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# Product Change Notification



Product Group: DD/Wed Jan 18, 2023/PCN-DD-001-2023-REV-0

## Additional In-House Backend Assembly Site for Commercial Rectifiers and TVS in SMP Package

For further information, please contact your regional Vishay office.

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**Description of Change:** To support BCP (Business Continuity Program), Vishay Diodes Division is introducing an additional in-house back-end manufacturing site for Commercial Grade products in SMP package (Case Outline: DO-220AA).

This assembly site is located in Kaohsiung, Taiwan, and already has manufacturing experience in surface mount packaged products. Meanwhile, 200V FRED Pt rectifier products in SMP package will also follow the changes communicated in PCN-DD-036-2022. There is no other change in form, fit and function on all involved part numbers.

**Classification of Change:** Capacity expansion and Risk management for additional manufacturing site and consolidation for 200V FRED Pt rectifier

**Expected Influence on Quality/Reliability/Performance:** No change in quality and reliability performance

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

**Vishay Brand(S):** Vishay General Semiconductor

#### Time Schedule:

Start Shipment Date: Sat Apr 1, 2023

**Sample Availability:** Available upon request

**Product Identification:** The new manufacturing code "K" will be marked next to the date code of device marking for identification, for example, "M31K" (M – halogen-free compound, 3 - 2023, 1 – January, K – Kaohsiung, Taiwan)

**Qualification Data:** Available upon request

**This PCN is considered approved, without further notification, unless we receive specific customer concerns before Mon Mar 20, 2023 or as specified by contract.**

