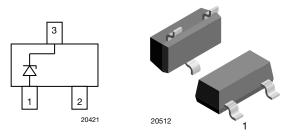
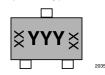


Single-Line ESD Protection in SOT-23



MARKING (example only)



YYY = type code (see table below) XX = date code

DESIGN SUPPORT TOOLS click logo to get started



FEATURES

- Single-line ESD protection device
- ESD immunity acc. IEC 61000-4-2
 - ± 30 kV contact discharge
 - ± 30 kV air discharge
- ESD capability according to AEC-Q101: human body model: class H3B: > 8 kV
- Space saving SOT-23 package
- e3 Sn
- AEC-Q101 qualified available
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>





ROHS COMPLIANT HALOGEN FREE

<u>GREEN</u> (5-2008)

| Available | | | | | | | | | |
|-----------------------------|-----------------------|---------------------|--------------|---------------|--------------------------------|----------------------------------|----------------------------|--|--|
| ORDERING INFORMATION | | | | | | | | | |
| | ENVIR | ONMENTAL AN | D QUALITY CO | ODE | PACKAG | ING CODE | | | |
| PART NUMBER (EXAMPLE) | AEC-Q101 QUALIFIED | RoHS-COM LEAD (P | | TIN PLATED | 3K PER 7" REEL (8 mm TAPE), | 10K PER 13" REEL (8 mm TAPE), | ORDERING CODE (EXAMPLE) | | |
| (LXAIVIF LL) | QUALIFIED | STANDARD | GREEN | PLATED | 15K/BOX = MOQ | 10K/BOX = MOQ | | | |
| GSOT05- | | E | | 3 | -08 | | GSOT05-E3-08 | | |
| GSOT05- | | | G | 3 | -08 | | GSOT05-G3-08 | | |
| GSOT05- | Н | E | | 3 | -08 | | GSOT05-HE3-08 | | |
| GSOT05- | Н | | G | 3 | -08 | | GSOT05-HG3-08 | | |
| GSOT05- | | E | | 3 | | -18 | GSOT05-E3-18 | | |
| GSOT05- | | | G | 3 | | -18 | GSOT05-G3-18 | | |
| GSOT05- | Н | E | | 3 | | -18 | GSOT05-HE3-18 | | |
| GSOT05- | Н | | G | 3 | | -18 | GSOT05-HG3-18 | | |

| PACKA | GE DATA | \ | | | | | |
|----------------|-----------------|--------------|-------------------------|--------|-----------------------------------------------|-------------------------------|---------------------------|
| DEVICE NAME | PACKAGE NAME | TYPE CODE | ENVIRONMENTAL STATUS | WEIGHT | MOLDING COMPOUND FLAMMABILITY RATING | MOISTURE SENSITIVITY LEVEL | SOLDERING CONDITIONS |
| GSOT03 | SOT-23 | 03 | Standard | 8.8 mg | UL 94 V-0 | MSL level 1 | 260 °C/10 s at terminals |
| 400100 | 001 20 | 03G | Green | 8.1 mg | 020110 | (according J-STD-020) | 200 O, 10 0 at torrillian |
| GSOT04 | SOT-23 | 04 | Standard | 8.8 mg | UL 94 V-0 | MSL level 1 | 260 °C/10 s at terminals |
| | | 04G | Green | 8.1 mg | | (according J-STD-020) | |
| GSOT05 | SOT-23 | 05 | Standard | 8.8 mg | UL 94 V-0 | MSL level 1 | 260 °C/10 s at terminals |
| | | 05G | Green | 8.1 mg | | (according J-STD-020) | |
| GSOT08 | SOT-23 | 80 | Standard | 8.8 mg | UL 94 V-0 | MSL level 1 | 260 °C/10 s at terminals |
| 400.00 | 001 20 | 08G | Green | 8.1 mg | 02011 | (according J-STD-020) | 200 0, 10 0 at torring |
| GSOT12 | SOT-23 | 12 | Standard | 8.8 mg | UL 94 V-0 | MSL level 1 | 260 °C/10 s at terminals |
| 400112 | 001 20 | 12G | Green | 8.1 mg | 02 04 1 0 | (according J-STD-020) | 200 0, 10 3 at terrimas |
| GSOT15 | SOT-23 | 15 | Standard | 8.8 mg | UL 94 V-0 | MSL level 1 | 260 °C/10 s at terminals |
| 400113 | 001 20 | 15G | Green | 8.1 mg | OL 34 V 0 | (according J-STD-020) | 200 0/103 at terrimas |
| GSOT24 | SOT-23 | 24 | Standard | 8.8 mg | UL 94 V-0 | MSL level 1 | 260 °C/10 s at terminals |
| 400124 | 001 20 | 24G | Green | 8.1 mg | 020400 | (according J-STD-020) | 200 C/ 10 C at terrimas |
| GSOT36 | SOT-23 | 36 | Standard | 8.8 mg | UL 94 V-0 | MSL level 1 | 260 °C/10 s at terminals |
| 400100 | 001-20 | 36G | Green | 8.1 mg | OL 34 V-0 | (according J-STD-020) | 200 O/10 3 at terrimas |

