



The DNA of tech.™



Chip change for solid state relays and MOSFET driver

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.toad@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: To ensure trade compliance, Vishay will change the chipset of it's solid state relays and photovoltaic MOSFET driver on short notice. An alternative combination of infrared light emitting diode (IRLED) and photovoltaic generator (PVG) will be introduced immediately. The new combination was qualified and evaluated to sustain the part performance. MOSFETs of solid state relays remain unchanged.

Classification of Change: The U.S. Department of Treasury's Office of Foreign Assets Control recently added a Vishay supplier located in Russia to its "Specially Designated Nationals and Block Persons list" ("SDN List"). As a result of this designation, Vishay is unable to continue its normal business with this supplier.

A new in-house manufactured Infrared Emitter is introduced to sustain the device performance.

Expected Influence on Quality/Reliability/Performance: Devices reliability and performance remains unchanged. In case where the performance deviates, it is highlighted in the attached comparison sheet.

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

Vishay Brand(S): Vishay Semiconductors

Time Schedule:

Start Shipment Date: Mon Jul 24, 2023

Sample Availability: 07/24/2023

Product Identification: Lot Code

Qualification Data: available on request

This PCN is considered approved, without further notification, unless we receive specific customer concerns before Mon Jul 24, 2023 or as specified by contract.



Product Change Notification



Product Group: OPT/Wed Jun 7, 2023/PCN-OPT-1282-2023-REV-0

The DNA of tech.™

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



Product Change Notification



Product Group: OPT/Wed Jun 7, 2023/PCN-OPT-1282-2023-REV-0

The DNA of tech.™

"PCN OPT-1282-2023"	Part Number List	LH1500AAB	LH1500AABTR	LH1500AT
LH1505AAC	LH1505AACTR	LH1505AB	LH1510AAB	LH1510AABTR
LH1510AT	LH1518AAB	LH1518AABTR	LH1518AT	LH1520AAC
LH1520AACTR	LH1520AB	LH1522AAC	LH1522AACTR	LH1522AB
LH1525A-3020	LH1525A-3125	LH1525AAB	LH1525AABTR	LH1525AT
LH1526AAC	LH1526AACTR	LH1526AB	LH1532AACTR	LH1532AB
LH1540AAB	LH1540AABTR	LH1540AAB-X001	LH1540AT	LH1540AT-X001
LH1546AABTR	LH1546ADF	LH1546ADFTR	LH1546AEF	LH1546AEFTR
LH1546AT	LH1550AAB1	LH1550AAB1TR	LH1550AT1	VO1400AEFT1
VO1400AEFTR	VO14642AABTR	VO14642AT	VOM1271T	VOM1271T-3138
VOR1121A6	VOR1121B6	VOR1121B6T	VOR1142A6	VOR1142B4
VOR1142B4T	VOR1142B6	VOR1142B6T	VOR1142M4	VOR1142M4T
VOR2121A8	VOR2121B8	VOR2121B8T	VOR2142A8	VOR2142B8
VOR2142B8T				



Heilbronn, June 6, 2023

**Chip Change for Solid State Relays and MOSFET driver
PCN OPT-1282-2023**

Dear Valued Customer:

The U.S. Department of Treasury's Office of Foreign Assets Control recently added a Vishay supplier located in Russia to its "Specially Designated Nationals and Block Persons" list ("SDN List"). As a result of this designation, Vishay is unable to continue its normal business with this supplier. We expect to have a new supplier qualified as soon as possible.

In the meantime, because Vishay, as a publicly traded U.S. company, must remain in compliance with U.S. laws and regulations, including those establishing commercial prohibitions for entities on the SDN List, Vishay's product delivery timelines will be adversely impacted. Accordingly, Vishay considers any negative impacts on its ability to perform under any contract with you to be a force majeure event beyond Vishay's commercially reasonable control.

A product change notification ("PCN OPT-1282-2023") accompanies this notice with more information on the supplier change timeline.

Vishay's team will work with you directly to discuss your continuing needs and timelines. We are working diligently to mitigate any impact to you and your customers.

