


**PRODUCT / PROCESS CHANGE INFORMATION**

**1. PCI basic data**

<b>1.1 Company</b>		STMicroelectronics International N.V
<b>1.2 PCI No.</b>		CRP/22/9465
<b>1.3 Title of PCI</b>		Moisture Barrier Bag (MBB) for 3-layer and 4-layer Pre plated frame FPN, SOT, SO & TSSOP REELS AND TUBES
<b>1.4 Product Category</b>		FPN, SOT, SO & TSSOP assembled with 3-layer and 4-layer Pre plated frame
<b>1.5 Issue date</b>		2022-03-18

**2. PCI Team**

<b>2.1 Contact supplier</b>	
<b>2.1.1 Name</b>	SANDRAN LIE
<b>2.1.2 Phone</b>	+65 4805930
<b>2.1.3 Email</b>	sandran.lie@st.com
<b>2.2 Change responsibility</b>	
<b>2.2.1 Process Owner</b>	Patrick LOW
<b>2.1.2 Corporate Quality Manager</b>	Veronique LIVACHE

**3. Change**

<b>3.1 Category</b>	<b>3.2 Type of change</b>	<b>3.3 Manufacturing Location</b>
Materials	New Indirect material part number (same supplier or different supplier): Boxes, trays, carriers, back grinding tape, wafer mounting tape, mold tape, ...	ST Shenzhen (China), ST Bouskoura (Morocco), ST Muar (Malaysia), ST Calamba (Philippines) ST Subcontractors (Carsem Semiconductor, Carsem China, UTAC Thai Limited, NFME, AMKOR ATP3, AMKOR APT1)

**4. Description of change**

	<b>Old</b>	<b>New</b>
<b>4.1 Description</b>	The reels and tubes of the 3-layer and 4-layer Pre plated frame FPN, SOT, SO & TSSOP packages from ST Shenzhen (China), ST Bouskoura (Morocco), ST Muar (Malaysia), ST Calamba (Philippines) and ST Subcontractors (Carsem Semiconductor, Carsem China, UTAC Thai Limited, NFME, AMKOR ATP3, AMKOR APT1) are packed into the inner box without bag. The reels and tubes of the 4-layer Pre plated frame SO8N & TSSOP8 packages from ST Shenzhen (China) of MMS Group are packed into the inner box with shielding bag (refer to PCI CRP/15/9379). The reels of VFQFPN32, UDFPN8, WDFPN8, UDFPN5 packages from ST Calamba (Philippines) & Amkor subcontractor (Philippines) of MMS Group are packed into the inner box with shielding bag (refer to PCI MMS/16/9678).	The reels and tubes of the 3-layer and 4-layer Pre plated frame FPN, SOT, SO & TSSOP packages from ST Shenzhen (China), ST Bouskoura (Morocco), ST Muar (Malaysia), ST Calamba (Philippines) and ST Subcontractors (Carsem Semiconductor, Carsem China, UTAC Thai Limited, NFME, AMKOR ATP3, AMKOR APT1) will be packed with a Moisture Barrier Bag (MBB).
<b>4.2 Anticipated Impact on form,fit, function, quality, reliability or processability?</b>	- Form: No change - Fit: No change - Function: No change	

**5. Reason / motivation for change**

<b>5.1 Motivation</b>	This Moisture Barrier Bag will protect the product during exposure to uncontrolled environment before product usage (transportation/storage).
<b>5.2 Customer Benefit</b>	QUALITY IMPROVEMENT

**6. Marking of parts / traceability of change**

<b>6.1 Description</b>	-
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7. Timing / schedule	
7.1 Date of qualification results	2016-05-20
7.2 Intended start of delivery	2016-06-03
7.3 Qualification sample available?	Not Applicable

8. Qualification / Validation		
8.1 Description		
8.2 Qualification report and qualification results	In progress	Issue Date

9. Attachments (additional documentations)
9465 Public product.pdf PCI PPF UPPF MBB bags.pdf

10. Affected parts		
10. 1 Current		10.2 New (if applicable)
10.1.1 Customer Part No	10.1.2 Supplier Part No	10.1.2 Supplier Part No
	STBP120AVDK6F	

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<b>1.4 Product Category</b>		FPN, SOT, SO & TSSOP assembled with 3-layer and 4-layer Pre plated frame
<b>1.5 Issue date</b>		2022-03-18

