



# Product Change Notification



Product Group: SIL/Mon Sep 28, 2020/PCN-SIL-0362020-2020-REV-0

## Commercial Power MOSFET Manufacturing Capacity Expansion

**DESCRIPTION OF CHANGE:** To meet increasing demand for Power MOSFET products, Vishay Siliconix has expanded assembly and test capacity on commercial High Voltage Power MOSFETs in Vishay's TO247AC package.

ASE has been a leading backend manufacturing company since 2003; The Weihai facility has provided world-class total manufacturing services for discrete MOSFETs since 2008. Vishay Siliconix has been a partner with the ASE Weihai facility since 2013. This qualification now adds TO-247AC to other Vishay Siliconix commercial Power MOSFET packages supplied by ASE. The manufacturing process to be used in ASE is similar to that used in the Vishay Xi'an and GEM Hefei facilities from which this package is currently manufactured.

ASE has received international quality systems and environmental compliance certifications including TS16949, ISO9001, ISO14001 and OSHAS 18001.

**REASON FOR CHANGE:** Manufacturing capacity expansion

**EXPECTED INFLUENCE ON QUALITY/RELIABILITY/PERFORMANCE:** There will be no affect on the quality, reliability, or performance. There will be no changes in minimum and maximum values on the data sheets. The finished good appearance and outline dimension variance are shown in annex.

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

**VISHAY BRAND(s):** Vishay Siliconix

**TIME SCHEDULE:**

Start Shipment Date: Fri Jan 1, 2021

**SAMPLE AVAILABILITY:** Oct. 15, 2020

**PRODUCT IDENTIFICATION:** Products manufactured at ASE will be identified by a "N" in the first position of the date code marked on the 2nd line of the part

**QUALIFICATION DATA:** Qualification results are available upon request

**This PCN is considered approved, without further notification, unless we receive specific customer concerns before Mon Dec 28, 2020 or as specified by contract.**

**ISSUED BY:** Michael Hsieh, Michael.Hsieh@vishay.com

**For further information, please contact your regional Vishay office.**

**CONTACT INFORMATION:**

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94-2574PBF	IRFP048PBF	IRFP048RPBF	IRFP054PBF	IRFP064PBF