**Issued By:** Alessandro Bonaudo, Eddie Hwang, Ivan Chen, Jill Li



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AR1PD-M3/84A	AR1PD-M3/85A	AR1PG-M3/84A	AR1PG-M3/85A	AR1PJ-M3/84A
AR1PJ-M3/85A	AR1PK-M3/84A	AR1PK-M3/85A	AR1PM-M3/84A	AR1PM-M3/85A
AS1PD-M3/84A	AS1PD-M3/85A	AS1PG-M3/84A	AS1PG-M3/85A	AS1PJ-M3/84A
AS1PJ-M3/85A	AS1PK-M3/84A	AS1PK-M3/85A	AS1PM-M3/84A	AS1PM-M3/85A
AU1PD-M3/84A	AU1PD-M3/85A	AU1PG-M3/84A	AU1PG-M3/85A	AU1PJ-M3/84A
AU1PJ-M3/85A	AU1PK-M3/84A	AU1PK-M3/85A	AU1PM-M3/84A	AU1PM-M3/85A
ES1PB-M3/84A	ES1PB-M3/85A	ES1PC-M3/84A	ES1PC-M3/85A	ES1PD-M3/84A
ES1PD-M3/85A	ESH1PB-M3/84A	ESH1PB-M3/85A	ESH1PC-M3/84A	ESH1PC-M3/85A
ESH1PD-M3Z/H	ESH1PD-M3/84A	ESH1PD-M3/85A	ESH2PB-M3/84A	ESH2PB-M3/85A
ESH2PC-M3/84A	ESH2PC-M3/85A	ESH2PD-M3/84A	ESH2PD-M3/85A	PTV10B-M3/84A
PTV10B-M3/85A	PTV11B-M3/84A	PTV11B-M3/85A	PTV12B-M3/84A	PTV12B-M3/85A
PTV13B-M3/84A	PTV13B-M3/85A	PTV15B-M3/84A	PTV15B-M3/85A	PTV16B-M3/84A
PTV16B-M3/85A	PTV18B-M3/84A	PTV18B-M3/85A	PTV20B-M3/84A	PTV20B-M3/85A
PTV22B-M3/84A	PTV22B-M3/85A	PTV24B-M3/84A	PTV24B-M3/85A	PTV27B-M3/84A
PTV27B-M3/85A	PTV3.9B-M3/84A	PTV3.9B-M3/85A	PTV30B-M3/84A	PTV30B-M3/85A
PTV33B-M3/84A	PTV33B-M3/85A	PTV36B-M3/84A	PTV36B-M3/85A	PTV4.3B-M3/84A
PTV4.3B-M3/85A	PTV4.7B-M3/84A	PTV4.7B-M3/85A	PTV5.1B-M3/84A	PTV5.1B-M3/85A
PTV5.6B-M3/84A	PTV5.6B-M3/85A	PTV6.2B-M3/84A	PTV6.2B-M3/85A	PTV6.8B-M3/84A
PTV6.8B-M3/85A	PTV7.5B-M3/84A	PTV7.5B-M3/85A	PTV8.2B-M3/84A	PTV8.2B-M3/85A
PTV9.1B-M3/84A	PTV9.1B-M3/85A	RS1PB-M3/84A	RS1PB-M3/85A	RS1PD-M3/84A
RS1PD-M3/85A	RS1PG-M3/84A	RS1PG-M3/85A	RS1PJ-M3/84A	RS1PJ-M3/85A
S1PB-M3/84A	S1PB-M3/85A	S1PD-M3/84A	S1PD-M3/85A	S1PG-M3/84A
S1PG-M3/85A	S1PJ-M3/84A	S1PJ-M3/85A	S1PK-M3/84A	S1PK-M3/85A
S1PM-M3/84A	S1PM-M3/85A	SE07PB-M3/84A	SE07PB-M3/85A	SE07PD-M3/84A
SE07PD-M3/85A	SE07PG-M3/84A	SE07PG-M3/85A	SE07PJ-M3/84A	SE07PJ-M3/85A
SE10PB-M3/84A	SE10PB-M3/85A	SE10PD-M3/84A	SE10PD-M3/85A	SE10PG-M3/84A
SE10PG-M3/85A	SE10PJ-M3/84A	SE10PJ-M3/85A	SE15PB-M3/84A	SE15PB-M3/85A
SE15PD-M3/84A	SE15PD-M3/85A	SE15PG-M3/84A	SE15PG-M3/85A	SE15PJ-M3/84A
SE15PJ-M3/85A	SE20PB-M3/84A	SE20PB-M3/85A	SE20PD-M3/84A	SE20PD-M3/85A
SE20PG-M3/84A	SE20PG-M3/85A	SE20PJ-M3/84A	SE20PJ-M3/85A	SMP11A-M3/84A
SMP11A-M3/85A	SMP12A-M3/84A	SMP12A-M3/85A	SMP13A-M3/84A	SMP13A-M3/85A
SMP14A-M3/84A	SMP14A-M3/85A	SMP15A-M3/84A	SMP15A-M3/85A	SMP16A-M3/84A
SMP16A-M3/85A	SMP17A-M3/84A	SMP17A-M3/85A	SMP18A-M3/84A	SMP18A-M3/85A
SMP20A-M3/84A	SMP20A-M3/85A	SMP22A-M3/84A	SMP22A-M3/85A	SMP24A-M3/84A
SMP24A-M3/85A	SMP26A-M3/84A	SMP26A-M3/85A	SMP28A-M3/84A	SMP28A-M3/85A
SMP30A-M3/84A	SMP30A-M3/85A	SMP33A-M3/84A	SMP33A-M3/85A	SMP36A-M3/84A
SMP36A-M3/85A	SMP3V3-M3/84A	SMP3V3-M3/85A	SMP5.0A-M3/84A	SMP5.0A-M3/85A
SMP6.0A-M3/84A	SMP6.0A-M3/85A	SMP6.5A-M3/84A	SMP6.5A-M3/85A	SMP7.0A-M3/84A
SMP7.0A-M3/85A	SMP7.5A-M3/84A	SMP7.5A-M3/85A	SMP8.0A-M3/84A	SMP8.0A-M3/85A
SMPZ3919B-M3/84A	SMPZ3919B-M3/85A	SMPZ3920B-M3/84A	SMPZ3920B-M3/85A	SMPZ3921B-M3/84A
SMPZ3921B-M3/85A	SMPZ3922B-M3/84A	SMPZ3922B-M3/85A	SMPZ3923B-M3/84A	SMPZ3923B-M3/85A
SMPZ3924B-M3/84A	SMPZ3924B-M3/85A	SMPZ3925B-M3/84A	SMPZ3925B-M3/85A	SMPZ3926B-M3/84A
SMPZ3926B-M3/85A	SMPZ3927B-M3/84A	SMPZ3927B-M3/85A	SMPZ3928B-M3/84A	SMPZ3928B-M3/85A
SMPZ3929B-M3/84A	SMPZ3929B-M3/85A	SMPZ3930B-M3/84A	SMPZ3930B-M3/85A	SMPZ3931B-M3/84A
SMPZ3931B-M3/85A	SMPZ3932B-M3/84A	SMPZ3932B-M3/85A	SMPZ3933B-M3/84A	SMPZ3933B-M3/85A
SMPZ3934B-M3/84A	SMPZ3934B-M3/85A	SMPZ3935B-M3/84A	SMPZ3935B-M3/85A	SMPZ3936B-M3/84A
SMPZ3936B-M3/85A	SMPZ3937B-M3/84A	SMPZ3937B-M3/85A	SMPZ3938B-M3/84A	SMPZ3938B-M3/85A
SMPZ3939B-M3/84A	SMPZ3939B-M3/85A	SMPZ3940B-M3/84A	SMPZ3940B-M3/85A	SS1P3-M3/84A
SS1P3-M3/85A	SS1P3L-M3/84A	SS1P3L-M3/85A	SS1P4-M3D/H	SS1P4-M3/84A
SS1P4-M3/85A	SS1P4L-M3D/H	SS1P4L-M3/84A	SS1P4L-M3/85A	SS1P5L-M3/84A
SS1P5L-M3/85A	SS1P6L-M3/84A	SS1P6L-M3/85A	SS2P2-M3/84A	SS2P2-M3/85A
SS2P2L-M3/84A	SS2P2L-M3/85A	SS2P3-M3/84A	SS2P3-M3/85A	SS2P3L-M3C/H
SS2P3L-M3/84A	SS2P3L-M3/85A	SS2P4-M3D/H	SS2P4-M3/84A	SS2P4-M3/85A
SS2P5-M3/84A	SS2P5-M3/85A	SS2P6-M3/84A	SS2P6-M3/85A	SS2PH10-M3P/H
SS2PH10-M3P/I	SS2PH10-M3/84A	SS2PH10-M3/85A	SS2PH5-M3/84A	SS2PH5-M3/85A
SS2PH6-M3/84A	SS2PH6-M3/85A	SS2PH9-M3/84A	SS2PH9-M3/85A	SS3P3-M3S/84A



