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# Product Change Notification



Product Group: OPT/Tuesday August 4, 2026/PCN-OPT-1505-2026-REV-0

## Qualification of new chipset in VO14642AT and VO14642AABTR solid state relay

For further information, please contact your regional Vishay office.

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**Description of Change:** Vishay will change the chipset combination (Emitter and Mosfet dies) in the affected products.

**Reason for Change:** The current Mosfet chip has been obsoleted by the supplier. While mitigation through last-time-buy of the existing chip was evaluated, trade and regulatory constraints limited Vishay's ability to secure sufficient long-term supply from the current source. Consequently, an alternative chipset combination has been qualified to ensure continued supply and sustain long-term manufacturing support for the affected products.

**Expected Influence on Quality/Reliability/Performance:** There is no change in form, fit and function of the affected parts. The performance as well as the reliability remains unchanged. The min and max parameters remains unchanged. The deviations in the typical performance parameters are highlighted in the attached comparison report.

Nevertheless, we require to test the product in their applications.

**Part Numbers/Series/Families Affected:** VO14642AT, VO14642AABTR,

**Vishay Brand(S):** Vishay Semiconductors

#### Time Schedule:

Start Shipment Date: Monday October 5, 2026

**Sample Availability:** Samples available beginning 05.08.2026. Shipment date depends on the depletion of existing materials.

**Product Identification:** Lot Code

**Qualification Data:** Available upon request

**This PCN is considered approved, without further notification, unless we receive specific customer concerns before Thursday September 3, 2026 or as specified by contract.**

**Issued By:** Sourabh Kulkarni, sourabh.kulkarni@vishay.com



PCN OPT-1505-2026 Rev. 0  
QUALIFICATION OF NEW CHIPSET FOR VO14642AT,  
VO14642AABTR solid state relay

Pre and Post PCN Comparison report



## VO14642AT, VO14642AABTR

Pre- PCN

| ELECTRICAL CHARACTERISTICS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified) |                                                                   |            |      |      |      |               |
|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|------------|------|------|------|---------------|
| PARAMETER                                                                                         | TEST CONDITION                                                    | SYMBOL     | MIN. | TYP. | MAX. | UNIT          |
| INPUT                                                                                             |                                                                   |            |      |      |      |               |
| LED forward current, switch turn-on                                                               | $I_L = 1\text{ A}$ , $V_L \leq 0.5\text{ V}$ , $t = 10\text{ ms}$ | $I_{Fon}$  | -    | 0.5  | 2    | mA            |
| LED forward current, switch turn-off                                                              | $V_L = 60\text{ V}$ , $I_L < 1\text{ }\mu\text{A}$                | $I_{Foff}$ | 50   | -    | -    | $\mu\text{A}$ |
| LED reverse current                                                                               | $V_R = 5\text{ V}$                                                | $I_R$      | -    | -    | 10   | $\mu\text{A}$ |
| LED forward voltage                                                                               | $I_F = 10\text{ mA}$                                              | $V_F$      | 1.0  | 1.4  | 1.6  | V             |
| OUTPUT                                                                                            |                                                                   |            |      |      |      |               |
| On-resistance (AC/DC)                                                                             | $I_F = 10\text{ mA}$ , $I_L = 1\text{ A}$                         | $R_{ON}$   | -    | 0.18 | 0.25 | $\Omega$      |
| On-resistance (DC only)                                                                           | $I_F = 10\text{ mA}$ , $I_L = 2\text{ A}$                         | $R_{ON}$   | -    | 0.05 | 0.07 | $\Omega$      |
| Off-state leakage current                                                                         | $I_F = 0\text{ mA}$ , $V_L = 60\text{ V}$                         | $I_{LEAK}$ | -    | -    | 1    | $\mu\text{A}$ |

| SWITCHING CHARACTERISTICS (AC/DC CONNECTION) |                                                                    |           |      |      |      |               |
|----------------------------------------------|--------------------------------------------------------------------|-----------|------|------|------|---------------|
| PARAMETER                                    | TEST CONDITION                                                     | SYMBOL    | MIN. | TYP. | MAX. | UNIT          |
| Turn-on time                                 | $I_F = 10\text{ mA}$ , $V_L = 30\text{ V}$ , $I_L = 200\text{ mA}$ | $t_{on}$  | -    | 370  | 800  | $\mu\text{s}$ |
| Turn-off time                                | $I_F = 10\text{ mA}$ , $V_L = 30\text{ V}$ , $I_L = 200\text{ mA}$ | $t_{off}$ | -    | 50   | 800  | $\mu\text{s}$ |
| Turn-on time                                 | $I_F = 10\text{ mA}$ , $V_L = 5\text{ V}$ , $I_L = 1\text{ A}$     | $t_{on}$  | -    | 550  | -    | $\mu\text{s}$ |
| Turn-off time                                | $I_F = 10\text{ mA}$ , $V_L = 5\text{ V}$ , $I_L = 1\text{ A}$     | $t_{off}$ | -    | 18   | -    | $\mu\text{s}$ |

