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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.

CONTACT INFORMATION

Americas

Jim Toal
2585 Junction Avenue , CA
-
San Jose United States 95134
Phone: +14085678358
Fax:
jim.toal@vishay.com

Europe

Boris Lazic
Theresienstrasse 2
-
Heilbronn Germany 74072
Phone: +4971317498516
Fax:
boris.lazic@vishay.com

Asia

Jason Soon
37A Tampines Street 92 #07-01
-
Singapore Singapore 528886
Phone: +6587785656
Fax:
jason.soon@vishay.com

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	-	-	μA
LED reverse current	$V_R = 5\text{ V}$	I_R	-	-	10	μA
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	Ω
On-resistance (DC only)	$I_F = 10\text{ mA}$, $I_L = 2\text{ A}$	R_{ON}	-	0.05	0.07	Ω
Off-state leakage current	$I_F = 0\text{ mA}$, $V_L = 60\text{ V}$	I_{LEAK}	-	-	1	μA

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	μs
Turn-off time	$I_F = 10\text{ mA}$, $V_L = 30\text{ V}$, $I_L = 200\text{ mA}$	t_{off}	-	50	800	μs
Turn-on time	$I_F = 10\text{ mA}$, $V_L = 5\text{ V}$, $I_L = 1\text{ A}$	t_{on}	-	550	-	μs
Turn-off time	$I_F = 10\text{ mA}$, $V_L = 5\text{ V}$, $I_L = 1\text{ A}$	t_{off}	-	18	-	μs