Rev. 2.5, 02-May-17 **1** Document Number: 85807



| ABSOLUTE MAXIMUM | RATINGS GSOT03 | | | |
|-----------------------|-----------------------------------------------------------------|------------------|-------------|------|
| PARAMETER | TEST CONDITIONS | SYMBOL | VALUE | UNIT |
| Peak pulse current | Pin 3 to 1 acc. IEC 61000-4-5, $t_p = 8/20 \mu s$; single shot | I _{PPM} | 30 | Α |
| Peak pulse power | Pin 3 to 1 acc. IEC 61000-4-5, $t_p = 8/20 \mu s$; single shot | P _{PP} | 369 | W |
| ESD immunity | Contact discharge acc. IEC 61000-4-2; 10 pulses | V _{ESD} | ± 30 | kV |
| ESD IIIIIIdility | Air discharge acc. IEC 61000-4-2; 10 pulses | VESD | 30 | kV |
| Operating temperature | Junction temperature | TJ | -40 to +125 | °C |
| Storage temperature | | T _{STG} | -55 to +150 | °C |

| ABSOLUTE MAXIMUM RATINGS GSOT04 | | | | | |
|---------------------------------|-------------------------------------------------------------------------|------------------|-------------|------|--|
| PARAMETER | TEST CONDITIONS | SYMBOL | VALUE | UNIT | |
| Peak pulse current | Pin 3 to 1 acc. IEC 61000-4-5, t _p = 8/20 μs; single shot | I _{PPM} | 30 | А | |
| Peak pulse power | Pin 3 to 1 acc. IEC 61000-4-5, $t_p = 8/20 \mu s$; single shot | P _{PP} | 429 | W | |
| CCD improvements. | Contact discharge acc. IEC 61000-4-2; 10 pulses | V | ± 30 | kV | |
| ESD immunity | Air discharge acc. IEC 61000-4-2; 10 pulses | V_{ESD} | 30 429 | kV | |
| Operating temperature | Junction temperature | T _J | -40 to +125 | °C | |
| Storage temperature | | T _{STG} | -55 to +150 | °C | |

| ABSOLUTE MAXIMUM RATINGS GSOT05 | | | | | |
|---------------------------------|-----------------------------------------------------------------|------------------|-------------|------|--|
| PARAMETER | TEST CONDITIONS | SYMBOL | VALUE | UNIT | |
| Peak pulse current | Pin 3 to 1 acc. IEC 61000-4-5, $t_p = 8/20 \mu s$; single shot | I _{PPM} | 30 | Α | |
| Peak pulse power | Pin 3 to 1 acc. IEC 61000-4-5, $t_p = 8/20 \mu s$; single shot | P _{PP} | 480 | W | |
| ESD immunity | Contact discharge acc. IEC 61000-4-2; 10 pulses | V | ± 30 | kV | |
| ESD illillidriity | Air discharge acc. IEC 61000-4-2; 10 pulses | V _{ESD} | 30 | kV | |
| Operating temperature | Junction temperature | T _J | -40 to +125 | °C | |
| Storage temperature | | T _{STG} | -55 to +150 | °C | |