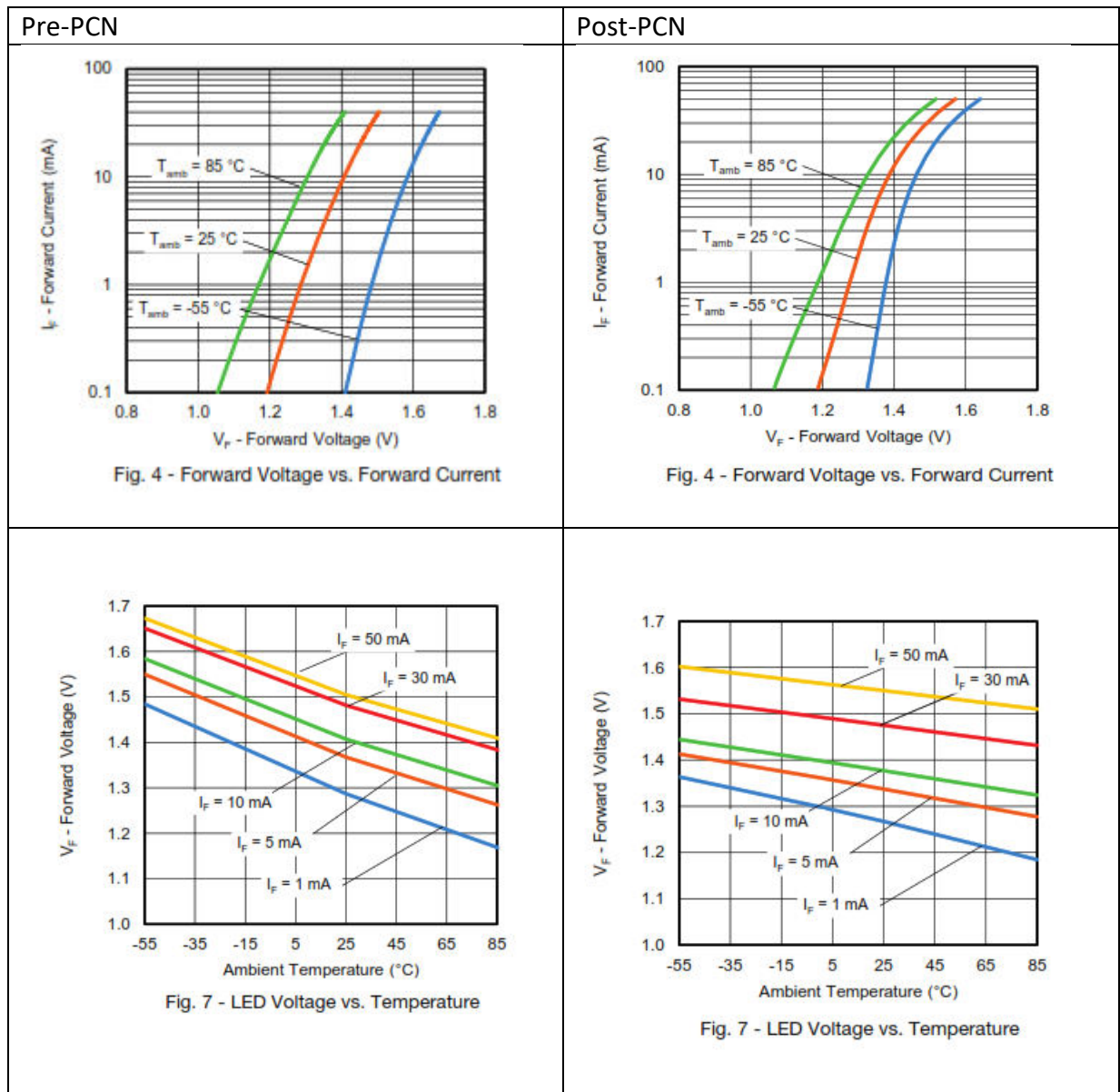
Post-PCN

| ELECTRICAL CHARACTERISTICS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified) |                                                                   |            |      |      |      |               |
|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|------------|------|------|------|---------------|
| PARAMETER                                                                                         | TEST CONDITION                                                    | SYMBOL     | MIN. | TYP. | MAX. | UNIT          |
| INPUT                                                                                             |                                                                   |            |      |      |      |               |
| LED forward current, switch turn-on                                                               | $I_L = 1\text{ A}$ , $V_L \leq 0.5\text{ V}$ , $t = 10\text{ ms}$ | $I_{Fon}$  | -    | 1    | 2    | mA            |
| LED forward current, switch turn-off                                                              | $V_L = 60\text{ V}$ , $I_L < 1\text{ }\mu\text{A}$                | $I_{Foff}$ | 50   | -    | -    | $\mu\text{A}$ |
| LED reverse current                                                                               | $V_R = 5\text{ V}$                                                | $I_R$      | -    | -    | 10   | $\mu\text{A}$ |
| LED forward voltage                                                                               | $I_F = 10\text{ mA}$                                              | $V_F$      | 1.0  | 1.4  | 1.6  | V             |
| OUTPUT                                                                                            |                                                                   |            |      |      |      |               |