We appreciate our long-standing relationship and look forward to working with you during these challenging circumstances. A Vishay representative will be contacting you directly to discuss your specific situation.

Sincerely,

Puetz, Andreas
Jun 6 2023 6:40 PM

DocuSign

Dr. Andreas Puetz
Director Product Marketing Optocouplers
Phone: +49 7131-7498-610
E-Mail: andreas.puetz@vishay.com

Slide 1

VISHAY
The DNA of tech™

Chip change for solid state relays and MOSFET driver PCN OPT-1282-2023

Sourabh Kulkarni
Product Marketing Optocoupler
sourabh.kulkarni@vishay.com
06.06.2023, Heilbronn

© 2021 VISHAY INTERTECHNOLOGY, INC. ALL RIGHTS RESERVED.

Slide 2

Background

Description:
To ensure trade compliance, Vishay will change the chipset of its solid state relays and photovoltaic MOSFET driver on short notice. An alternative combination of infrared light emitting diode (IRLED) and photovoltaic generator (PVG) will be introduced immediately. The new combination was qualified and evaluated to sustain the part performance. MOSFETs of solid state relays remain unchanged.

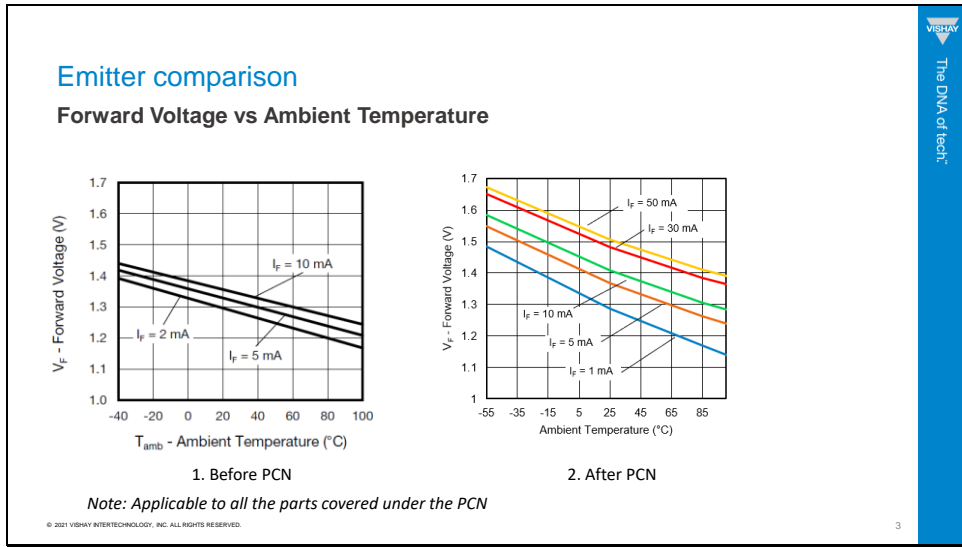
Reason for change:
The U.S. Department of Treasury's Office of Foreign Assets Control recently added a Vishay supplier located in Russia to its "Specially Designated Nationals and Block Persons list" ("SDN List"). As a result of this designation, Vishay is unable to continue its normal business with this supplier.
A new in-house manufactured Infrared Emitter is introduced to sustain the device performance.

© 2021 VISHAY INTERTECHNOLOGY, INC. ALL RIGHTS RESERVED.