IRFP140PBF	IRFP150PBF	IRFP17N50LPBF	IRFP21N60LPBF	IRFP22N50APBF
IRFP22N60KPBF	IRFP23N50LPBF	IRFP240PBF	IRFP244PBF	IRFP250PBF
IRFP254PBF	IRFP260PBF	IRFP264PBF	IRFP26N60LPBF	IRFP27N60KPBF
IRFP31N50LPBF	IRFP32N50KPBF	IRFP340PBF	IRFP350LCPBF	IRFP350PBF
IRFP360LCPBF	IRFP360PBF	IRFP440PBF	IRFP448PBF	IRFP450APBF
IRFP450LCPBF	IRFP450PBF	IRFP460APBF	IRFP460BPBF	IRFP460LCPBF
IRFP460PBF	IRFP9140PBF	IRFP9240PBF	IRFPC40PBF	IRFPC50APBF
IRFPC50LCPBF	IRFPC50PBF	IRFPC60LCPBF	IRFPC60PBF	IRFPE30PBF
IRFPE40PBF	IRFPE50PBF	IRFPF30PBF	IRFPF40PBF	IRFPF50PBF
IRFPG30PBF	IRFPG40PBF	IRFPG50PBF	SIHFP21N60L-E3	SIHFP27N60K-E3
SIHFP450-E3	SIHFP450LC-E3	SIHG018N60E-GE3	SIHG039N60E-GE3	SIHG039N60EF-GE3
SIHG039N60EF-GE3-H	SIHG050N60E-GE3	SIHG052N60EF-GE3	SIHG065N60E-GE3	SIHG068N60EF-GE3
SIHG100N60E-GE3	SIHG105N60EF-GE3	SIHG11N80AE-GE3	SIHG11N80E-GE3	SIHG120N60E-GE3
SIHG125N60EF-GE3	SIHG14N50D-E3	SIHG14N50D-GE3	SIHG15N60E-GE3	SIHG15N80AE-GE3
SIHG16N50C-E3	SIHG17N60D-E3	SIHG17N60D-GE3	SIHG17N80AE-GE3	SIHG17N80E-GE3
SIHG180N60E-GE3	SIHG186N60EF-GE3	SIHG20N50C-E3	SIHG20N50E-GE3	SIHG21N60EF-GE3
SIHG21N65EF-GE3	SIHG21N80AE-GE3	SIHG22N50D-E3	SIHG22N50D-GE3	SIHG22N60AE-GE3
SIHG22N60E-E3	SIHG22N60E-GE3	SIHG22N60EF-GE3	SIHG22N60EL-GE3	SIHG22N65E-GE3
SIHG23N60E-GE3	SIHG24N65E-E3	SIHG24N65E-GE3	SIHG24N65EF-GE3	SIHG25N40D-E3
SIHG25N40D-GE3	SIHG25N50E-GE3	SIHG25N60EFL-GE3	SIHG28N60EF-GE3	SIHG28N65E-GE3
SIHG28N65EF-GE3	SIHG30N60E-E3	SIHG30N60E-GE3	SIHG32N50D-E3	SIHG32N50D-GE3
SIHG33N60E-E3	SIHG33N60E-GE3	SIHG33N60EF-GE3	SIHG33N65E-GE3	SIHG33N65EF-GE3
SIHG35N60E-GE3	SIHG35N60EF-GE3	SIHG40N60E-GE3	SIHG44N65EF-GE3	SIHG460B-GE3
SIHG47N60AE-GE3	SIHG47N60AEF-GE3	SIHG47N60E-E3	SIHG47N60E-GE3	SIHG47N60EF-GE3
SIHG47N65E-GE3	SIHG61N65EF-GE3	SIHG64N65E-GE3	SIHG70N60AEF-GE3	SIHG70N60EF-GE3
SIHG73N60AE-GE3	SIHG73N60E-E3	SIHG73N60E-GE3	SIHG73N60E-GE3-H	SIHG80N60E-GE3
SIHG80N60EF-GE3	V961-0013-GE3	V961-0016-GE3		