| ABSOLUTE MAXIMUM RATINGS GSOT08 | | | | | | |
|---------------------------------|-----------------------------------------------------------------|------------------|-------------|------|--|--|
| PARAMETER | TEST CONDITIONS | SYMBOL | VALUE | UNIT | | |
| Peak pulse current | Pin 3 to 1 acc. IEC 61000-4-5, $t_p = 8/20 \mu s$; single shot | I _{PPM} | 18 | А | | |
| Peak pulse power | Pin 3 to 1 acc. IEC 61000-4-5, $t_p = 8/20 \mu s$; single shot | P_{PP} | 345 | W | | |
| ESD immunity | Contact discharge acc. IEC 61000-4-2; 10 pulses | V | ± 30 | kV | | |
| ESD Illillurilly | Air discharge acc. IEC 61000-4-2; 10 pulses | V_{ESD} | | kV | | |
| Operating temperature | Junction temperature | TJ | -40 to +125 | °C | | |
| Storage temperature | | T _{STG} | -55 to +150 | °C | | |



| ABSOLUTE MAXIMUM RATINGS GSOT12 | | | | | | |
|---------------------------------|-----------------------------------------------------------------|------------------|-------------|------|--|--|
| PARAMETER | TEST CONDITIONS | SYMBOL | VALUE | UNIT | | |
| Peak pulse current | Pin 3 to 1 acc. IEC 61000-4-5, $t_p = 8/20 \mu s$; single shot | I _{PPM} | 12 | А | | |
| Peak pulse power | Pin 3 to 1 acc. IEC 61000-4-5, $t_p = 8/20 \mu s$; single shot | P _{PP} | 312 | W | | |
| ESD immunity | Contact discharge acc. IEC 61000-4-2; 10 pulses | V | ± 30 | kV | | |
| ESD initiduity | Air discharge acc. IEC 61000-4-2; 10 pulses | V _{ESD} | ± 30 | kV | | |
| Operating temperature | Junction temperature | T_J | -40 to +125 | °C | | |
| Storage temperature | | T _{STG} | -55 to +150 | °C | | |

| ABSOLUTE MAXIMUM RATINGS GSOT15 | | | | | | |
|---------------------------------|----------------------------------------------------------------------|------------------|-------------|------|--|--|
| PARAMETER | TEST CONDITIONS | SYMBOL | VALUE | UNIT | | |
| Peak pulse current | Pin 3 to 1 acc. IEC 61000-4-5, t _p = 8/20 μs; single shot | I _{PPM} | 8 | Α | | |
| Peak pulse power | Pin 3 to 1 acc. IEC 61000-4-5, t _p = 8/20 μs; single shot | P _{PP} | 230 | W | | |
| CCD images up its s | Contact discharge acc. IEC 61000-4-2; 10 pulses | V | ± 30 | kV | | |
| ESD immunity | Air discharge acc. IEC 61000-4-2; 10 pulses | V_{ESD} | ± 30 | kV | | |
| Operating temperature | Junction temperature | T _J | -40 to +125 | °C | | |
| Storage temperature | | T _{STG} | -55 to +150 | °C | | |

| ABSOLUTE MAXIMUM RATINGS GSOT24 | | | | | |
|---------------------------------|----------------------------------------------------------------------|------------------|-------------|------|--|
| PARAMETER | TEST CONDITIONS | SYMBOL | VALUE | UNIT | |
| Peak pulse current | Pin 3 to 1 acc. IEC 61000-4-5, t _p = 8/20 μs; single shot | I _{PPM} | 5 | А | |
| Peak pulse power | Pin 3 to 1 acc. IEC 61000-4-5, t _p = 8/20 μs; single shot | P _{PP} | 235 | W | |
| CCD immunity | Contact discharge acc. IEC 61000-4-2; 10 pulses | V | ± 30 | kV | |
| ESD immunity | Air discharge acc. IEC 61000-4-2; 10 pulses | V_{ESD} | 5 235 | kV | |
| Operating temperature | Junction temperature | T _J | -40 to +125 | °C | |
| Storage temperature | | T _{STG} | -55 to +150 | °C | |

