Product Change Notification

Product Group: OPT/Fri Nov 3, 2023/PCN-OPT-1298-2023-REV-0

VO2223 series production line transfer

For further information, please contact your regional Vishay office.

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Description of Change: The VO2223 power phototriac is manufactured in our Krubong, Malaysia plant. With the implementation of an improved lead frame, mold material, and state-of-the-art MOCVD emitter, the VO2223 will be manufactured on a different production line within the same plant.

Reason for Change: Transfer to another production line with introduction of new leadframe, mold material and emitter chip.

Expected Influence on Quality/Reliability/Performance: No influence on quality, reliability and performance expected. Nevertheless, we request our customers to test the product in their specific application.

Part Numbers/Series/Families Affected: Please see materials list on the succeeding page.

Vishay Brand(S): Vishay Semiconductors

Time Schedule:

Start Shipment Date: Thu Feb 1, 2024

Sample Availability: Components with the change implemented could start shipping on or after the start shipment date and will be a function of the availability of the material.

Product Identification: By lot code and pin 1 identifier

Qualification Data: This change has been rigorously qualified by company and industry standard

This PCN is considered approved, without further notification, unless we receive specific customer concerns before Sun Jan 7, 2024 or as specified by contract.

Issued By: Achim Kruck, achim.kruck@vishay.com

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VO2223	VO2223-X001	VO2223A	VO2223A-X001	VO2223A-X007T
VO2223B	VO2223B-X017T	VO2223B-X007T	VO2223B-3122	VO2223B-X001

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PCN OPT-1298-2023
VO2223 Series Production Line Transfer

Achim Kruck

2023-10-11

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Performance Comparison

Current vs. New Production Line
(VO2223B example)

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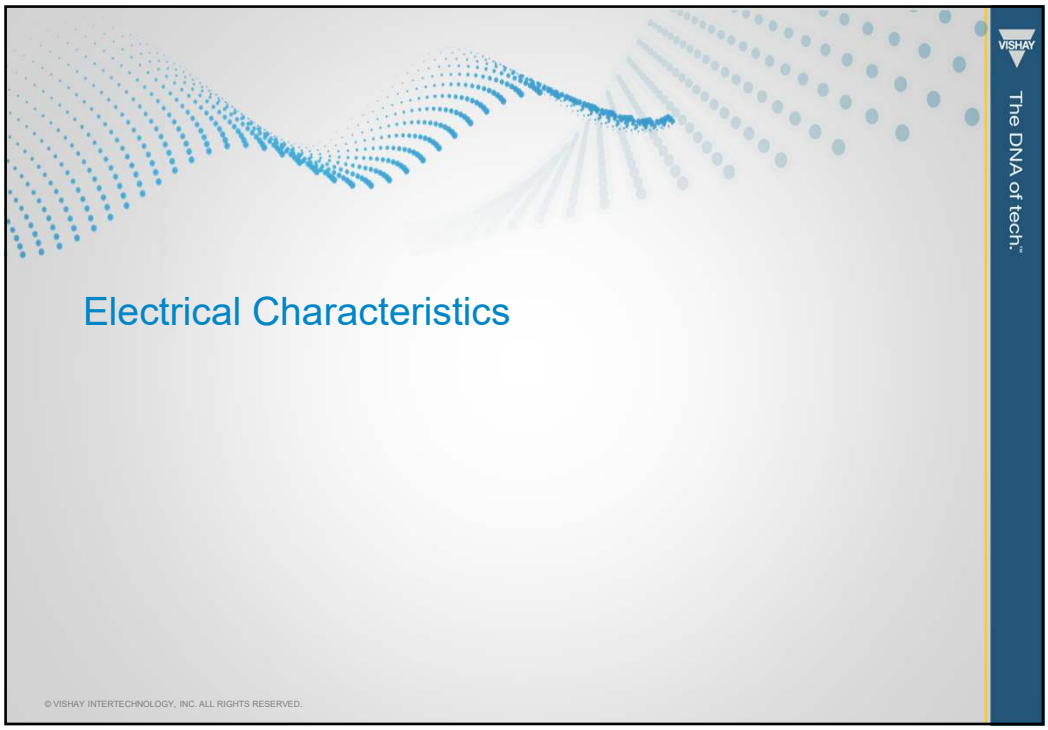

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Input

Current

INPUT						
Trigger input current	V_T = 6 V	I_{FT}	-	-	10	mA
Input reverse current	V_R = 5 V	I_R	-	-	10	µA
Forward voltage	I_F = 10 mA	V_F	0.9	-	1.5	V