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Product Group: Vishay Siliconix/September 24, 2020/PCN-SIL-0362020 Rev0

## PCN-SIL-0362020 Affected Parts List

94-2574PBF	IRFP448PBF	SIHFP450LC-E3	SIHG21N60EF-GE3	SIHG33N60EF-GE3
IRFP048PBF	IRFP450APBF	SIHG018N60E-GE3	SIHG21N65EF-GE3	SIHG33N65E-GE3
IRFP048RPBF	IRFP450LCPBF	SIHG039N60E-GE3	SIHG21N80AE-GE3	SIHG33N65EF-GE3
IRFP054PBF	IRFP450PBF	SIHG039N60EF-GE3	SIHG22N50D-E3	SIHG35N60E-GE3
IRFP064PBF	IRFP460APBF	SIHG039N60EF-GE3-H	SIHG22N50D-GE3	SIHG35N60EF-GE3
IRFP140PBF	IRFP460BPBF	SIHG050N60E-GE3	SIHG22N60AE-GE3	SIHG40N60E-GE3
IRFP150PBF	IRFP460LCPBF	SIHG052N60EF-GE3	SIHG22N60E-E3	SIHG44N65EF-GE3
IRFP17N50LPBF	IRFP460PBF	SIHG065N60E-GE3	SIHG22N60E-GE3	SIHG460B-GE3
IRFP21N60LPBF	IRFP9140PBF	SIHG068N60EF-GE3	SIHG22N60EF-GE3	SIHG47N60AE-GE3
IRFP22N50APBF	IRFP9240PBF	SIHG100N60E-GE3	SIHG22N60EL-GE3	SIHG47N60AEF-GE3
IRFP22N60KPBF	IRFPC40PBF	SIHG105N60EF-GE3	SIHG22N65E-GE3	SIHG47N60E-E3
IRFP23N50LPBF	IRFPC50APBF	SIHG11N80AE-GE3	SIHG23N60E-GE3	SIHG47N60E-GE3
IRFP240PBF	IRFPC50LCPBF	SIHG11N80E-GE3	SIHG24N65E-E3	SIHG47N60EF-GE3
IRFP244PBF	IRFPC50PBF	SIHG120N60E-GE3	SIHG24N65E-GE3	SIHG47N65E-GE3
IRFP250PBF	IRFPC60LCPBF	SIHG125N60EF-GE3	SIHG24N65EF-GE3	SIHG61N65EF-GE3
IRFP254PBF	IRFPC60PBF	SIHG14N50D-E3	SIHG25N40D-E3	SIHG64N65E-GE3
IRFP260PBF	IRFPE30PBF	SIHG14N50D-GE3	SIHG25N40D-GE3	SIHG70N60AEF-GE3
IRFP264PBF	IRFPE40PBF	SIHG15N60E-GE3	SIHG25N50E-GE3	SIHG70N60EF-GE3
IRFP26N60LPBF	IRFPE50PBF	SIHG15N80AE-GE3	SIHG25N60EFL-GE3	SIHG73N60AE-GE3
IRFP27N60KPBF	IRFPF30PBF	SIHG16N50C-E3	SIHG28N60EF-GE3	SIHG73N60E-E3
IRFP31N50LPBF	IRFPF40PBF	SIHG17N60D-E3	SIHG28N65E-GE3	SIHG73N60E-GE3
IRFP32N50KPBF	IRFPF50PBF	SIHG17N60D-GE3	SIHG28N65EF-GE3	SIHG73N60E-GE3-H
IRFP340PBF	IRFPG30PBF	SIHG17N80AE-GE3	SIHG30N60E-E3	SIHG80N60E-GE3
IRFP350LCPBF	IRFPG40PBF	SIHG17N80E-GE3	SIHG30N60E-GE3	SIHG80N60EF-GE3
IRFP350PBF	IRFPG50PBF	SIHG180N60E-GE3	SIHG32N50D-E3	V961-0013-GE3
IRFP360LCPBF	SIHFP21N60L-E3	SIHG186N60EF-GE3	SIHG32N50D-GE3	V961-0016-GE3
IRFP360PBF	SIHFP27N60K-E3	SIHG20N50C-E3	SIHG33N60E-E3	
IRFP440PBF	SIHFP450-E3	SIHG20N50E-GE3	SIHG33N60E-GE3	

## Samples

The following parts are planned to be built for sampling:

IRFP054PBF	IRFP31N50LPBF	IRFP9140PBF	SIHG039N60EF-GE3	SIHG30N60E-GE3
IRFP064PBF	IRFP32N50KPBF	IRFP9240PBF	SIHG039N60E-GE3	SIHG33N60EF-GE3
IRFP150PBF	IRFP350PBF	IRFPC60LCPBF	SIHG065N60E-GE3	SIHG33N60E-GE3
IRFP22N50APBF	IRFP360PBF	IRFPC60PBF	SIHG100N60E-GE3	SIHG47N60AE-GE3
IRFP240PBF	IRFP450APBF	IRFPE40PBF	SIHG180N60E-GE3	SIHG47N60EF-GE3
IRFP250PBF	IRFP450PBF	IRFPE50PBF	SIHG20N50C-E3	SIHG47N60E-GE3
IRFP264PBF	IRFP460APBF	IRFPG30PBF	SIHG22N60E-GE3	SIHG70N60EF-GE3
IRFP26N60LPBF	IRFP460LCPBF	IRFPG50PBF	SIHG22N60S-E3	SIHG73N60E-GE3
IRFP27N60KPBF	IRFP460PBF	SIHG018N60E-GE3	SIHG23N60E-GE3	SIHG80N60E-GE3