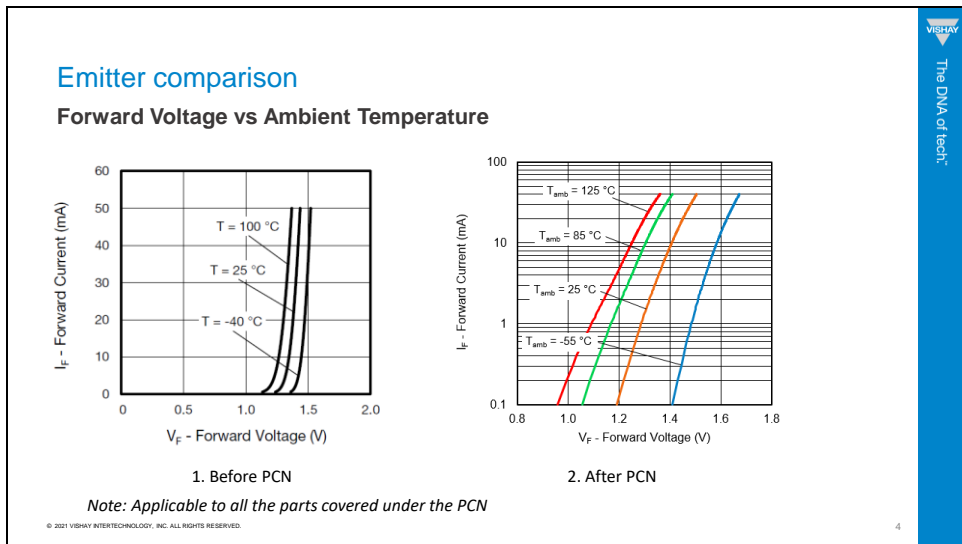
VISHAY
The DNA of tech™

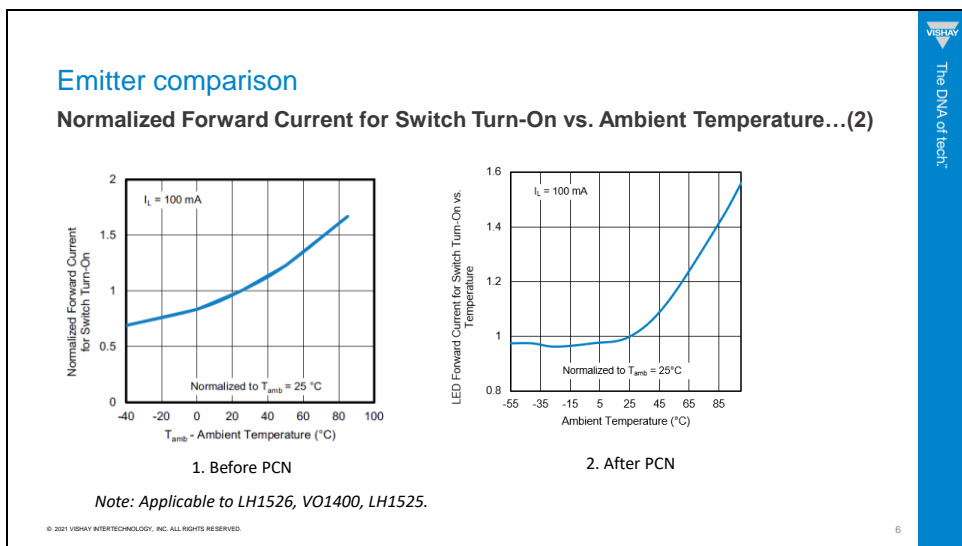
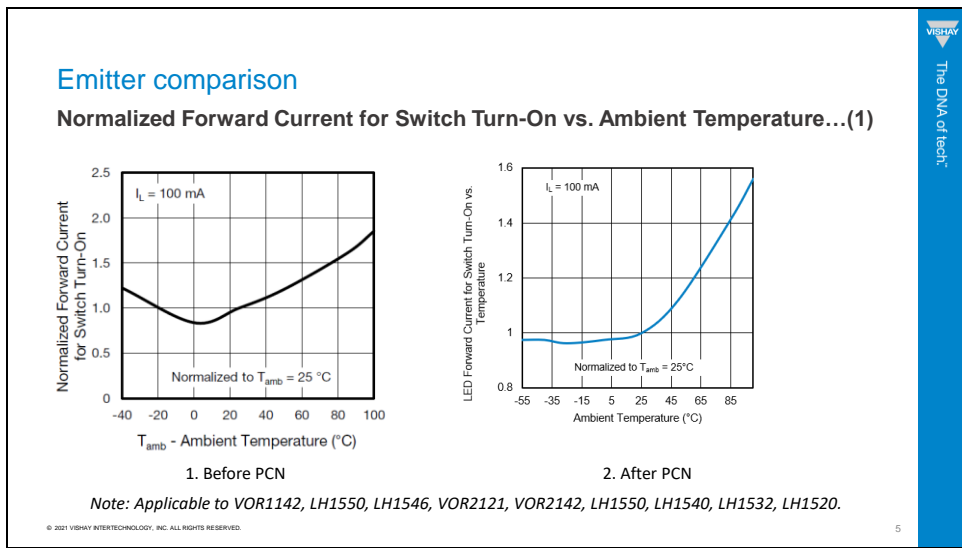
2