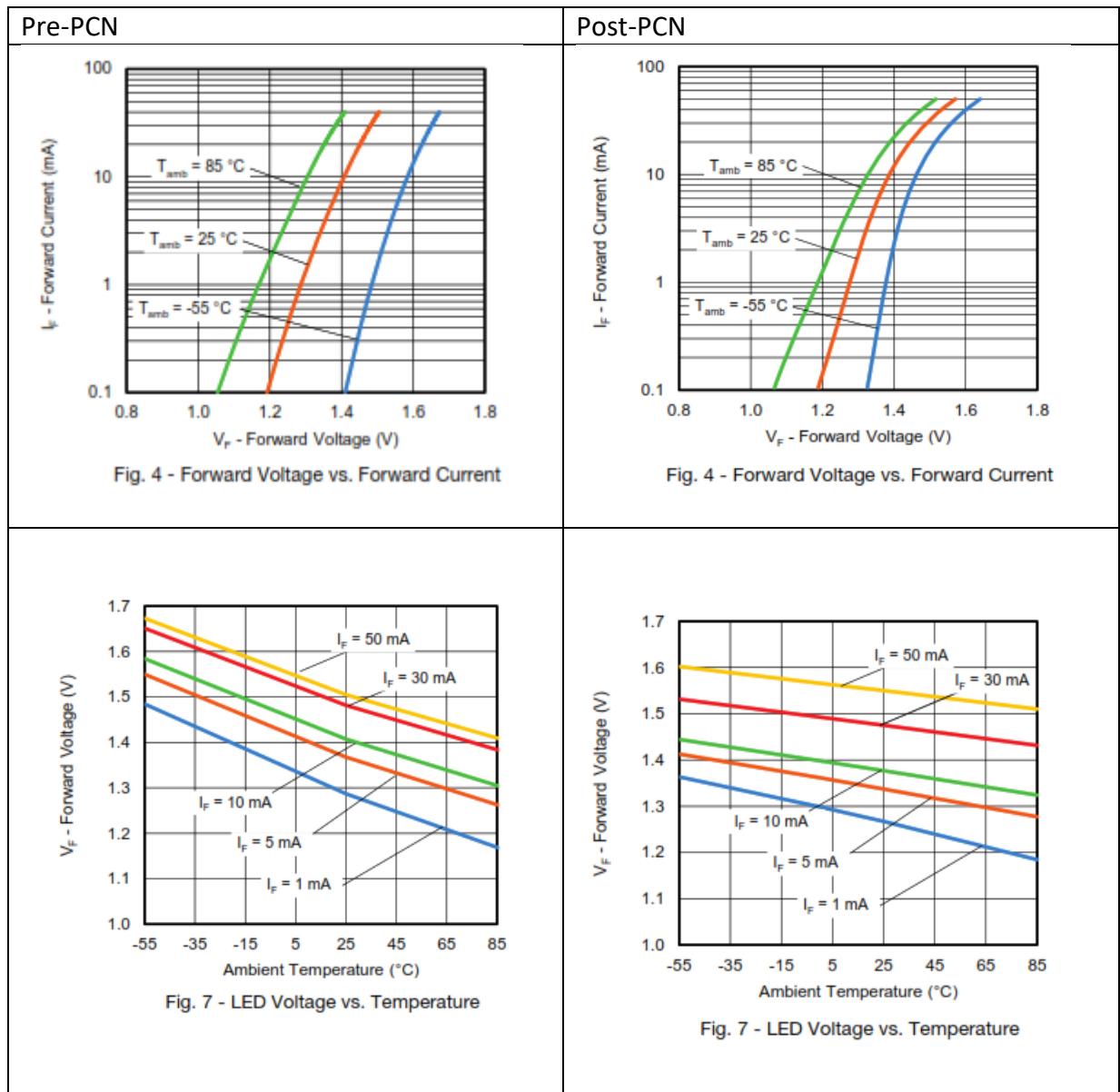
Post-PCN

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	-	-	μA
LED reverse current	$V_R = 5\text{ V}$	I_R	-	-	10	μA
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	Ω
On-resistance (DC only)	$I_F = 10\text{ mA}$, $I_L = 2\text{ A}$	R_{ON}	-	0.05	0.07	Ω
Off-state leakage current	$I_F = 0\text{ mA}$, $V_L = 60\text{ V}$	I_{LEAK}	-	-	1	μA

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	μs
Turn-off time	$I_F = 10\text{ mA}$, $V_L = 30\text{ V}$, $I_L = 200\text{ mA}$	t_{off}	-	60	450	μs
Turn-on time	$I_F = 10\text{ mA}$, $V_L = 5\text{ V}$, $I_L = 1\text{ A}$	t_{on}	-	700	-	μs
Turn-off time	$I_F = 10\text{ mA}$, $V_L = 5\text{ V}$, $I_L = 1\text{ A}$	t_{off}	-	50	-	μs



VO14642AT, VO14642AABTR



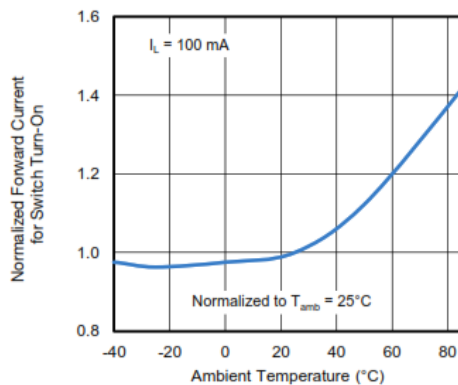


Fig. 8 - LED Forward Current for Switch Turn-On vs. Ambient Temperature

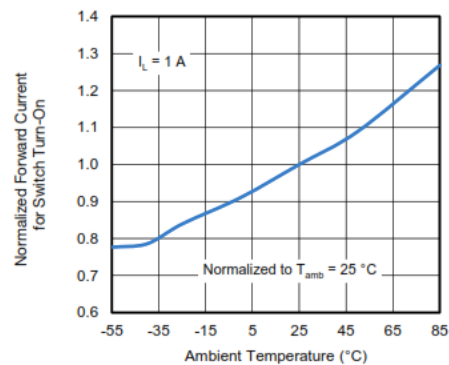


Fig. 8 - Normalized LED Forward Current for Switch Turn-On vs. Ambient Temperature