New

INPUT						
Trigger input current	V_T = 6 V	I_{FT}	-	4.5	10	mA
Input reverse current	V_R = 5 V	I_R	-	-	10	µA
Forward voltage	I_F = 10 mA	V_F	0.9	-	1.5	V

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Output

Current

OUTPUT						
Peak on-state voltage	I_{TM} = 1 A	V_{TM}	-	-	1.7	V
Peak off-state current	V_{DRM} = 600 V	I_{DRM}	-	-	100	µA
Holding current	R_L = 100 Ω	I_H	-	-	25	mA
Critical rate of rise of off-state voltage	V_{IN} = 400 V_{RMS} (Fig. 3)	dV/dt_{cr}	-	600	-	V/µs
Critical rate of rise of commutating voltage	V_{IN} = 240 V_{RMS}, I_T = 1 A_{RMS} (Fig. 3)	dV/dt_{crq}	-	0.7	-	V/µs

New

OUTPUT						
Peak on-state voltage	I_{TM} = 1 A	V_{TM}	-	-	1.7	V
Peak off-state current	V_{DRM} = 600 V	I_{DRM}	-	-	100	µA
Holding current	R_L = 100 Ω	I_H	-	-	25	mA
Critical rate of rise of off-state voltage	V_{IN} = 400 V_{RMS} (Fig. 3)	dV/dt_{cr}	-	600	-	V/µs
Critical rate of rise of commutating voltage	V_{IN} = 240 V_{RMS}, I_T = 1 A_{RMS} (Fig. 3)	dV/dt_{crq}	-	0.7	-	V/µs

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Typical Characteristics

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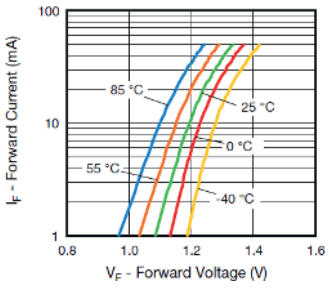
Forward Voltage vs. Ambient Temperature

Current



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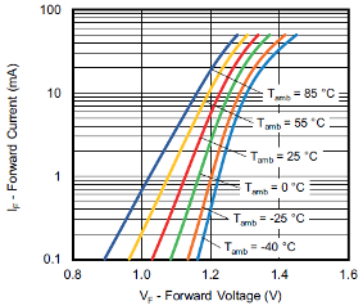

Fig. 4 - Forward Current vs. Forward Voltage

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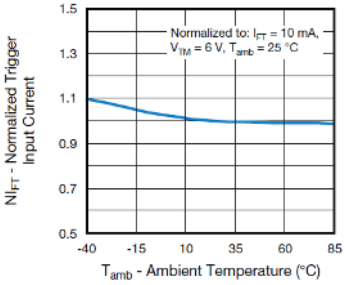
Normalized Trigger Input Current vs. Ambient Temperature

Current



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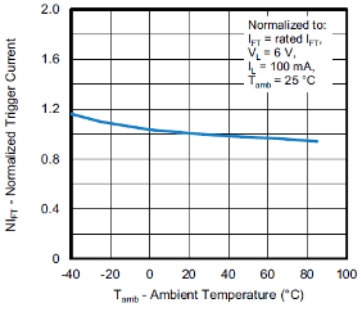

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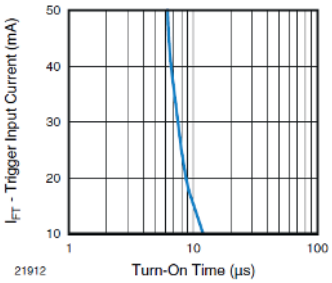
Turn-On Time vs. Forward Current

Current



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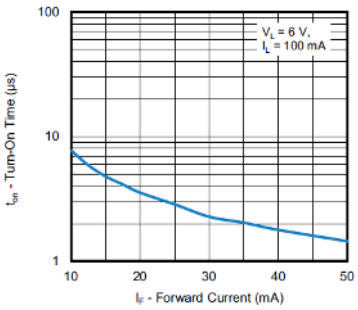

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Package Dimensions & Marking