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SS3P3-M3/84A	SS3P3-M3/85A	SS3P4-M3D/H	SS3P4-M3/84A	SS3P4-M3/85A
SS3P5-M3/84A	SS3P5-M3/85A	SS3P6-M3/84A	SS3P6-M3/85A	UH1PB-M3/84A
UH1PB-M3/85A	UH1PC-M3/84A	UH1PC-M3/85A	UH1PD-M3/84A	UH1PD-M3/85A
V2P22L-M3/H	V2P22L-M3/I	V2P6L-M3/H	V2P6L-M3/I	V2P6X-M3/H
V2P6X-M3/I	V2PL45L-M3/H	V2PL45L-M3/I	V2PL63L-M3/H	V2PL63L-M3/I
V2PM10L-M3/H	V2PM10L-M3/I	V2PM12L-M3/H	V2PM12L-M3/I	V2PM15L-M3/H
V2PM15L-M3/I	V2PM63L-M3/H	V2PM63L-M3/I	V2PM6L-M3/H	V2PM6L-M3/I
V3P22-M3/H	V3P22-M3/I	V3P6-M3/84A	V3P6-M3/85A	V3P6L-M3/H
V3P6L-M3/I	V3PL45-M3/H	V3PL45-M3/I	V3PL63-M3/H	V3PL63-M3/I
V3PM10-M3/H	V3PM10-M3/I	V3PM12-M3/H	V3PM12-M3/I	V3PM15-M3/H
V3PM15-M3/I	V3PM6-M3/H	V3PM6-M3/I	V3PM63-M3/H	V3PM63-M3/I
VS-1ENH01-M3/84A	VS-1ENH01-M3/85A	VS-1ENH02-M3/84A	VS-1ENH02-M3/85A	VS-2ENH01-M3/84A
VS-2ENH01-M3/85A	VS-2ENH02-M3/84A	VS-2ENH02-M3/85A		



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## Annex 1

200V FRED Pt rectifier products will be implemented changes in the photo-masking and metal deposition process steps, in order to consolidate and harmonize the manufacturing flows in the wafer fab. As a result, the most relevant change is the reduction of the Al layer thickness (from 3um to 0.3um) while keeping thickness of the die-to-clip layer metal interfaces (Ag-Ni-Ti) unchanged. Die sizes and active areas will not change and the affected products will remain fully compliant to the existing datasheets.

	Current	Changed
Schematic of top side metallization layer		
	Ag Contact layer to bond clip (no change)	Ag Contact layer to bond clip (no change)
	Ni Intermediate layer (no change)	Ni Intermediate layer (no change)
	Ti Intermediate layer (no change)	Ti Intermediate layer (no change)
	Al Contact layer to Si (3 μm)	Al Contact layer to Si (0.3 μm)

Part Numbers affected listed below

VS-1ENH01-M3/84A	VS-1ENH02-M3/84A	VS-2ENH01-M3/84A	VS-2ENH02-M3/84A
VS-1ENH01-M3/85A	VS-1ENH02-M3/85A	VS-2ENH01-M3/85A	VS-2ENH02-M3/85A

\* Upon the approval of this PCN, all future and customized part number for related product in the same package will adopt the same change.