| On-resistance (AC/DC)                                                                             | $I_F = 10\text{ mA}$ , $I_L = 1\text{ A}$                         | $R_{ON}$   | -    | 0.18 | 0.25 | $\Omega$      |
| On-resistance (DC only)                                                                           | $I_F = 10\text{ mA}$ , $I_L = 2\text{ A}$                         | $R_{ON}$   | -    | 0.05 | 0.07 | $\Omega$      |
| Off-state leakage current                                                                         | $I_F = 0\text{ mA}$ , $V_L = 60\text{ V}$                         | $I_{LEAK}$ | -    | -    | 1    | $\mu\text{A}$ |

| SWITCHING CHARACTERISTICS (AC/DC CONNECTION) |                                                                    |           |      |      |      |               |
|----------------------------------------------|--------------------------------------------------------------------|-----------|------|------|------|---------------|
| PARAMETER                                    | TEST CONDITION                                                     | SYMBOL    | MIN. | TYP. | MAX. | UNIT          |
| Turn-on time                                 | $I_F = 10\text{ mA}$ , $V_L = 30\text{ V}$ , $I_L = 200\text{ mA}$ | $t_{on}$  | -    | 400  | 800  | $\mu\text{s}$ |
| Turn-off time                                | $I_F = 10\text{ mA}$ , $V_L = 30\text{ V}$ , $I_L = 200\text{ mA}$ | $t_{off}$ | -    | 60   | 450  | $\mu\text{s}$ |
| Turn-on time                                 | $I_F = 10\text{ mA}$ , $V_L = 5\text{ V}$ , $I_L = 1\text{ A}$     | $t_{on}$  | -    | 700  | -    | $\mu\text{s}$ |
| Turn-off time                                | $I_F = 10\text{ mA}$ , $V_L = 5\text{ V}$ , $I_L = 1\text{ A}$     | $t_{off}$ | -    | 50   | -    | $\mu\text{s}$ |



## VO14642AT, VO14642AABTR



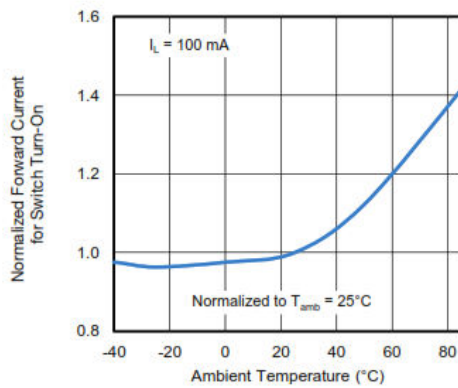


Fig. 8 - LED Forward Current for Switch Turn-On vs. Ambient Temperature

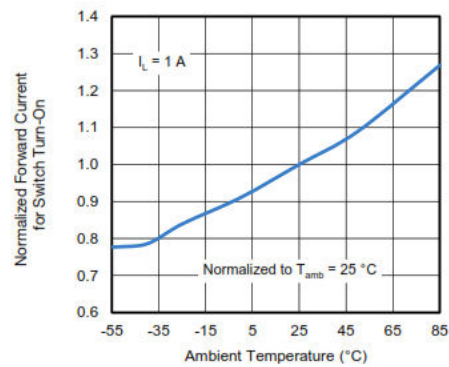


Fig. 8 - Normalized LED Forward Current for Switch Turn-On vs. Ambient Temperature

