



Product Change Notification



Product Group: OPT/Mon Sep 19, 2022/PCN-OPT-1225-2022-REV-0

Change of Minimold IR Receivers materials

DESCRIPTION OF CHANGE: -Changeover of the Au wire Diameter from 25um to 20um for all Minimold products.

-Introduction of a new in-house designed IR Receiver IC for "Mneme" and

"Methone" IC parts:

The new Cyllene 2 IC uses the latest Chip Technology of the worlds

leading IC Foundry. The Cyllene 2 will replace the "Mneme" and "Methone"

ICs in existing Product Series without a name change.

It will provide similar electrical and optical characteristics, at

nearly 50 percent less current consumption. Besides it provides the best

receiving range in bright ambient. The mechanical dimensions remain

unchanged.

We recommend to test the product in customers application.

REASON FOR CHANGE: -Au wire Diameter reduction:

In order to streamline the production and optimize the material supply chain, Vishay introduces a new Standardization of Au wire Diameter.

The material is qualified to high Standards.

-Introduction of new Cyllene 2 IC:

The existing external IC Supplier has announced to end production. To assure a long-term product availability of IR Receivers, Vishay

developed an inhouse IC in cooperation with the worlds leading Chip Foundry.

EXPECTED INFLUENCE ON QUALITY/RELIABILTY/PERFORMANCE: No change on Quality/Reliability. Similar electrical and optical characteristics.

PART NUMBERS/SERIES/FAMILIES AFFECTED: Please see materials list on the succeeding page.

VISHAY BRAND(s): Vishay Semiconductors

TIME SCHEDULE:

Start Shipment Date: Sun Jan 1, 2023

SAMPLE AVAILABILITY: 1st October 2022

PRODUCT IDENTIFICATION: via date code

QUALIFICATION DATA: Q-Report is available.

This PCN is considered approved, without further notification, unless we receive specific customer concerns before Sun Nov 13, 2022 or as specified by contract.

ISSUED BY: Rainer Hauschildt, rainer.hauschildt@vishay.com

For further information, please contact your regional Vishay office.

CONTACT INFORMATION:

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ONE OF THE WORLD'S LARGEST MANUFACTURERS OF DISCRETE SEMICONDUCTORS AND PASSIVE COMPONENT



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?HS0013438	HS0013438P16TR	HS0013638	HS0053438	HS0093638
TSOP13136	TSOP13138	TSOP13140	TSOP13156	TSOP13236
TSOP13238	TSOP13240	TSOP13256	TSOP13336	TSOP13336DS1F
TSOP13336P16FTR	TSOP13336SS1F	TSOP13338	TSOP13338DF1P	TSOP13338P16FTR
TSOP13340	TSOP13356	TSOP13436	TSOP13436P16FTR	TSOP13438
TSOP13440	TSOP13456	TSOP13536	TSOP13536DF1P	TSOP13538
TSOP13540	TSOP13556	TSOP13636	TSOP13638	TSOP13638CA1F
TSOP13640	TSOP13656	TSOP33136	TSOP33138	TSOP33140
TSOP33156	TSOP33230	TSOP33233	TSOP33236	TSOP33238
TSOP33240	TSOP33256	TSOP33330	TSOP33333	TSOP33336
TSOP33336P16FTR	TSOP33338	TSOP33338P16TR	TSOP33340	TSOP33356
TSOP33433	TSOP33436	TSOP33438	TSOP33440	TSOP33456
TSOP33536	TSOP33538	TSOP53130	TSOP53133	TSOP53136
TSOP53138	TSOP53140	TSOP53156	TSOP53230	TSOP53233
TSOP53236	TSOP53238	TSOP53238DF1P	TSOP53240	TSOP53256
TSOP53256DR1F	TSOP53330	TSOP53333	TSOP53336	TSOP53338
TSOP53338DP1F	TSOP53338DR1F	TSOP53338P16TR	TSOP53338SS1F	TSOP53338ST1F
TSOP53340	TSOP53356	TSOP53356P10TR	TSOP53433	TSOP53436
TSOP53436DF1P	TSOP53436SS1F	TSOP53438	TSOP53438DR1	TSOP53438P16FTR
TSOP53438ST1	TSOP53440	TSOP53456	TSOP53456DP1	TSOP53456SS1F
TSOP53530	TSOP53533	TSOP53536	TSOP53538	TSOP53540
TSOP53556	TSOP93236	TSOP93238	TSOP93240	TSOP93256
TSOP93336	TSOP93338	TSOP93340	TSOP93356	TSOP93436
TSOP93438	TSOP93438SS1F	TSOP93440	TSOP93456	TSOP93536
TSOP93538	TSOP93540	TSOP93556	TSOP93636	TSOP93638
TSOP93638CA1	TSOP93640	TSOP93656	TSSP53038	TSSP53056
TSSP93038	TSSP93038DF1PZA	TSSP93056	TSSP93056DF1P	TSOP13338DF1PF
TSOP13338DP1F	TSOP13338SS1F	TSOP13356P10TR	TSOP13438ST1F	TSOP13456ST1F
TSOP13336CA1F	TSOP13436DF1P	TSOP13436SS1F	TSOP13456SS1F	TSOP33336CA1F
TSOP33336SS1F	TSOP33338SS1F	TSOP33438SS1F	TSOP33438ST1F	TSOP33336P16PF
TSOP53256SS1F	TSOP53256ST1F	TSOP53338DF1PF	TSOP53356P10P	TSOP53436P16FTR
TSOP53438DF1PF	TSOP53438P16PF	TSOP53338CA1	TSOP53438DF1P	TSOP53456ST1F
TSSP13038	TSSP53038DF1P			