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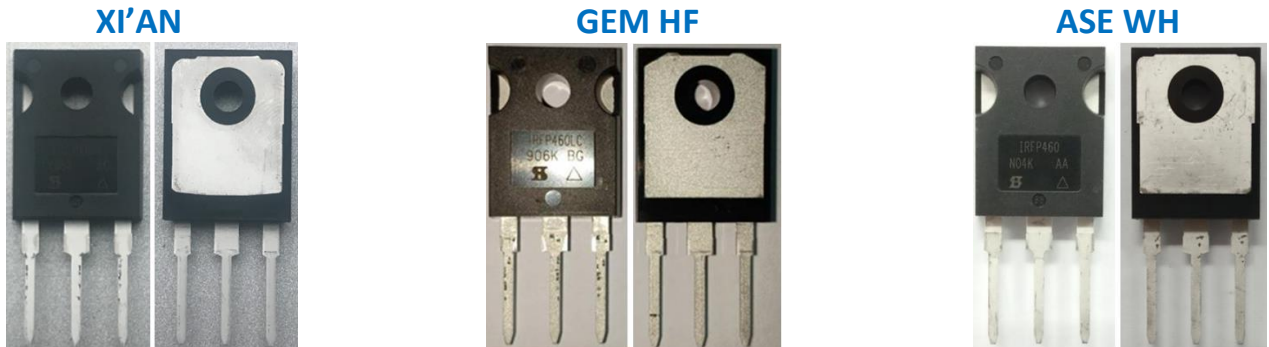
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## ANNEX

### TO-247AC Outline



### Outline Drawing Comparison

TO247AC Symbol	JEDEC		XI'AN		GEM HF		ASE WH		Change (GEM vs. ASE)
	Min	Max	Min	Max	Min	Max	Min	Max	
A	4.65	5.31	4.65	5.31	4.83	5.21	4.65	5.31	-0.18 / +0.10
A1	2.21	2.59	2.21	2.59	2.29	2.55	2.21	2.59	-0.08 / +0.04
A2	1.50	2.49	1.17	1.37	1.50	2.49	1.17	1.37	-0.33 / -1.12
b	0.99	1.40	0.99	1.40	1.12	1.33	0.99	1.40	-0.13 / +0.07
b1	0.99	1.35	0.99	1.35	1.12	1.28	0.99	1.35	-0.13 / +0.07
b2	1.65	2.39	1.65	2.39	1.91	2.39	1.65	2.39	-0.26 / +0.00
b3	1.65	2.34	1.65	2.34	1.91	2.34	1.65	2.34	-0.26 / +0.00
b4	2.59	3.43	2.59	3.43	2.87	3.22	2.59	3.43	-0.28 / +0.21
b5	2.59	3.38	2.59	3.38	2.87	3.18	2.59	3.38	-0.28 / +0.20
c	0.38	0.89	0.38	0.89	0.55	0.69	0.38	0.89	-0.17 / +0.20
c1	0.38	0.84	0.38	0.84	0.55	0.65	0.38	0.84	-0.17 / +0.19
D	19.71	20.70	19.71	20.70	20.40	20.70	19.71	20.70	-0.69 / +0.00
D1	13.08	–	13.08	–	16.25	16.85	13.08	–	-3.17 / none
D2	0.51	1.35	0.51	1.35	0.56	0.76	0.51	1.35	-0.05 / +0.59
E	15.29	15.88	15.29	15.87	15.50	15.87	15.29	15.87	-0.21 / +0.00
E1	13.46	–	13.46	–	13.46	14.16	13.46	–	+0.00 / none
e	5.46		5.46 BSC		5.46 BSC		5.46 BSC		None
Ø K	0.25		0.254		–		0.254		None
L	14.20	16.10	14.20	16.10	14.90	15.40	14.20	16.10	-0.70 / +0.70
L1	3.71	4.29	3.71	4.29	3.96	4.16	3.71	4.29	-0.25 / +0.13
N	–		7.62 BSC		–		7.62 BSC		None
Ø P	3.56	3.66	3.56	3.66	3.56	3.65	3.56	3.66	+0.00 / +0.01
Ø P1	–	7.39	–	7.39	–	7.19	–	7.39	none / +0.20
Q	5.69	5.82	5.31	5.69	5.31	5.69	5.31	5.69	None
R	4.52	5.49	4.52	5.49	4.52	5.49	4.52	5.49	None
S	5.51		5.51 BSC		5.54	5.74	5.51 BSC		None