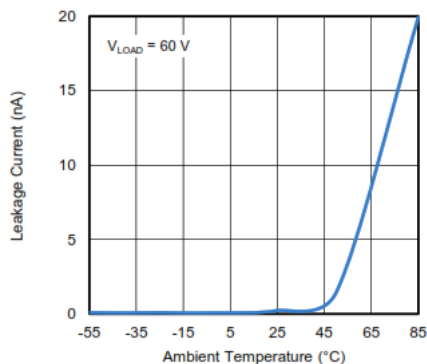


Fig. 6 - Leakage Current vs. Temperature

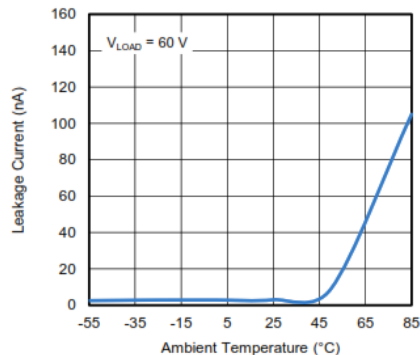


Fig. 6 - Leakage Current vs. Temperature

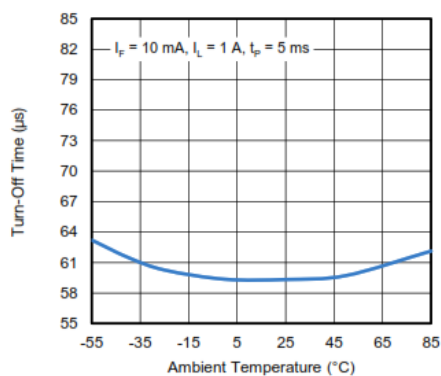


Fig. 10 - Turn-Off Time vs. Temperature

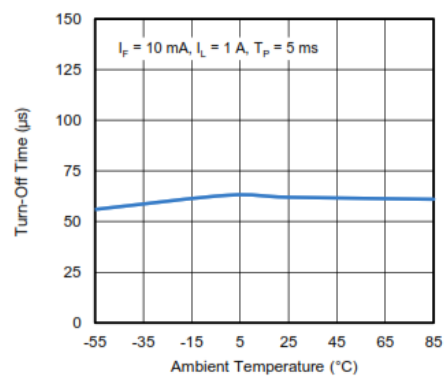


Fig. 10 - Turn-Off Time vs. Temperature

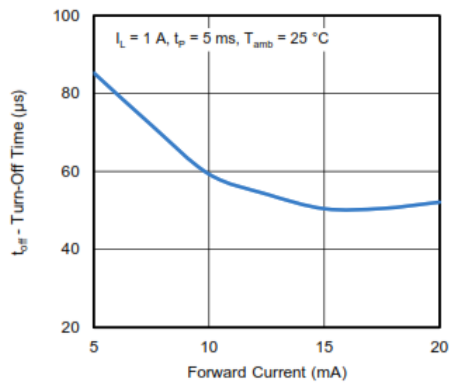


Fig. 11 - Turn-Off Time vs. Forward Current

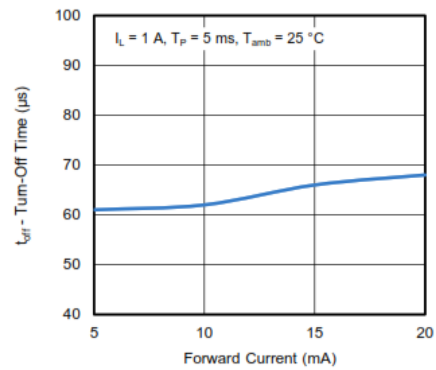