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Introduction of new CYLLENE 2 IC and thin Bond wires

Vishay Opto has published PCN-OPT-1225-2022, announcing the introduction of a new in-house designed IC for existing TSxP1xxx/HS001xxx and TSxP5xxx/HS005xxx product series only. This IC uses the latest chip technology of the worlds leading Chip Foundry and provides improved performance. The PCN also announces the changeover to thinner bond wires of all Minimold parts.

FAQ:

Q: Are there any technical differences (form/fit/function) expected?

A: Mechanically there are no changes.

The Cyllene 2 IC will provide similar electrical and optical characteristics, at nearly 50 percent less current consumption. Besides it provides the best receiving range in bright ambient (DC light). Please contact our application support in case you need further details or any design in support: IRR@Vishay.com .

Q: Will there be any change of the product name?

A: No.

The thin bond wires will be introduced to all Minimold parts without a name change. The new IC will be introduced only at existing TSxP1xxx/HS001xxx and TSxP5xxx/HS005xxx product series without a name change.

Q: When do we plan to implement these changes in production?

A: Please refer to the start shipment date mentioned in the PCN.

Q: Why has Vishay introduced these changes?

A:

-Bond wires: In order to streamline the production and optimize the material supply chain, Vishay introduces a new Standardization of Au wire Diameter.

-IC: The existing IC supplier has announced to end production. To assure a long-term product availability, Vishay has designed a new IC with similar electrical and optical characteristics, using the latest chip technology of the worlds leading Chip Foundry.

Q: Are datasheets available?

A: Yes. The updated datasheets are available on our website 26th September 2022.



Q: Which part numbers are concerned?

A: Overview of part numbers and change description:

Material	New IC	Thin Bond wires	Material	New IC	Thin Bond wires	Material	New IC	Thin Bond wires
HS0013438	x	x	TSOP33356		x	TSOP93240		x
HS0013438P16TR	x	x	TSOP33433		x	TSOP93256		x
HS0013638	x	x	TSOP33436		x	TSOP93336		x
HS0053438	x	x	TSOP33438		x	TSOP93338		x
HS0093638		x	TSOP33440		x	TSOP93340		x
TSOP13136	x	x	TSOP33456		x	TSOP93356		x
TSOP13138	x	x	TSOP33536		x	TSOP93436		x
TSOP13140	x	x	TSOP33538		x	TSOP93438		x
TSOP13156	x	x	TSOP53130	x	x	TSOP93438SS1F		x
TSOP13236	x	x	TSOP53133	x	x	TSOP93440		x
TSOP13238	x	x	TSOP53136	x	x	TSOP93456		x
TSOP13240	x	x	TSOP53138	x	x	TSOP93536		x
TSOP13256	x	x	TSOP53140	x	x	TSOP93538		x
TSOP13336	x	x	TSOP53156	x	x	TSOP93540		x
TSOP13336DS1F	x	x	TSOP53230	x	x	TSOP93556		x
TSOP13336P16FTR	x	x	TSOP53233	x	x	TSOP93636		x
TSOP13336SS1F	x	x	TSOP53236	x	x	TSOP93638		x
TSOP13338	x	x	TSOP53238	x	x	TSOP93638CA1		x
TSOP13338DF1P	x	x	TSOP53238DF1P	x	x	TSOP93640		x
TSOP13338P16FTR	x	x	TSOP53240	x	x	TSOP93656		x
TSOP13340	x	x	TSOP53256	x	x	TSSP53038	x	x
TSOP13356	x	x	TSOP53256DR1F	x	x	TSSP53056	x	x
TSOP13436	x	x	TSOP53330	x	x	TSSP93038		x
TSOP13436P16FTR	x	x	TSOP53333	x	x	TSSP93038DF1PZA		x
TSOP13438	x	x	TSOP53336	x	x	TSSP93056		x
TSOP13440	x	x	TSOP53338	x	x	TSSP93056DF1P		x
TSOP13456	x	x	TSOP53338DP1F	x	x	TSOP13338DF1PF	x	x
TSOP13536	x	x	TSOP53338DR1F	x	x	TSOP13338DP1F	x	x
TSOP13536DF1P	x	x	TSOP53338P16TR	x	x	TSOP13338SS1F	x	x
TSOP13538	x	x	TSOP53338SS1F	x	x	TSOP13356P10TR	x	x
TSOP13540	x	x	TSOP53338ST1F	x	x	TSOP13438ST1F	x	x
TSOP13556	x	x	TSOP53340	x	x	TSOP13456ST1F	x	x
TSOP13636	x	x	TSOP53356	x	x	TSOP13336CA1F	x	x
TSOP13638	x	x	TSOP53356P10TR	x	x	TSOP13436DF1P	x	x
TSOP13638CA1F	x	x	TSOP53433	x	x	TSOP13436SS1F	x	x
TSOP13640	x	x	TSOP53436	x	x	TSOP13456SS1F	x	x
TSOP13656	x	x	TSOP53436DF1P	x	x	TSOP33336CA1F		x
TSOP33136		x	TSOP53436SS1F	x	x	TSOP33336SS1F		x
TSOP33138		x	TSOP53438	x	x	TSOP33338SS1F		x
TSOP33140		x	TSOP53438DR1	x	x	TSOP33438SS1F		x
TSOP33156		x	TSOP53438P16FTR	x	x	TSOP33438ST1F		x
TSOP33230		x	TSOP53438ST1	x	x	TSOP33336P16PF		x
TSOP33233		x	TSOP53440	x	x	TSOP53256SS1F	x	x
TSOP33236		x	TSOP53456	x	x	TSOP53256ST1F	x	x
TSOP33238		x	TSOP53456DP1	x	x	TSOP53338DF1PF	x	x
TSOP33240		x	TSOP53456SS1F	x	x	TSOP53356P10P	x	x
TSOP33256		x	TSOP53530	x	x	TSOP53436P16FTR	x	x
TSOP33300		x	TSOP53533	x	x	TSOP53438DF1PF	x	x
TSOP33333		x	TSOP53536	x	x	TSOP53438P16PF	x	x
TSOP33336		x	TSOP53538	x	x	TSOP53338CA1	x	x
TSOP33336P16FTR		x	TSOP53540	x	x	TSOP53438DF1P	x	x
TSOP33338		x	TSOP53556	x	x	TSOP53456ST1F	x	x
TSOP33338P16TR		x	TSOP93236		x	TSSP13038	x	x
TSOP33340		x	TSOP93238		x	TSSP53038DF1P	x	x



