

# Photovoltaic

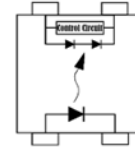
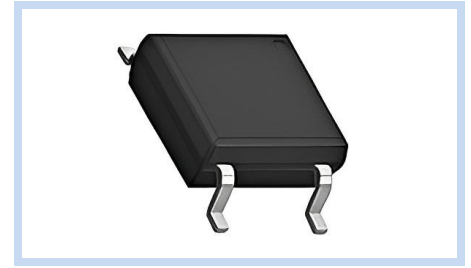
## 1CH 2.5KViso 16V 8uA SOP-4

PVD12516V08S4

MERITEK

### FEATURE

- Isolated Floating Output
- Isolation Voltage: 2500 Vrms
- High-Speed Switching
- Integrated Turn-Off Circuitry
- Application: MOSFET and IGBT Driver, Programmable Controller, Process Control, Solid State Relay, Isolated Switching, Isolated Power Supply
- In Accordance with Safety Class UL1577 Standard



### MAXIMUM RATINGS

| Parameter                   |                            | Symbol    | Value    | Unit               |
|-----------------------------|----------------------------|-----------|----------|--------------------|
| Input Forward Current       |                            | $I_F$     | 50       | mA                 |
| Input Peak Forward Current  | $f=100\text{Hz}$ , Duty=1% | $I_{FP}$  | 1        | A                  |
| Input Reverse Voltage       |                            | $V_R$     | 5        | V                  |
| Input Power Dissipation     |                            | $P_I$     | 75       | mW                 |
| Isolation Voltage           | AC for 60sec, RH60%        | $V_{ISO}$ | 2500     | $V_{RMS}$          |
| Operating Temperature Range |                            | $T_{Opr}$ | -40~+85  | $^{\circ}\text{C}$ |
| Storage Temperature Range   |                            | $T_{Stg}$ | -40~+100 | $^{\circ}\text{C}$ |

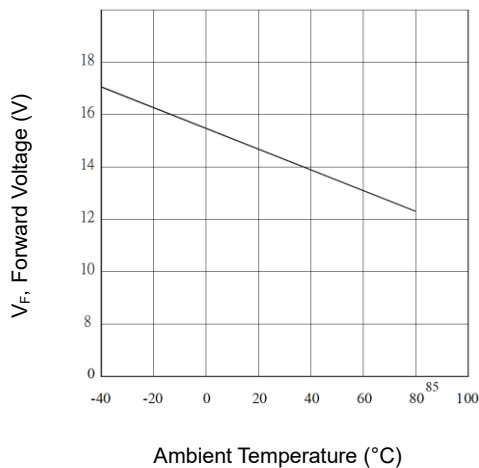
### ELECTRICAL CHARACTERISTICS

| Input Characteristics            |                                         | Conditions | Symbol      | Min       | Typ. | Max  | Unit          |
|----------------------------------|-----------------------------------------|------------|-------------|-----------|------|------|---------------|
| Forward Voltage                  | $I_F=10\text{mA}$                       |            | $V_F$       | --        | 1.2  | 1.4  | V             |
| Operation LED Current            | $V_{OC}=5\text{V}$                      |            | $I_{F,On}$  | --        | 0.50 | 3.00 | mA            |
| Recovery LED Current             | $V_{OC}=1\text{V}$                      |            | $I_{F,Off}$ | --        | 0.35 | 0.50 | mA            |
| Output Characteristics           |                                         | Conditions | Symbol      | Min       | Typ. | Max  | Unit          |
| Short Circuit Current            | $I_F=10\text{mA}$                       |            | $I_{SC}$    | 3         | 8    | --   | $\mu\text{A}$ |
| Open Circuit Voltage             | $I_F=10\text{mA}$                       |            | $V_{OC}$    | 10        | 16   | --   | V             |
| Coupled Characteristics          |                                         | Conditions | Symbol      | Min       | Typ. | Max  | Unit          |
| Resistance from Input to Output  | $V_{IO}=500V_{DC}$                      |            | $R_{IO}$    | $10^{10}$ | --   | --   | $\Omega$      |
| Capacitance from Input to Output | $f=1\text{MHz}$                         |            | $C_{IO}$    | --        | 0.8  | 1.5  | pF            |
| Turn-On Time                     | $I_F=10\text{mA}$ , $C_L=1000\text{pF}$ |            | $t_{On}$    | --        | 0.28 | --   | ms            |
| Turn-Off Time                    |                                         |            | $t_{Off}$   | --        | 0.05 | --   |               |

