (Inches)



18058



Ozone Depleting Substances Policy Statement

It is the policy of **Vishay Semiconductor GmbH** to

1. Meet all present and future national and international statutory requirements.
2. Regularly and continuously improve the performance of our products, processes, distribution and operating systems with respect to their impact on the health and safety of our employees and the public, as well as their impact on the environment.

It is particular concern to control or eliminate releases of those substances into the atmosphere which are known as ozone depleting substances (ODSs).

The Montreal Protocol (1987) and its London Amendments (1990) intend to severely restrict the use of ODSs and forbid their use within the next ten years. Various national and international initiatives are pressing for an earlier ban on these substances.

Vishay Semiconductor GmbH has been able to use its policy of continuous improvements to eliminate the use of ODSs listed in the following documents.

1. Annex A, B and list of transitional substances of the Montreal Protocol and the London Amendments respectively
2. Class I and II ozone depleting substances in the Clean Air Act Amendments of 1990 by the Environmental Protection Agency (EPA) in the USA
3. Council Decision 88/540/EEC and 91/690/EEC Annex A, B and C (transitional substances) respectively.

Vishay Semiconductor GmbH can certify that our semiconductors are not manufactured with ozone depleting substances and do not contain such substances.

We reserve the right to make changes to improve technical design and may do so without further notice.

Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer. Should the buyer use Vishay Semiconductors products for any unintended or unauthorized application, the buyer shall indemnify Vishay Semiconductors against all claims, costs, damages, and expenses, arising out of, directly or indirectly, any claim of personal damage, injury or death associated with such unintended or unauthorized use.

Vishay Semiconductor GmbH, P.O.B. 3535, D-74025 Heilbronn, Germany
Telephone: 49 (0)7131 67 2831, Fax number: 49 (0)7131 67 2423