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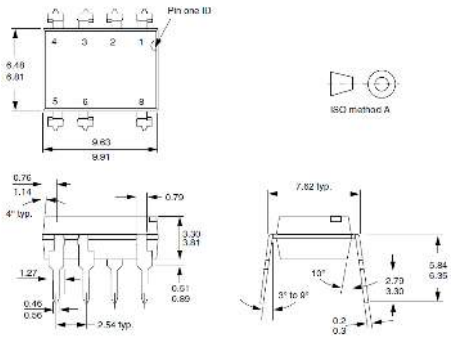
Current



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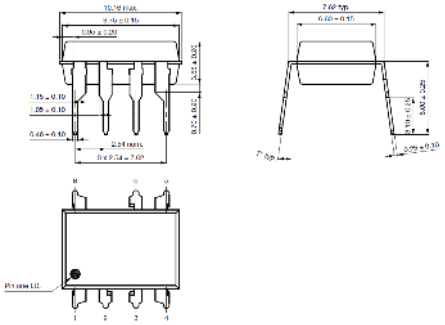

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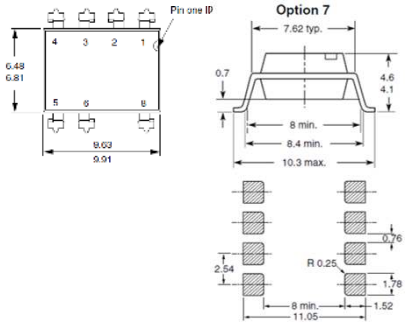
Current



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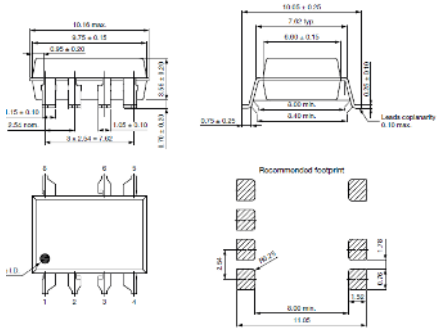

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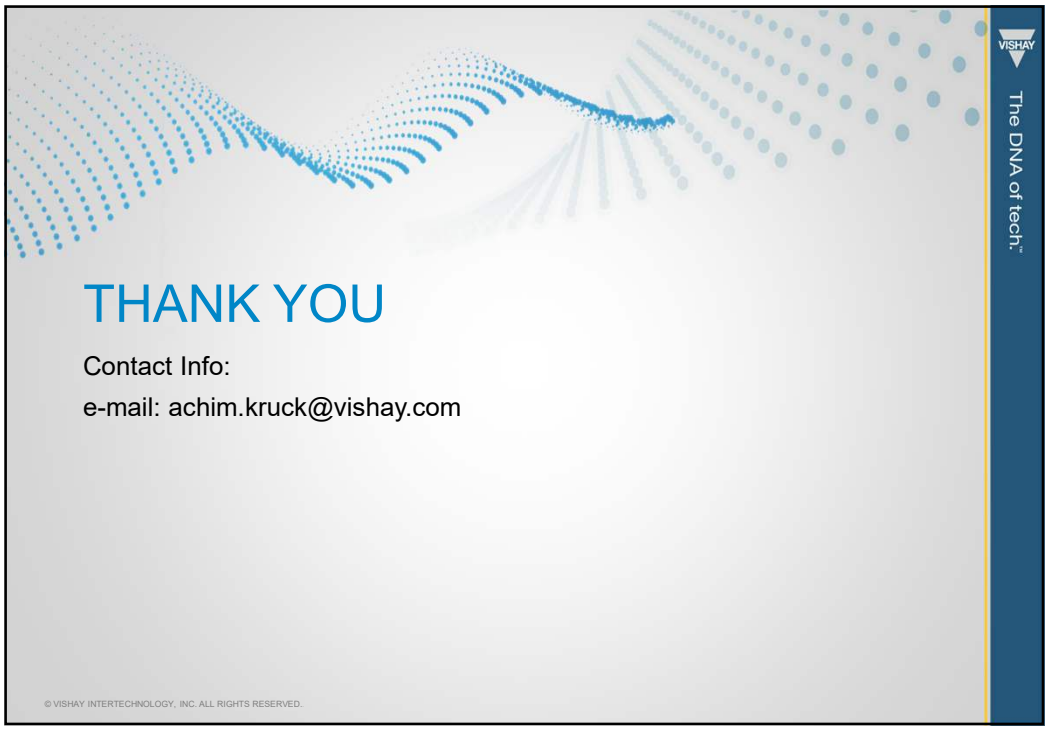
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THANK YOU
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