Slide 3

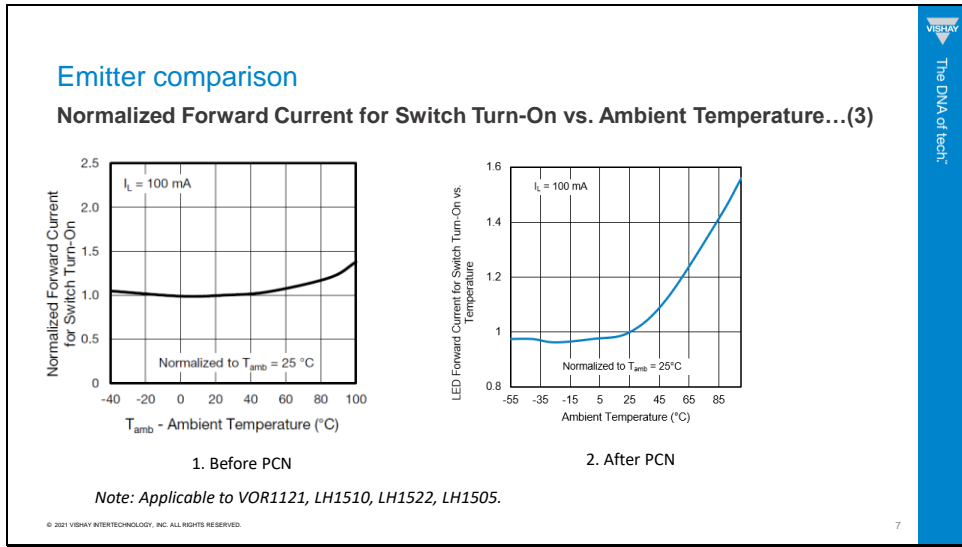


Slide 4

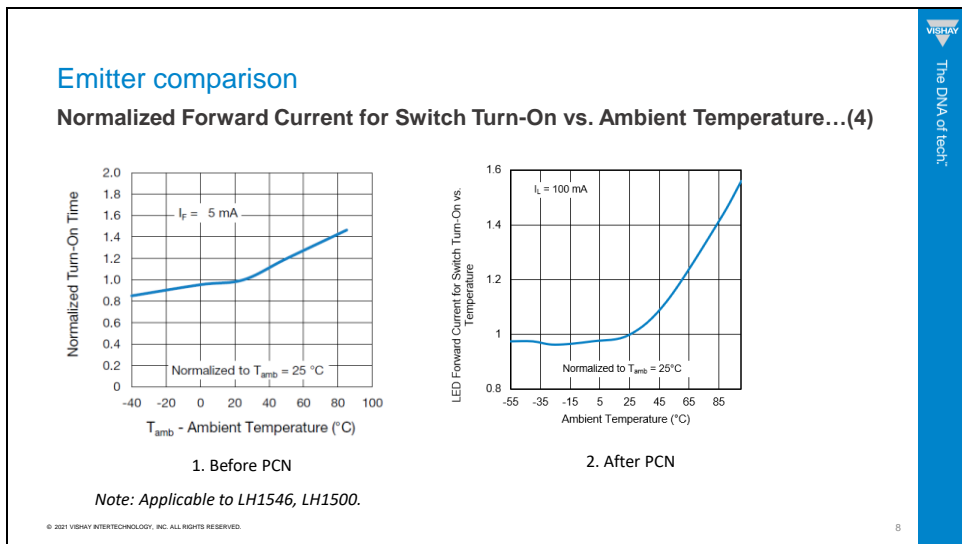




Slide 7



Slide 8



VOM1271

The DNA of Tech™

1. Before PCN

SWITCHING CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Turn-on time	CL = 200 pF, I _F = 20 mA,	t _{on}	-	53	-	μs
Turn-off time	P _W = 2 ms, duty cycle = 50 %	t _{off}	-	24	-	μs