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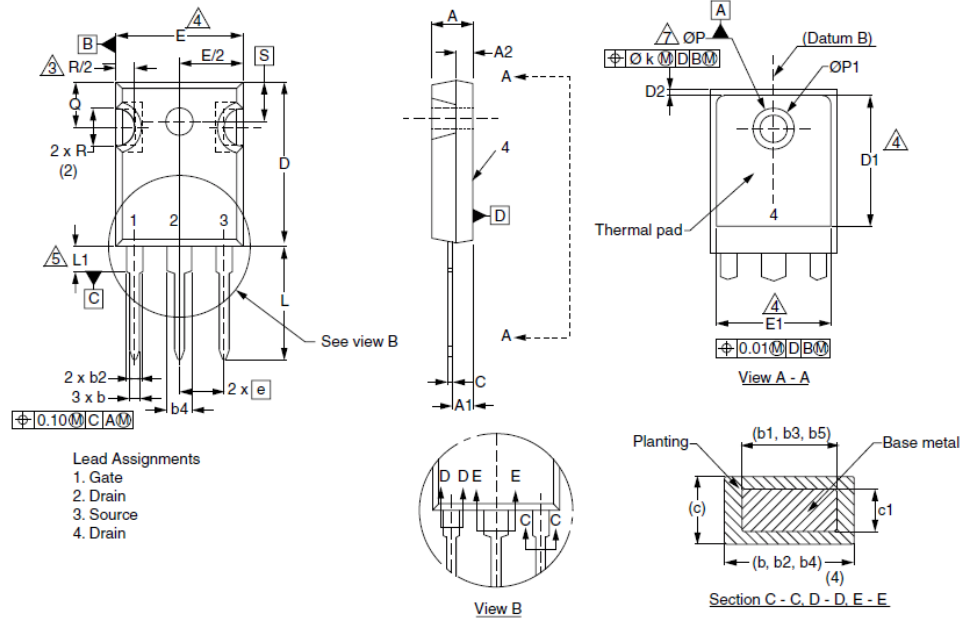


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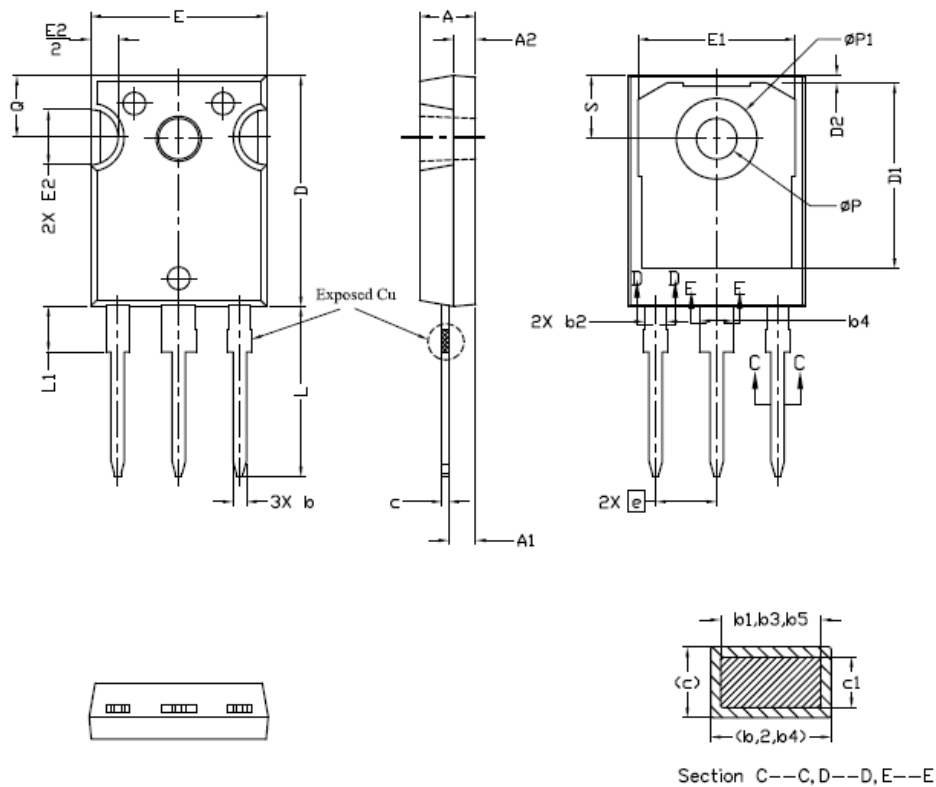


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## XI'AN / ASE WH



## GEM HF



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