| ABSOLUTE MAXIMUM RATINGS GSOT36 | | | | | | |
|---------------------------------|-------------------------------------------------------------------------|------------------|-------------|------|--|--|
| PARAMETER | TEST CONDITIONS | SYMBOL | VALUE | UNIT | | |
| Peak pulse current | Pin 3 to 1 acc. IEC 61000-4-5, t _p = 8/20 μs; single shot | I _{PPM} | 3.5 | А | | |
| Peak pulse power | Pin 3 to 1 acc. IEC 61000-4-5, t _p = 8/20 μs; single shot | P _{PP} | 248 | W | | |
| ECD importants | Contact discharge acc. IEC 61000-4-2; 10 pulses | M | ± 30 | kV | | |
| ESD immunity | Air discharge acc. IEC 61000-4-2; 10 pulses | V_{ESD} | 3.5 | kV | | |
| Operating temperature | Junction temperature | TJ | -40 to +125 | °C | | |
| Storage temperature | | T _{STG} | -55 to +150 | °C | | |



www.vishay.com

Vishay Semiconductors

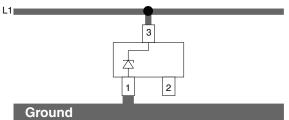
BIAs-MODE (1-line Bidirectional Asymmetrical protection mode)

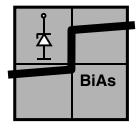
With the GSOTxx one signal- or data-lines (L1) can be protected against voltage transients. With pin 1 connected to ground and pin 3 connected to a signal- or data-line which has to be protected. As long as the voltage level on the data- or signal-line is between 0 V (ground level) and the specified maximum reverse working voltage (V_{RWM}) the protection diode between pin 1 and pin 3 offers a high isolation to the ground line. The protection device behaves like an open switch.

As soon as any positive transient voltage signal exceeds the breakdown voltage level of the protection diode, the diode becomes conductive and shorts the transient current to ground. Now the protection device behaves like a closed switch. The clamping voltage (V_C) is defined by the breakdown voltage (V_{BR}) level plus the voltage drop at the series impedance (resistance and inductance) of the protection diode.

Any negative transient signal will be clamped accordingly. The negative transient current is flowing in the forward direction through the protection diode. The low forward voltage (V_F) clamps the negative transient close to the ground level.

Due to the different clamping levels in forward and reverse direction the GSOTxx clamping behavior is Bidirectional and Asymmetrical (BiAs).





20422

| ELECTRICAL CHARACTERISTICS GSOT03 ($T_{amb} = 25 ^{\circ}\text{C}$ unless otherwise specified) between pin 3 and pin 1 | | | | | | |
|---------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|----------------------|------|------|------|-------|
| PARAMETER | TEST CONDITIONS/REMARKS | SYMBOL | MIN. | TYP. | MAX. | UNIT |
| Protection paths | Number of lines which can be protected | N _{channel} | - | - | 1 | lines |
| Reverse stand-off voltage | Max. reverse working voltage | V_{RWM} | - | - | 3.3 | V |
| Reverse voltage | at I _R = 100 μA | V_R | 3.3 | - | - | V |
| Reverse current | at V _R = 3.3 V | I _R | - | - | 100 | μΑ |
| Reverse breakdown voltage | at I _R = 1 mA | V_{BR} | 4 | 4.6 | 5.5 | V |
| Deverse elemning veltage | at I _{PP} = 1 A | V | - | 5.7 | 7.5 | V |
| Reverse clamping voltage | at I _{PP} = I _{PPM} = 30 A | V _C | - | 10 | 12.3 | V |
| Converd elemening veltage | at I _{PP} = 1 A | M | - | 1 | 1.2 | V |
| Forward clamping voltage | at I _{PP} = I _{PPM} = 30 A | V _F | - | 4.5 | - | V |
| Canacitanas | at V _R = 0 V; f = 1 MHz | - | - | 420 | 600 | pF |
| Capacitance | at V _R = 1.6 V; f = 1 MHz | C _D | - | 260 | - | pF |