2. After PCN

SWITCHING CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Turn-on time	CL = 200 pF, I _F = 20 mA,	t _{on}	-	53	-	μs
Turn-off time	P _W = 2 ms, duty cycle = 50 %	t _{off}	-	65	-	μs

© 2021 VISHAY INTERTECHNOLOGY, INC. ALL RIGHTS RESERVED.

9

VOM1271

The DNA of Tech™

1. Before PCN
LED forward Voltage Vs
forward Current

2. After PCN
LED forward current
forward Voltage

1. Before PCN
LED Reverse Current vs.
Reverse Voltage

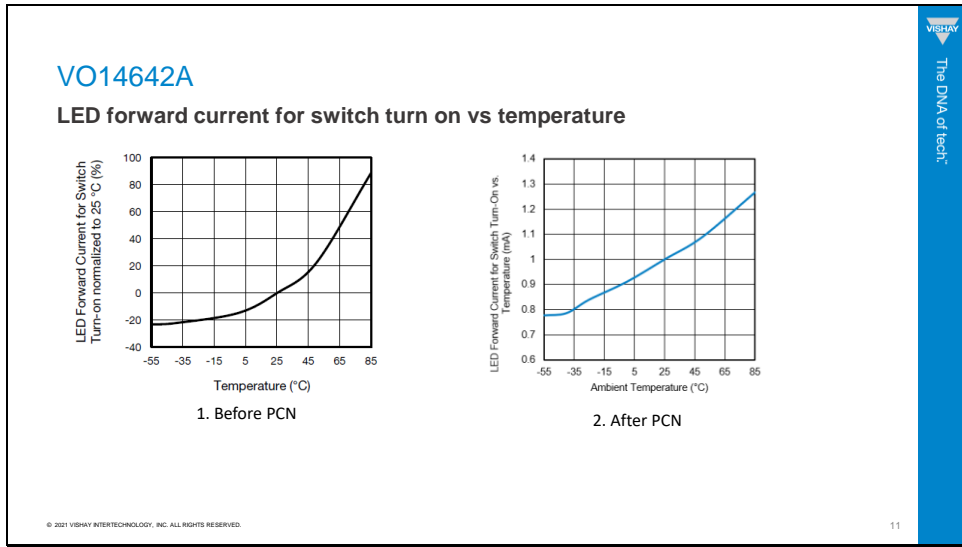
Fig. 6 - LED Reverse Current vs. Reverse Voltage

2. After PCN
LED Reverse Current vs.
Reverse Voltage

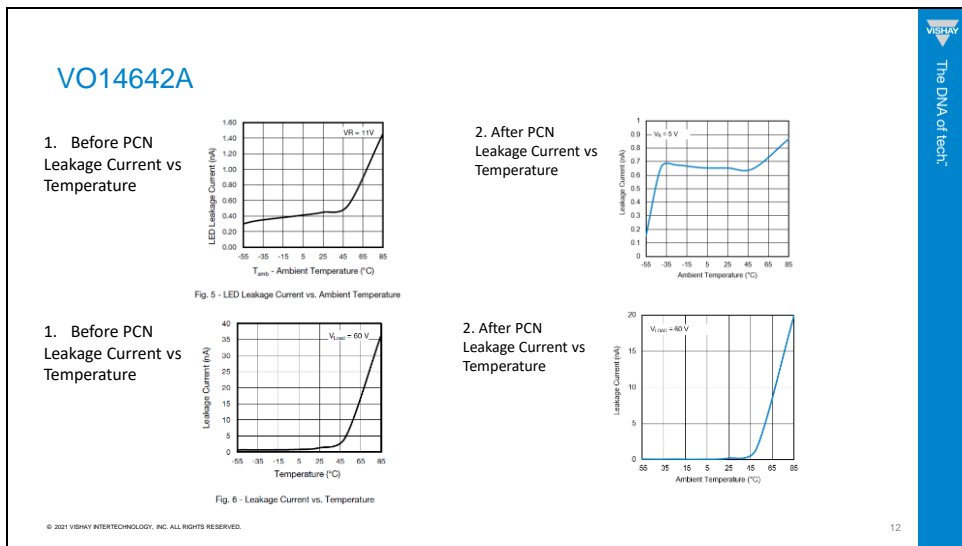
© 2021 VISHAY INTERTECHNOLOGY, INC. ALL RIGHTS RESERVED.