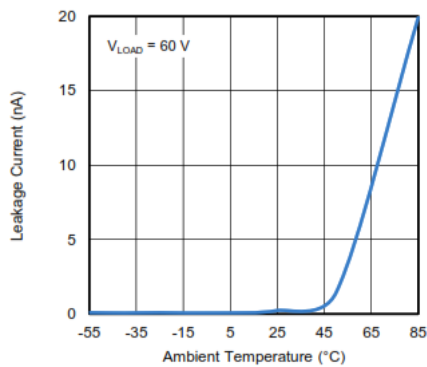


Fig. 6 - Leakage Current vs. Temperature

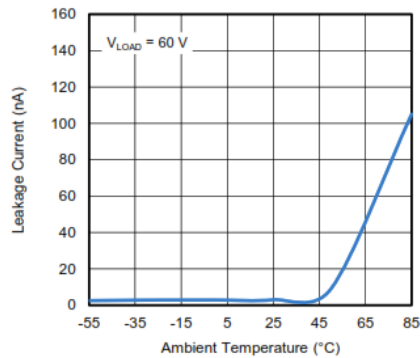


Fig. 6 - Leakage Current vs. Temperature

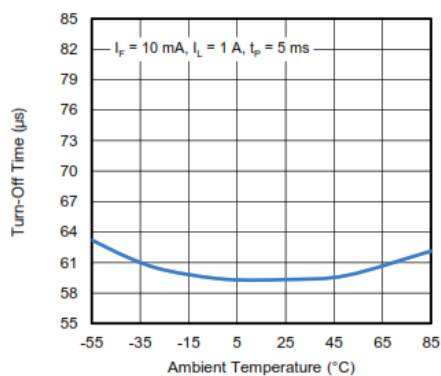


Fig. 10 - Turn-Off Time vs. Temperature

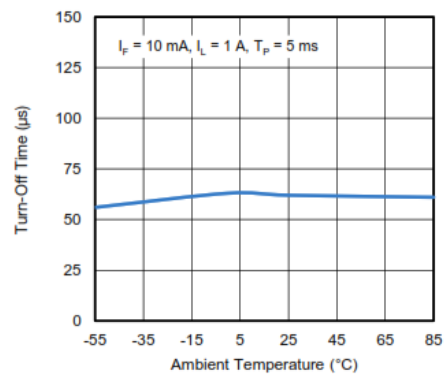


Fig. 10 - Turn-Off Time vs. Temperature

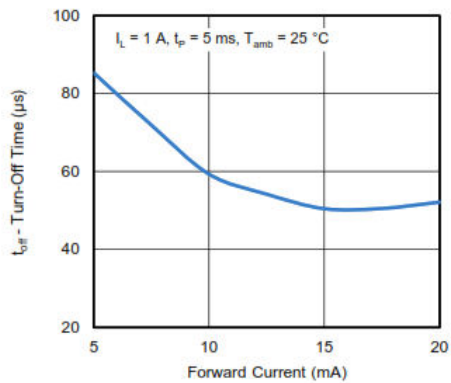


Fig. 11 - Turn-Off Time vs. Forward Current

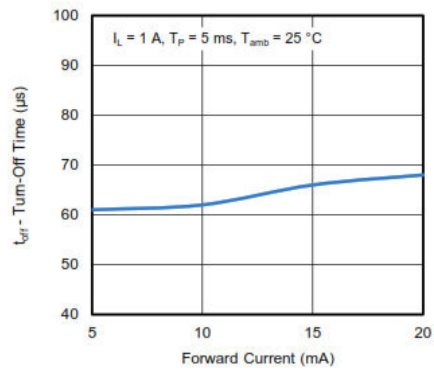


Fig. 11 - Turn-Off Time vs. Forward Current

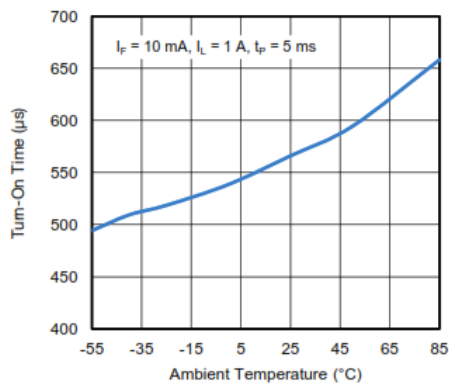


Fig. 12 - Turn-On Time vs. Temperature

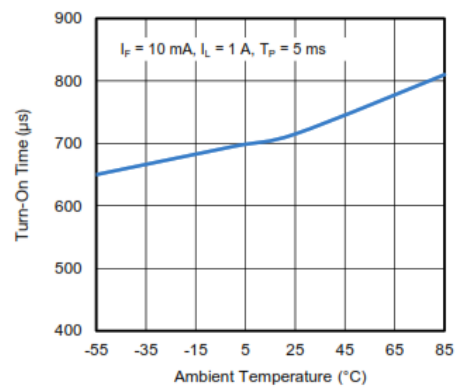


Fig. 12 - Turn-On Time vs. Temperature

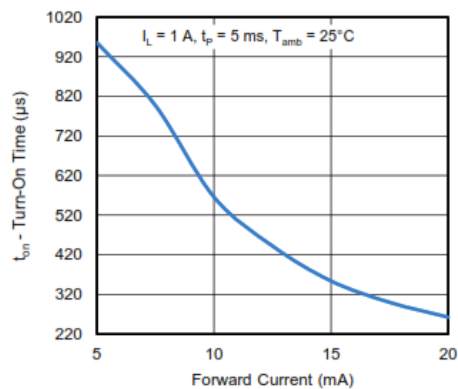


