



Product Change Notification



Product Group: DIODES / January 19th, 2018 / PCN-DD-002-2018 Rev 0

Additional assembly site for TO-220FullPAK package

DESCRIPTION OF CHANGE: In order to meet increasing demand of Rectifiers, Vishay Diodes Division is introducing an additional assembly line at a new subcontractor in China for commercial TO-220FullPAK Part Numbers.
 The new subcontractor has received international quality system and environmental compliance certification ISO9001 and ISO14001.
 Bill of materials is shown in annex 2 while Package Outline Dimensions will be consolidated as illustrated in annex 3.
 UL certification (File E78996) update for new assembly site is pending.
 Taking the chance of this capacity expansion, product nomenclature will be harmonized: Vishay Diodes Division will discontinue the Part Numbers with PBF suffix and keep active the Halogen-free version only (-M3 / -N3 suffix).

CLASSIFICATION OF CHANGE: Assembly Site

REASON FOR CHANGE: Capacity expansion for improving delivery support

EXPECTED INFLUENCE ON QUALITY/RELIABILITY/PERFORMANCE: There will be no effect on quality, reliability or electrical performance.

PRODUCT CATEGORY: Diodes & Rectifiers

PART NUMBERS/SERIES/FAMILIES AFFECTED:

TO-220FullPAK			
Family	Halogen-free nomenclature		Old nomenclature (PBF)
	Part Number	Datasheet	Part Number
FRED	VS-15ETH06FP-N3	96426	VS-15ETH06FPPBF
FRED	VS-15ETL06FP-N3	96427	VS-15ETL06FPPBF
FRED	VS-15ETX06FP-N3	96428	VS-15ETX06FPPBF
FRED	VS-20CTH03FP-N3	96432	VS-20CTH03FPPBF
FRED	VS-20CTH03FP-N3R		
FRED	VS-30CTH02FP-N3	96433	VS-30CTH02FPPBF
FRED	VS-8ETH06FP-N3	96429	VS-8ETH06FPPBF
FRED	VS-8ETL06FP-N3	96430	VS-8ETL06FPPBF
FRED	VS-8ETX06FP-N3	96431	VS-8ETX06FPPBF
STANDARD DIODES	VS-10ETF02FP-M3	96293	VS-10ETF02FPPBF
STANDARD DIODES	VS-10ETF04FP-M3	96293	VS-10ETF04FPPBF
STANDARD DIODES	VS-10ETF06FP-M3	96293	VS-10ETF06FPPBF
STANDARD DIODES	VS-10ETF10FP-M3	96294	VS-10ETF10FPPBF
STANDARD DIODES	VS-10ETF12FP-M3	96294	VS-10ETF12FPPBF
STANDARD DIODES	VS-10ETS08FP-M3	96295	VS-10ETS08FPPBF

TO-220FullPAK			
Family	Halogen-free nomenclature		Old nomenclature (PBF)
	Part Number	Datasheet	Part Number
STANDARD DIODES	VS-10ETS12FP-M3	96295	VS-10ETS12FPPBF
STANDARD DIODES	VS-20ETF02FP-M3	96296	VS-20ETF02FPPBF
STANDARD DIODES	VS-20ETF04FP-M3	96296	VS-20ETF04FPPBF
STANDARD DIODES	VS-20ETF06FP-M3	96296	VS-20ETF06FPPBF
STANDARD DIODES	VS-20ETF06FP-M3D		
STANDARD DIODES	VS-20ETF10FP-M3	96297	VS-20ETF10FPPBF
STANDARD DIODES	VS-20ETF12FP-M3	96297	VS-20ETF12FPPBF
STANDARD DIODES	VS-20ETS08FP-M3	96298	VS-20ETS08FPPBF
STANDARD DIODES	VS-20ETS12FP-M3	96298	VS-20ETS12FPPBF
THYRISTORS	VS-25TTS08FP-M3	96300	VS-25TTS08FPPBF
THYRISTORS	VS-25TTS12FP-M3	96300	VS-25TTS12FPPBF
THYRISTORS	VS-16TTS08FP-M3	96299	VS-16TTS08FPPBF
THYRISTORS	VS-16TTS12FP-M3	96299	VS-16TTS12FPPBF

Note: upon this PCN approval, all future TO-220FullPAK Part Numbers will be shipped from either one of qualified locations.