10

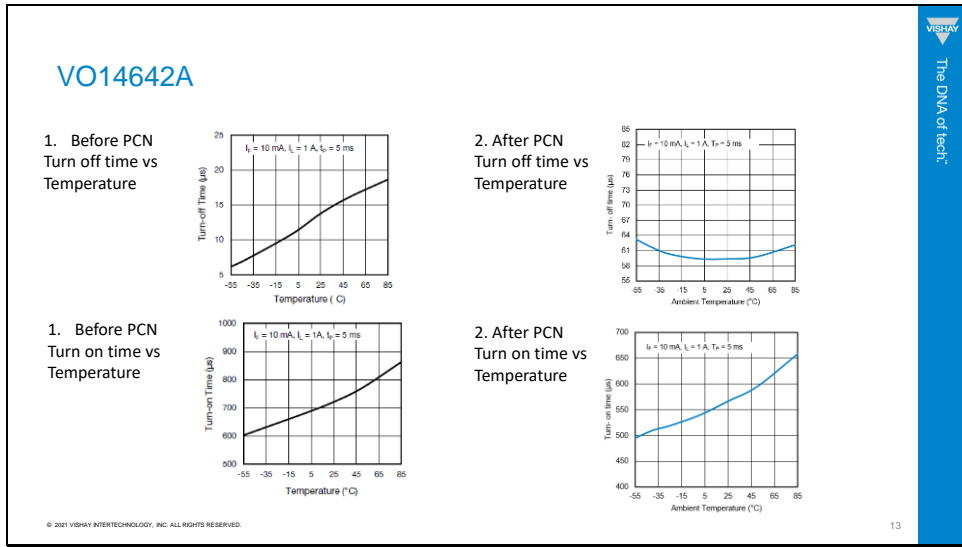
Slide 11



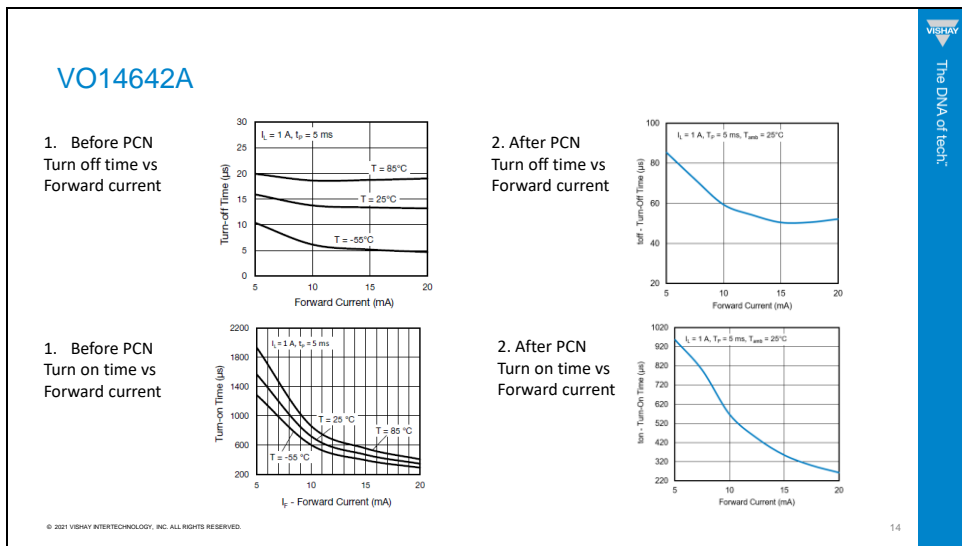
Slide 12



Slide 13



Slide 14



VO1400

Turn on and Turn off measurement

1. Before PCN

SWITCHING CHARACTERISTICS (Tamb = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Turn-on time	$I_f = 10 \text{ mA}, V_L = 20 \text{ V}, I_L = 100 \text{ mA}$	t_{on}	-	52	-	μs
Turn-off time	$I_f = 10 \text{ mA}, V_L = 20 \text{ V}, I_L = 100 \text{ mA}$	t_{off}	-	36	-	μs

2. After PCN

SWITCHING CHARACTERISTICS (Tamb = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Turn-on time	$I_f = 10 \text{ mA}, V_L = 20 \text{ V}, I_L = 100 \text{ mA}$	t_{on}	-	20	-	μs
Turn-off time	$I_f = 10 \text{ mA}, V_L = 20 \text{ V}, I_L = 100 \text{ mA}$	t_{off}	-	80	-	μs