| ELECTRICAL CHARACTERISTICS GSOT04 (T _{amb} = 25 °C unless otherwise specified) between pin 3 and pin 1 | | | | | | |
|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|----------------------|------|------|------|-------|
| PARAMETER | TEST CONDITIONS/REMARKS | SYMBOL | MIN. | TYP. | MAX. | UNIT |
| Protection paths | Number of lines which can be protected | N _{channel} | - | - | 1 | lines |
| Reverse stand-off voltage | Max. reverse working voltage | V_{RWM} | - | - | 4 | V |
| Reverse voltage | at I _R = 20 μA | V_R | 4 | - | = | V |
| Reverse current | at V _R = 4 V | I _R | - | - | 20 | μA |
| Reverse breakdown voltage | at I _R = 1 mA | V_{BR} | 5 | 6.1 | 7 | V |
| Deverse elemning veltage | at I _{PP} = 1 A | M | - | 7.5 | 9 | V |
| Reverse clamping voltage | at I _{PP} = I _{PPM} = 30 A | V _C | - | 11.2 | 14.3 | V |
| Converd elemning veltage | at I _{PP} = 1 A | | - | 1 | 1.2 | V |
| Forward clamping voltage | at I _{PP} = I _{PPM} = 30 A | V _F | - | 4.5 | - | V |
| Canacitanas | at V _R = 0 V; f = 1 MHz | | - | 310 | 450 | pF |
| Capacitance | at V _R = 2 V; f = 1 MHz | - C _D | - | 200 | - | pF |



| ELECTRICAL CHARAC between pin 3 and pin 1 | TERISTICS GSOT05 (T _{amb} = 25 °C | C unless ot | herwise s | pecified) | | |
|----------------------------------------------|----------------------------------------------|----------------------|-----------|-----------|------|-------|
| PARAMETER | TEST CONDITIONS/REMARKS | SYMBOL | MIN. | TYP. | MAX. | UNIT |
| Protection paths | Number of lines which can be protected | N _{channel} | - | - | 1 | lines |
| Reverse stand-off voltage | Max. reverse working voltage | V_{RWM} | = | - | 5 | V |
| Reverse voltage | at I _R = 10 μA | V_R | 5 | - | - | V |
| Reverse current | at V _R = 5 V | I _R | = | - | 10 | μΑ |
| Reverse breakdown voltage | at I _R = 1 mA | V_{BR} | 6 | 6.8 | 8 | V |
| | at I _{PP} = 1 A | - V _C | = | 7 | 8.7 | V |
| Reverse clamping voltage | at I _{PP} = I _{PPM} = 30 A | | = | 12 | 16 | V |
| Forward clamping voltage | at I _{PP} = 1 A | V _F | - | 1 | 1.2 | V |
| | at I _{PP} = I _{PPM} = 30 A | | - | 4.5 | - | V |
| Capacitance | at V _R = 0 V; f = 1 MHz | - C _D | - | 260 | 350 | pF |
| | at V _R = 2.5 V; f = 1 MHz | | - | 150 | - | pF |

| ELECTRICAL CHARACT between pin 3 and pin 1 | TERISTICS GSOT08 (T _{amb} = 25 °C | C unless ot | herwise s | pecified) | | |
|--------------------------------------------|----------------------------------------------|----------------------|-----------|-----------|------|-------|
| PARAMETER | TEST CONDITIONS/REMARKS | SYMBOL | MIN. | TYP. | MAX. | UNIT |
| Protection paths | Number of lines which can be protected | N _{channel} | = | - | 1 | lines |
| Reverse stand-off voltage | Max. reverse working voltage | V_{RWM} | - | - | 8 | V |
| Reverse voltage | at I _R = 5 μA | V_R | 8 | - | - | V |
| Reverse current | at V _R = 8 V | I _R | - | - | 5 | μΑ |
| Reverse breakdown voltage | at I _R = 1 mA | V_{BR} | 9 | 10 | 11 | V |
| Deverse elemning veltage | at I _{PP} = 1 A | V _C | - | 10.7 | 13 | V |
| Reverse clamping voltage | at I _{PP} = I _{PPM} = 18 A | | = | 15.2 | 19.2 | V |
| Forward clamping voltage | at I _{PP} = 1 A | V _F | - | 1 | 1.2 | V |
| | at I _{PP} = I _{PPM} = 18 A | | = | 3 | - | V |
| Capacitance | at V _R = 0 V; f = 1 MHz | - C _D | - | 160 | 250 | pF |
| | at V _R = 4 V; f = 1 MHz | | - | 80 | - | pF |