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<b>2.1 Contact supplier</b>	
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<b>2.1.2 Phone</b>	+65 4805930
<b>2.1.3 Email</b>	sandran.lie@st.com
<b>2.2 Change responsibility</b>	
<b>2.2.1 Process Owner</b>	Patrick LOW
<b>2.1.2 Corporate Quality Manager</b>	Veronique LIVACHE

**3. Change**

<b>3.1 Category</b>	<b>3.2 Type of change</b>	<b>3.3 Manufacturing Location</b>
Materials	New Indirect material part number (same supplier or different supplier): Boxes, trays, carriers, back grinding tape, wafer mounting tape, mold tape, ...	ST Shenzhen (China), ST Bouskoura (Morocco), ST Muar (Malaysia), ST Calamba (Philippines) ST Subcontractors (Carsem Semiconductor, Carsem China, UTAC Thai Limited, NFME, AMKOR ATP3, AMKOR APT1)

**4. Description of change**

	<b>Old</b>	<b>New</b>
<b>4.1 Description</b>	<p>The reels and tubes of the 3-layer and 4-layer Pre plated frame FPN, SOT, SO &amp; TSSOP packages from ST Shenzhen (China), ST Bouskoura (Morocco), ST Muar (Malaysia), ST Calamba (Philippines) and ST Subcontractors (Carsem Semiconductor, Carsem China, UTAC Thai Limited, NFME, AMKOR ATP3, AMKOR APT1) are packed into the inner box without bag.</p> <p>The reels and tubes of the 4-layer Pre plated frame SO8N &amp; TSSOP8 packages from ST Shenzhen (China) of MMS Group are packed into the inner box with shielding bag (refer to PCI CRP/15/9379).</p> <p>The reels of VFQFPN32, UDFPN8, WDFPN8, UDFPN5 packages from ST Calamba (Philippines) &amp; Amkor subcontractor (Philippines) of MMS Group are packed into the inner box with shielding bag (refer to PCI MMS/16/9678).</p>	<p>The reels and tubes of the 3-layer and 4-layer Pre plated frame FPN, SOT, SO &amp; TSSOP packages from ST Shenzhen (China), ST Bouskoura (Morocco), ST Muar (Malaysia), ST Calamba (Philippines) and ST Subcontractors (Carsem Semiconductor, Carsem China, UTAC Thai Limited, NFME, AMKOR ATP3, AMKOR APT1) will be packed with a Moisture Barrier Bag (MBB).</p>
<b>4.2 Anticipated Impact on form,fit, function, quality, reliability or processability?</b>	<ul style="list-style-type: none"> <li>- Form: No change</li> <li>- Fit: No change</li> <li>- Function: No change</li> </ul>	

**5. Reason / motivation for change**

<b>5.1 Motivation</b>	This Moisture Barrier Bag will protect the product during exposure to uncontrolled environment before product usage (transportation/storage).
<b>5.2 Customer Benefit</b>	QUALITY IMPROVEMENT

**6. Marking of parts / traceability of change**

<b>6.1 Description</b>	-
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7. Timing / schedule	
7.1 Date of qualification results	2016-05-20
7.2 Intended start of delivery	2016-06-03
7.3 Qualification sample available?	Not Applicable

8. Qualification / Validation		
8.1 Description		
8.2 Qualification report and qualification results	In progress	Issue Date

9. Attachments (additional documentations)
9465 Public product.pdf PCI PPF UPPF MBB bags.pdf

10. Affected parts		
10.1 Current		10.2 New (if applicable)
10.1.1 Customer Part No	10.1.2 Supplier Part No	10.1.2 Supplier Part No
	CR95HF-VMD5T	
	ST8024CDR	
	STM32F031F6P6	
	STM8S003F3P6TR	
	STM8S003F3U6TR	

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## Public Products List

Public Products are off the shelf products. They are not dedicated to specific customers, they are available through ST Sales team, or Distributors, and visible on ST.com

**PCI Title** : Moisture Barrier Bag (MBB) for 3-layer and 4-layer Pre plated frame FPN, SOT, SO & TSSOP REELS AND TUBES

**PCI Reference** : CRP/22/9465

**Subject** : Public Products List

Dear Customer,

Please find below the Standard Public Products List impacted by the change.