Fig. 11 - Turn-Off Time vs. Forward Current

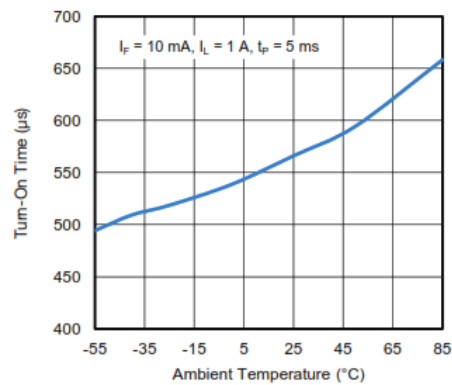


Fig. 12 - Turn-On Time vs. Temperature

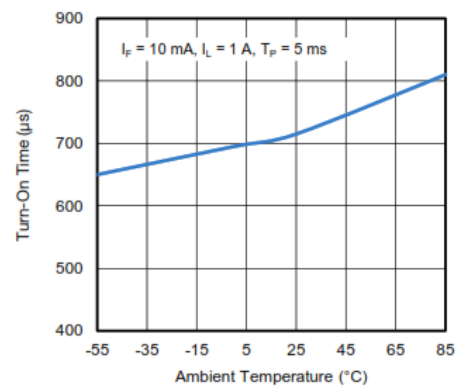


Fig. 12 - Turn-On Time vs. Temperature

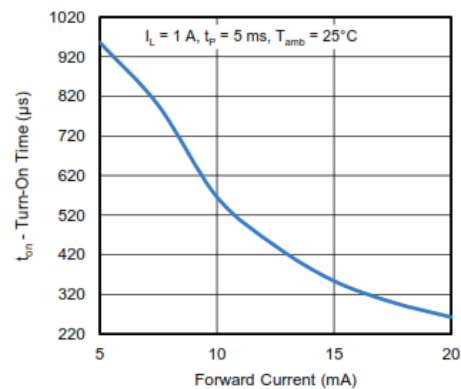


Fig. 13 - Turn-On Time vs. Forward Current

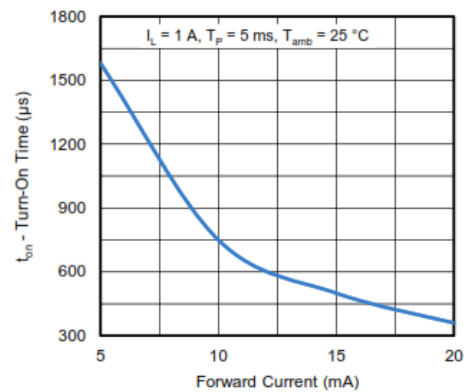
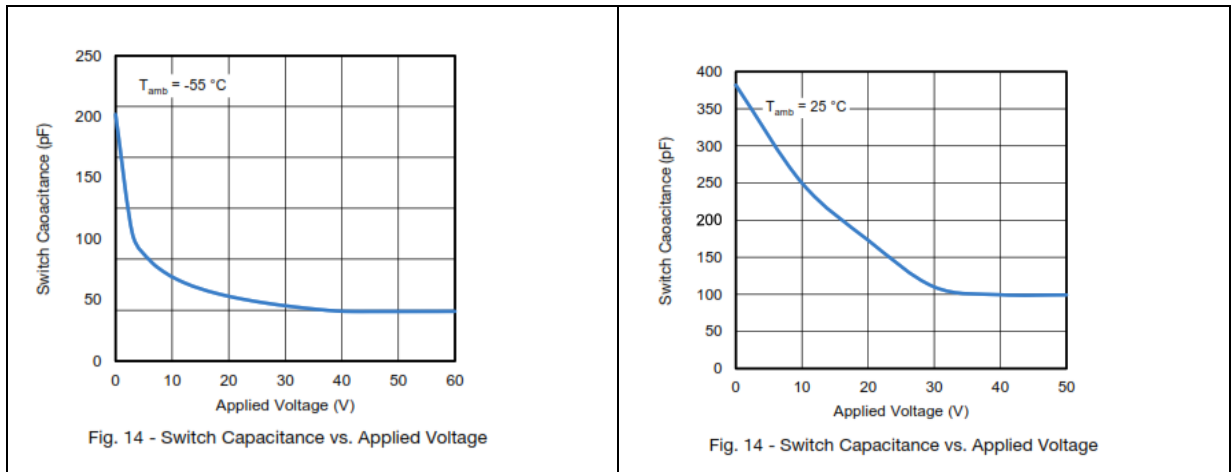


Fig. 13 - Turn-On Time vs. Forward Current



For any questions, please reach out to optocoupleranswers@vishay.com.