The DNA of tech™

© 2021 VISHAY INSTRUMENT TECHNOLOGY, INC. ALL RIGHTS RESERVED.
15

VO1400

Turn on time vs forward current

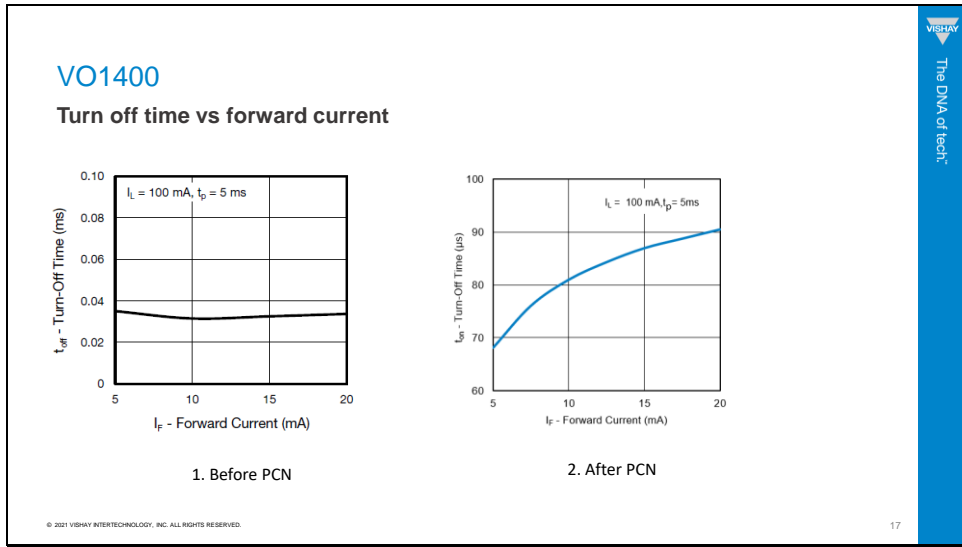
1. Before PCN

1. After PCN

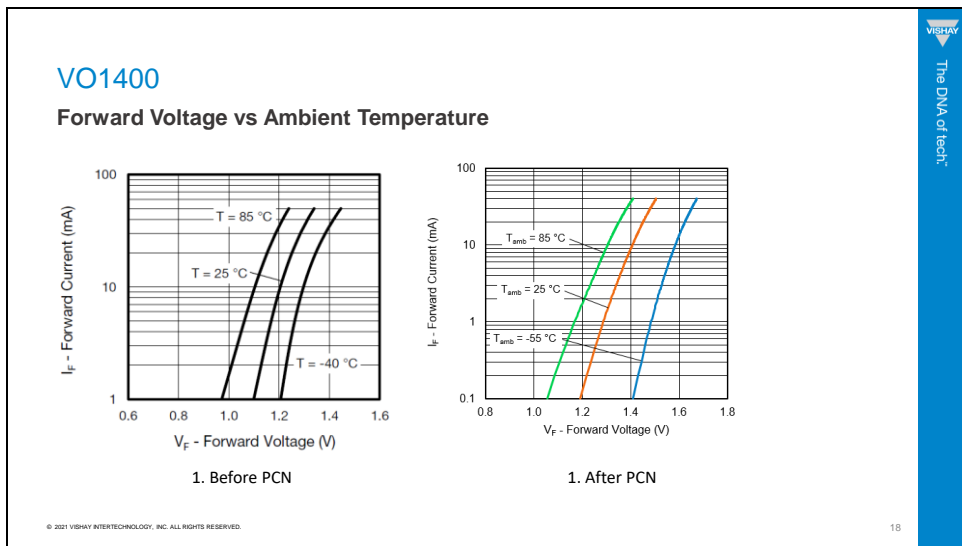
The DNA of tech™

© 2021 VISHAY INSTRUMENT TECHNOLOGY, INC. ALL RIGHTS RESERVED.
16

Slide 17



Slide 18




LH1526

1. Before PCN

SWITCHING CHARACTERISTICS (Tamb = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Turn-on time	$I_F = 1.5 \text{ mA}, I_L = 50 \text{ mA}, R_L = 1 \text{ k}\Omega$	t_{on}	-	0.6	-	ms
	$I_F = 5 \text{ mA}, I_L = 50 \text{ mA}, R_L = 1 \text{ k}\Omega$	t_{off}	-	0.15	1	ms
Turn-off time	$I_F = 1.5 \text{ mA}, I_L = 50 \text{ mA}, R_L = 1 \text{ k}\Omega$	t_{on}	-	0.04	-	ms