| ELECTRICAL CHARACTERISTICS GSOT12 (T _{amb} = 25 °C unless otherwise specified) between pin 3 and pin 1 | | | | | | |
|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|----------------------|------|------|------|-------|
| PARAMETER | TEST CONDITIONS/REMARKS | SYMBOL | MIN. | TYP. | MAX. | UNIT |
| Protection paths | Number of lines which can be protected | N _{channel} | = | - | 1 | lines |
| Reverse stand-off voltage | Max. reverse working voltage | V_{RWM} | = | - | 12 | V |
| Reverse voltage | at I _R = 1 μA | V_R | 12 | - | - | V |
| Reverse current | at V _R = 12 V | I _R | - | - | 1 | μΑ |
| Reverse breakdown voltage | at I _R = 1 mA | V_{BR} | 13.5 | 15 | 16.5 | V |
| Deverse elemning veltage | at I _{PP} = 1 A | V _C | - | 15.4 | 18.7 | V |
| Reverse clamping voltage | at I _{PP} = I _{PPM} = 12 A | | - | 21.2 | 26 | V |
| Forward clamping voltage | at I _{PP} = 1 A | V | - | 1 | 1.2 | V |
| | at I _{PP} = I _{PPM} = 12 A | V _F | - | 2.2 | - | V |
| Capacitance | at V _R = 0 V; f = 1 MHz | _ | - | 115 | 150 | pF |
| | at V _R = 6 V; f = 1 MHz | C _D | - | 50 | - | рF |



| ELECTRICAL CHARACTERISTICS GSOT15 (T _{amb} = 25 °C unless otherwise specified) between pin 3 and pin 1 | | | | | | |
|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|----------------------|------|------|------|-------|
| PARAMETER | TEST CONDITIONS/REMARKS | SYMBOL | MIN. | TYP. | MAX. | UNIT |
| Protection paths | Number of lines which can be protected | N _{channel} | = | - | 1 | lines |
| Reverse stand-off voltage | Max. reverse working voltage | V_{RWM} | = | - | 15 | V |
| Reverse voltage | at I _R = 1 μA | V_R | 15 | - | - | V |
| Reverse current | at V _R = 15 V | I _R | - | - | 1 | μΑ |
| Reverse breakdown voltage | at I _R = 1 mA | V_{BR} | 16.5 | 18 | 20 | V |
| Dayaraa alamaina valtaaa | at I _{PP} = 1 A | V _C | = | 19.4 | 23.5 | V |
| Reverse clamping voltage | at I _{PP} = I _{PPM} = 8 A | | - | 24.8 | 28.8 | V |
| Forward clamping voltage | at I _{PP} = 1 A | V _F | - | 1 | 1.2 | V |
| | at I _{PP} = I _{PPM} = 8 A | | = | 1.8 | - | V |
| Capacitance | at V _R = 0 V; f = 1 MHz | C _D | - | 90 | 120 | pF |
| | at V _R = 7.5 V; f = 1 MHz | | - | 35 | - | pF |

| ELECTRICAL CHARACTERISTICS GSOT24 (T _{amb} = 25 °C unless otherwise specified) between pin 3 and pin 1 | | | | | | |
|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|----------------------|------|------|------|-------|
| PARAMETER | TEST CONDITIONS/REMARKS | SYMBOL | MIN. | TYP. | MAX. | UNIT |
| Protection paths | Number of lines which can be protected | N _{channel} | - | - | 1 | lines |
| Reverse stand-off voltage | Max. reverse working voltage | V_{RWM} | - | - | 24 | V |
| Reverse voltage | at I _R = 1 μA | V_R | 24 | - | - | V |
| Reverse current | at V _R = 24 V | I _R | - | - | 1 | μΑ |
| Reverse breakdown voltage | at I _R = 1 mA | V_{BR} | 27 | 30 | 33 | V |
| Deverse elemning veltage | at I _{PP} = 1 A | V _C | - | 34 | 41 | V |
| Reverse clamping voltage | at I _{PP} = I _{PPM} = 5 A | | - | 41 | 47 | V |
| Forward clamping voltage | at I _{PP} = 1 A | W | - | 1 | 1.2 | V |
| | at I _{PP} = I _{PPM} = 5 A | V _F | - | 1.4 | - | V |
| Capacitance | at V _R = 0 V; f = 1 MHz | _ | - | 65 | 80 | pF |
| | at V _R = 12 V; f = 1 MHz | C _D | - | 20 | = | pF |