VISHAY BRAND(s): Vishay Semiconductors

TIME SCHEDULE: Starting from March 19th, 2018 Vishay may start to ship from new location

SAMPLE AVAILABILITY: On customer request

PRODUCT IDENTIFICATION: Products manufactured at new location will be identified by the new plant digit of the data code marked on 2nd line of the part.

QUALIFICATION DATA: See annex 1

This PCN is considered approved, without further notification, unless we receive specific customer written concerns before March 19th, 2018 or as specified by contract

ISSUED BY: FRED, STANDARD DIODES AND THYRISTORS
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ANNEX 1

Qualification Data

TO-220FullIPAK

Test Item & Condition	Duration	Fred	Diode	Thyristor
HTRB TjMax @100% Vr	168 Hrs	0/231	0/77	0/154
	500 Hrs	0/231	0/77	0/154
	1000 Hrs	0/231	0/77	0/154
Solderability @245°C/5sec	Post	0 / 30	0 / 10	0 / 20
Temperature Cycling @-55°C / +150°C / 30min.	250 Cycs	0/231	0/77	0/154
	500 Cycs	0/231	0/77	0/154
	1000 Cycs	0/231	0/77	0/154
UHAST @Ta= 130°C , 85%R.H.	48 Hrs	0/231	0/77	0/154
	96 Hrs	0/231	0/77	0/154
IOL Delta Tj=100°C T0n/Toff >= 2min	500 Hrs	0/231	0/77	0/154
	1000 Hrs	0/231	0/77	0/154
H3TRB 85°C 85% HR @ 100V	168 Hrs	0/231	0/77	0/154
	500 Hrs	0/231	0/77	0/154
	1000 Hrs	0/231	0/77	0/154

ANNEX 2

Bill of materials

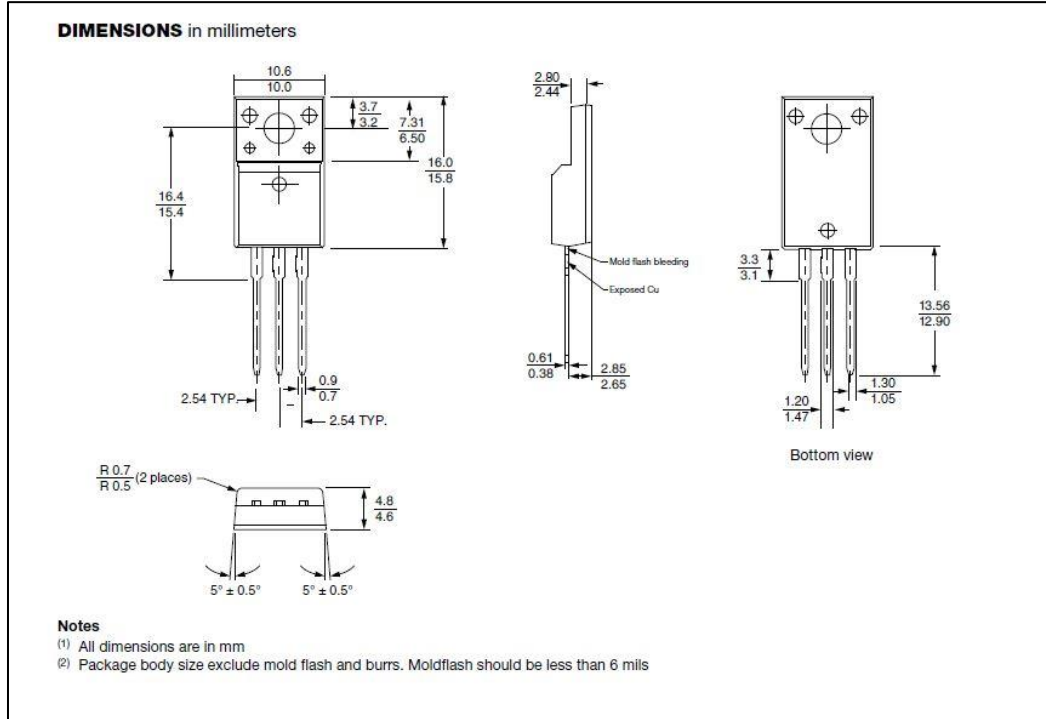
TO-220FullIPAK

	ACTUAL	ADDITIONAL
Die Attach Solder (Thyristors)	PbSn	PbSnAg
Junction Coating (Thyristors)	Yes	No