Q: How can the customer distinguish products including these changes?

A: The PCN announces a changeover date (production work week). The standard bar code label contains the production week as shown below (Batch 202222PH19→ produced in ww22 2022). A green sticker will be added to the box label for shipments which include the changes:



Q: Do you recommend to test the product in customers application?

A: Yes. We recommend to order samples and test the product in customers application. Samples can be ordered by contacting me or our Business Marketing colleagues mentioned below.

THE AMERICAS

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Summary of PCN-OPT-1224-2022, -1225-2022

IR Receivers

The main components of an IR receiver are a photodiode and an IC which amplifies, filters, and demodulates the signal being received. One of our IC suppliers has chosen to exit the business. To ensure long-term supply, we have designed our own IC and a migration to this IC will take place starting in November; January for the MiniMold receivers.






The table below lists the receivers impacted by this change. In addition, all holder and lead bend versions of these parts will also change. See the PCN for details.

Form, fit and function of the receivers are unchanged.

- No change to the package
- No change to the part number; existing orders are valid
- Improved optical and electrical performance
 - Improved receiving range in bright ambient conditions
 - Pulse width accuracy improves to ± 4 cycles
 - ESD robustness improves to more than 12 kV HBM
 - Supply voltage range is wider, working down to 2.0 V
 - Supply current is 50% less
 - Sensitivity over temperature is more stable
- Datasheets are available on the website
- Samples are available

The IC's in these parts will change

xx = 30, 33, 36, 38, 40, or 56 kHz

Package	AGC 1 (6 cycles)	AGC 2 (10 cycles)	AGC3 (6 cycles)	AGC4 (10 cycles)	AGC5 (6 cycles)	AGC6 (10 cycles)	Presence Sensor
MiniMold 	TSOP131xx TSOP531xx	TSOP132xx TSOP532xx	TSOP133xx TSOP533xx	TSOP134xx TSOP534xx	TSOP135xx TSOP535xx	TSOP136xx	TSSP13038 or -56 TSSP53038 or -56
Mold 	TSOP141xx TSOP41xx	TSOP142xx TSOP48xx	TSOP143xx TSOP43xx	TSOP144xx TSOP44xx	TSOP145xx TSOP45xx	TSOP146xx	TSSP14038 TSSP4038 or -56
	TSOP121xx TSOP21xx	TSOP122xx TSOP22xx	TSOP123xx TSOP23xx	TSOP124xx TSOP24xx	TSOP125xx TSOP25xx	TSOP126xx	
Panhead 	TSOP61xx	TSOP62xx	TSOP63xx	TSOP64xx	TSOP65xx		TSSP16038 TSSP6038 or -56
Heimdall 		TSOP772xx	TSOP773xx	TSOP774xx	TSOP775xx		TSSP15038 TSSP77038
Belobog 		TSOP572xx	TSOP573xx	TSOP574xx	TSOP575xx		TSSP17038 TSSP57038 or -56

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