	$I_F = 5 \text{ mA}, I_L = 50 \text{ mA}, R_L = 1 \text{ k}\Omega$	t_{off}	-	0.05	1.5	ms

2. After PCN

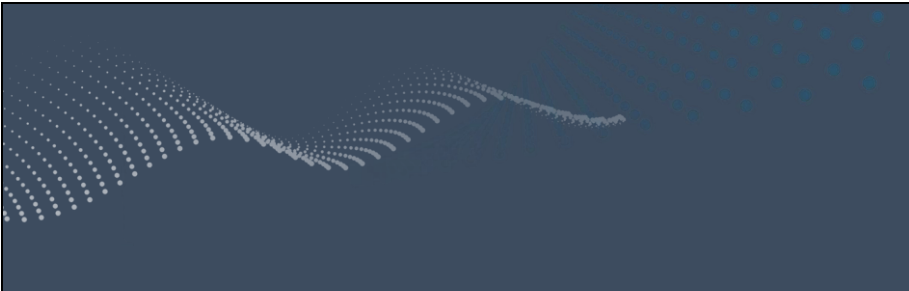
SWITCHING CHARACTERISTICS (Tamb = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Turn-on time	$I_F = 1.5 \text{ mA}, I_L = 50 \text{ mA}, R_L = 1 \text{ k}\Omega$	t_{on}	-	0.85	-	ms
	$I_F = 5 \text{ mA}, I_L = 50 \text{ mA}, R_L = 1 \text{ k}\Omega$	t_{off}	-	0.15	1	ms
Turn-off time	$I_F = 1.5 \text{ mA}, I_L = 50 \text{ mA}, R_L = 1 \text{ k}\Omega$	t_{on}	-	0.08	-	ms
	$I_F = 5 \text{ mA}, I_L = 50 \text{ mA}, R_L = 1 \text{ k}\Omega$	t_{off}	-	0.06	1.5	ms




The DNA of Tech™

© 2021 VISHAY INTERTECHNOLOGY, INC. ALL RIGHTS RESERVED.

19



THANK YOU!



The DNA of Tech™

© 2021 VISHAY INTERTECHNOLOGY, INC. ALL RIGHTS RESERVED.