| ELECTRICAL CHARACTERISTICS GSOT36 (T _{amb} = 25 °C unless otherwise specified) between pin 3 and pin 1 | | | | | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|----------------------|------|------|------|-------|
| PARAMETER | TEST CONDITIONS/REMARKS | SYMBOL | MIN. | TYP. | MAX. | UNIT |
| Protection paths | Number of lines which can be protected | N _{channel} | = | - | 1 | lines |
| Reverse stand-off voltage | Max. reverse working voltage | V_{RWM} | = | - | 36 | V |
| Reverse voltage | at I _R = 1 μA | V_R | 36 | - | - | V |
| Reverse current | at V _R = 36 V | I _R | - | - | 1 | μΑ |
| Reverse breakdown voltage | at I _R = 1 mA | V_{BR} | 39 | 43 | 47 | V |
| Deverse elemning voltage | at I _{PP} = 1 A | - V _C | - | 49 | 60 | V |
| Reverse clamping voltage | at I _{PP} = I _{PPM} = 3.5 A | | - | 59 | 71 | V |
| Forward clamping voltage | at I _{PP} = 1 A | V _F | - | 1 | 1.2 | V |
| | at I _{PP} = I _{PPM} = 3.5 A | | - | 1.3 | - | V |
| Capacitance | at V _R = 0 V; f = 1 MHz | - C _D | - | 52 | 65 | pF |
| | at V _R = 18 V; f = 1 MHz | | - | 12 | - | pF |

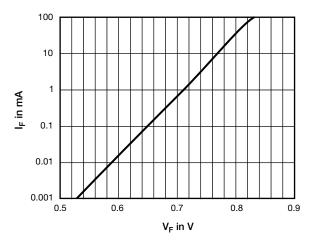


Fig. 1 - Typical Forward Current I_F vs. Forward Voltage V_F

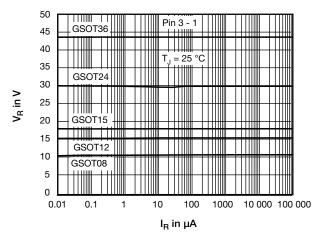


Fig. 2 - Typical Reverse Voltage V_{R} vs. Reverse Current I_{R}

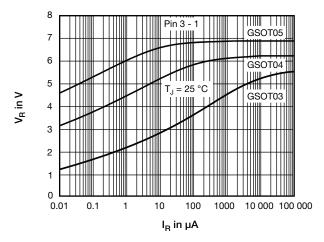
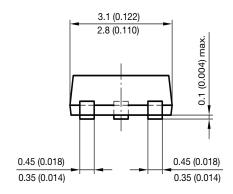
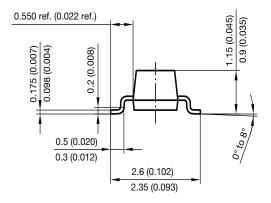


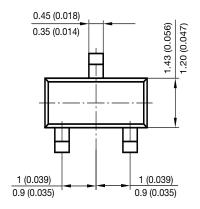
Fig. 3 - Typical Reverse Voltage V_{R} vs. Reverse Current I_{R}

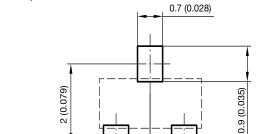
0.95 (0.037)

PACKAGE DIMENSIONS in millimeters (inches): SOT-23





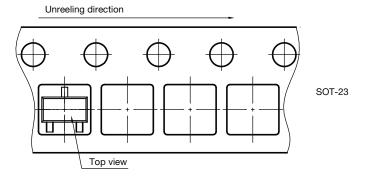




Foot print recommendation:

Document no.: 6.541-5014.01-4

Rev. 8 - Date: 23.Sept.2009 17418



0.95 (0.037)

Orientation in carrier tape SOT-23 S8-V-3929.01-006 (4) 04.02.2010 22607



Legal Disclaimer Notice

Vishay

Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.