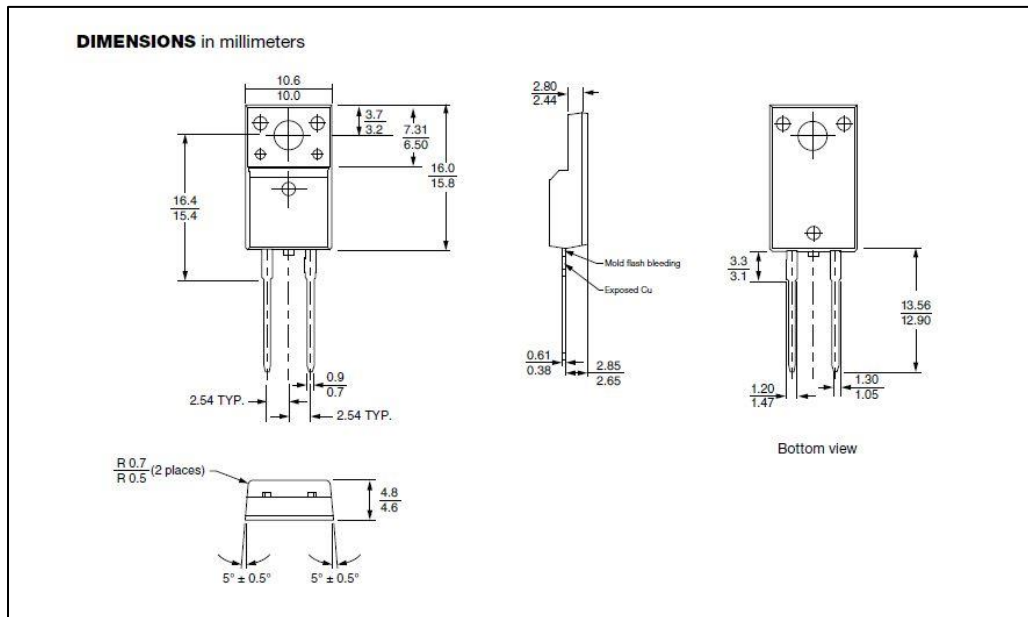
ANNEX 3

Package Outline Dimension

3L TO-220FullIPAK



2L TO-220FullIPAK

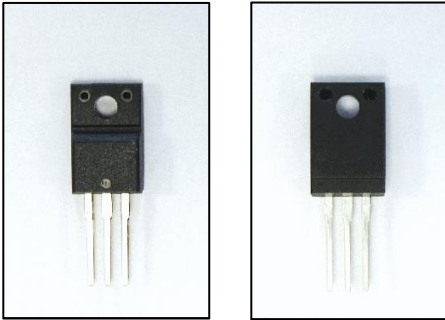


ANNEX 4

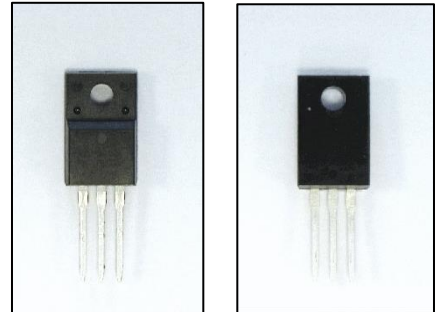
Outline

3L TO-220FullPAK

Current

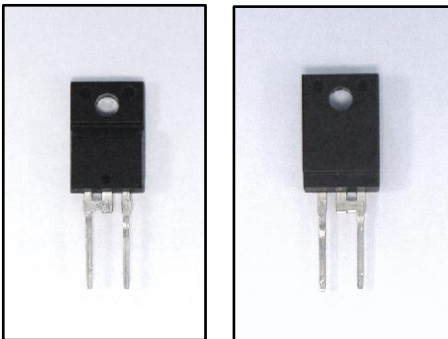


Additional



2L TO-220FullPAK

Current



Additional