Fig. 13 - Turn-On Time vs. Forward Current

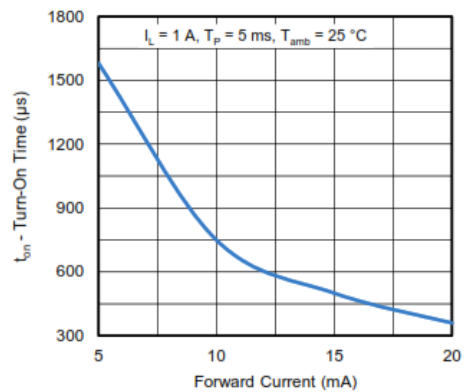
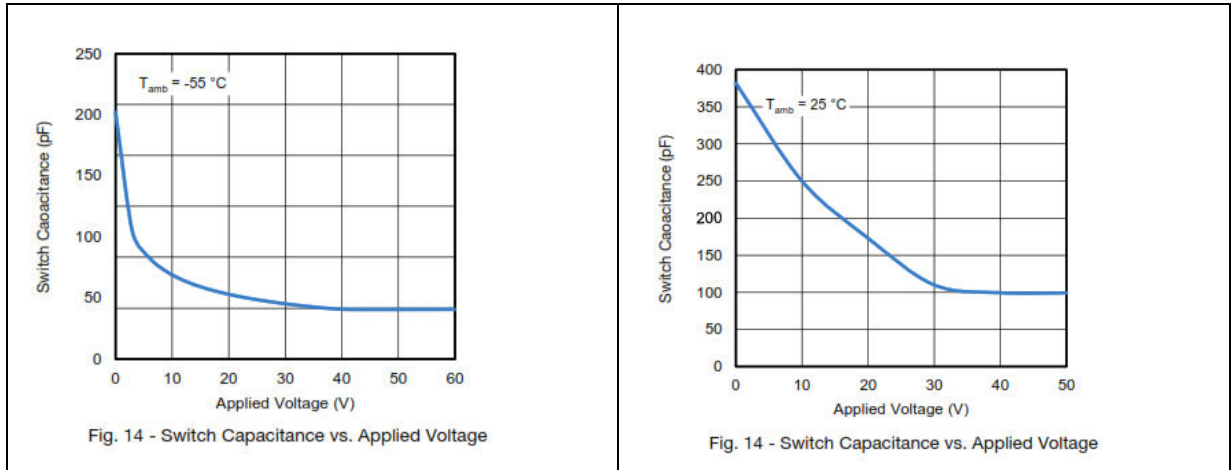


Fig. 13 - Turn-On Time vs. Forward Current



For any questions, please reach out to [optocoupleranswers@vishay.com](mailto:optocoupleranswers@vishay.com).

| Vishay Material Code | Customer Material | Location           |
|----------------------|-------------------|--------------------|
| VO14642AABTR         | VOPVO14642AABTR   | Ft Worth           |
| VO14642AT            | VOPVO14642AT      | Ft Worth           |
| VO14642AABTR         | VOPVO14642AABTR   | Maisach Gernlinden |
| VO14642AT            | VOPVO14642AT      | Maisach Gernlinden |
| VO14642AABTR         | 2011-P2SCMP-00998 | Singapore          |