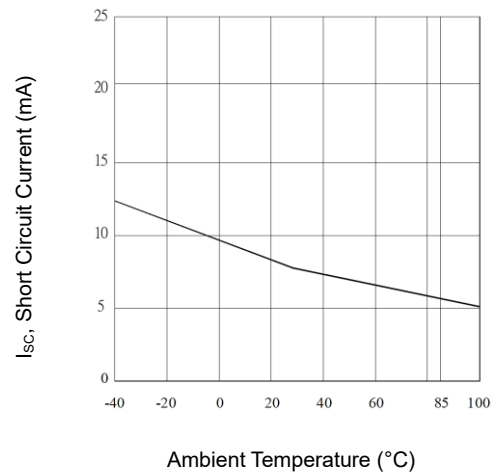
Note:  $T_A=25^{\circ}\text{C}$  unless otherwise noted.

## CHARACTERISTIC CURVES

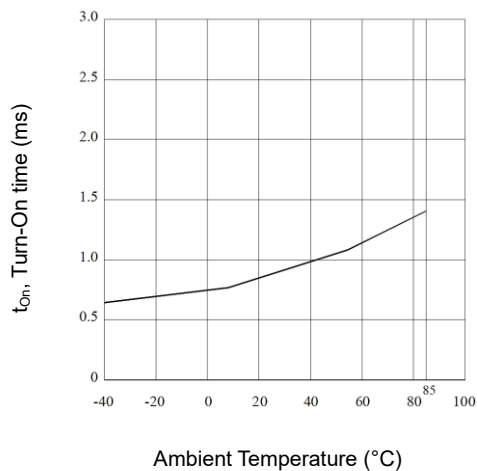
Forward Voltage vs. Temperature



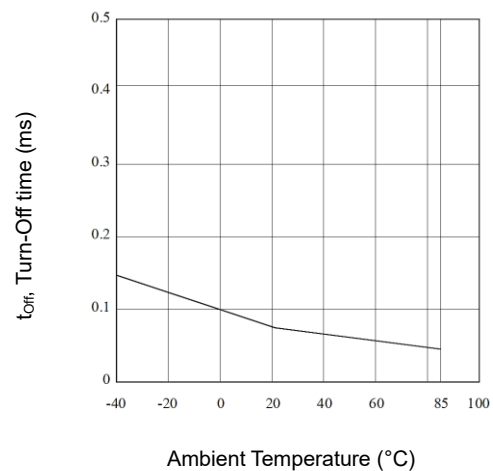
Short Circuit Current vs Temperature



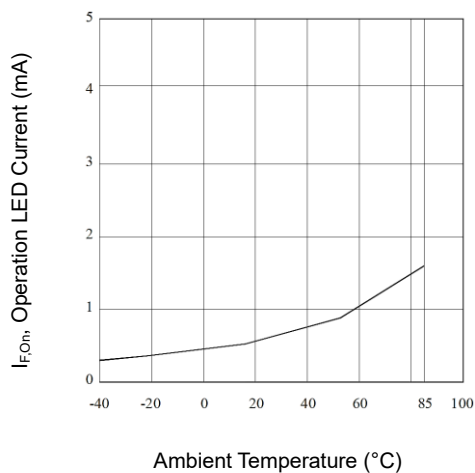
Turn-On Time vs. Temperature



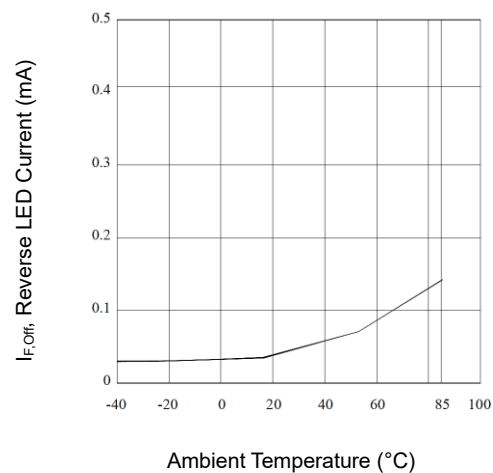
Turn-Off Time vs. Temperature



Operation LED Current vs. Temperature

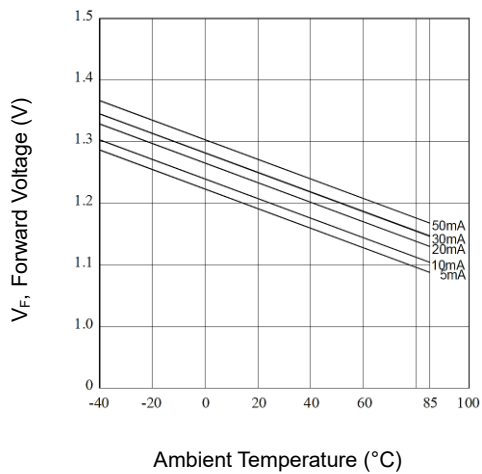


Recovery LED Current vs. Temperature

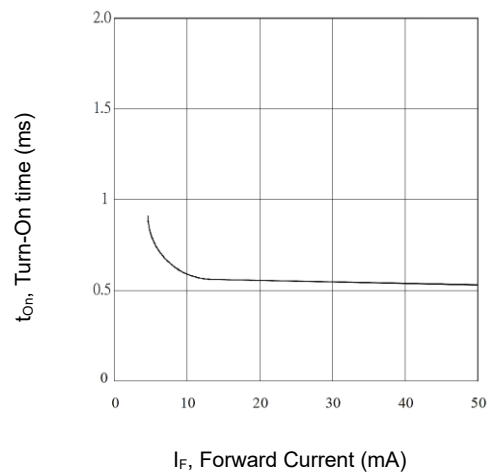


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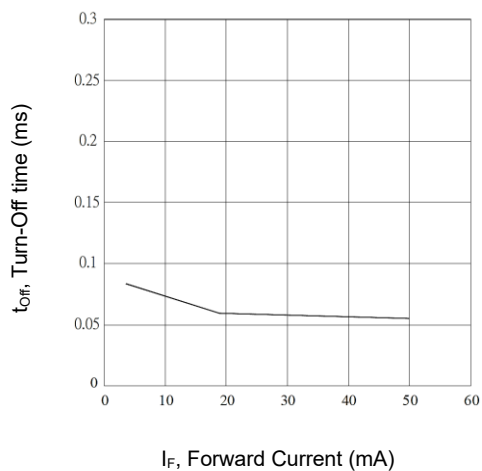
Forward Voltage vs. Temperature



Turn-On Time vs. Forward Current



Turn-Off Time vs. Forward Current



## DIMENSIONS

| Item | Min (mm) | Max (mm) |
|------|----------|----------|
| A1   | 0.00     | 0.20     |
| A2   | 1.80     | 2.20     |
| b    | 0.30     | 0.50     |
| D    | 4.10     | 4.50     |
| e    | 2.54     |          |
| E    | 6.40     | 7.20     |
| E1   | 4.20     | 4.60     |
| L    | 0.46     | 0.86     |
| X    | 0.80     |          |
| X1   | 2.54     |          |
| Y    | 1.20     |          |
| Y1   | 7.20     |          |
| Z    | 0.93     |          |

Note:

1.LED Anode;2.LED Cathode; 3.Cathode; 4 Anode