SR2HARU	TS922ID	TSV622IDT
ST1S31D-R	SRC0GS22D	LD3985M33R
TS431ILT	M93C66-WDW6TP	M93C76-WMN6TP
M24C64-DRMN8TP/K	M24C08-WMN6TP	M95160-RMN6TP
LD59015C12R	TL072CD	M24C04-WMN6TP
TS912AIDT	TS922AIDT	TL431AIDT
M93C86-WMN6TP	STLQ015M25R	UC2844BD1
TSX634IQ4T	M93C66-WMN6TP	M24C02-RMN6TP
STM818LM6F	ULN2001D1013TR	M93C56-RMN3TP/K
TS1874IPT	VIPER22ASTR-E	LD2979M33TR
LDK120C10R	M34E04B-FMC9TG	M95640-WDW6TP
M93C56-RDW6TP	M24128-BFMC6TG	TS925IPT
M74HC4094YRM13TR	M93C56-WDW6TP	LM324WPT
LDS3985M25R	74LCX00YTTR	M24128-BFMH6TG
STMP52252MTR	M93S66-WMN6TP	M95128-RMN6TP
TD310IDT	M41T83ZQA6F	M93C86-WDW6TP
M95512-DRDW3TP/K	M24256-BRMN6TP	M95320-WMN6TP
TSV994IYPT	TSV911IYLT	STM8S903F3P6
L6563ATR	STLM75DS2F	M95256-DFMN6TP
LDK120M12R	TSX7191IYLT	M24128-BRMN6TP
M24C04-WDW6TP	M24256-BWDW6TP	TSU101RICT
LM239PT	LM2903YST	M24C16-WDW6TP
TS514AIDT	TS941AILT	STM8S103F2P3
TSV991AIYLT	M95256-RMC6TG	STM708SAM6F
LD2981CM33TR	STM32F030F4P6	STM8L101F3U6ATR
STM809SWX6F	M24C08-WDW6TP	M24128-DFMN6TP
STM8L101F3P3	M95080-RDW6TP	M24C04-RMN6TP
L79L08ACD13TR	M95256-DRMN8TP/K	M24C01-WDW6TP
L6386ED	M24128-BRDW6TP	ULQ2003D1013TR
TS921ID	LM358DT	LM2903HYPT
TSC1021AIPT	STM6524AUABDL6F	LMV822IDT
TS331IQT	M24C16-RDW6TP	UC3845BD1013TR
M24C02-RMC6TG	STM6322LWY6F	M95040-RMC6TG
M95M01-RMN6TP	M24512-RDW6TP	M24C64-WMN6TP
L6562DTR	LDK120C12R	M24M01-RMN6TP
LK112M50TR	STTS751-0DP3F	TSV631ICT



## Public Products List

TSV914AIDT	M24C64-FMC6TG	M95128-WMN6TP
M41T83RQA6F	STM707M6F	ST1S30IPUR
TSV914AIPT	M95010-RDW6TP	LD39100PUR
L6385ED	STM32L031F6P7	M95640-RMC6TG
TL062IDT	STM6717TZWY6F	M24128-BWMN6TP
M35B32-WMN6TP	M93C56-WMN6TP	TSV6395IPT
TSH82IDT	LM224APT	STM805SM6F
M95160-RDW6TP	L6386ADTR	M93C56-RMN6TP
ST1S40IDR	L78L09ABD13TR	TSV853AIST
STP08CP05MTR	M95512-RMN6TP	LM258APT
LMV825IPT	TS972IDT	LDK220M27R
M24C02-FMC6TG	M95160-DFMC6TG	M24C64-WDW6TP
TSV522IQ2T	M24128-DRMF3TG/K	L6387ED013TR
TL431IL5T	M24C04-RMC6TG	STM6717TWWY6F
ST1S40IPUR	UC2842BD1013TR	LMV822AIYST
LM2931AD50R	TL431CL5T	STP08DP05MTR
TS861ILT	TS9222IYPT	STM6779VWB6F
STP16CPP05MTR	TS921IDT	M24256-BFMC6TG
LD39020DTPU13R	LMV324IPT	LMV820ILT
ST3232BTR	STM8L101F3P6	LD2980CM33TR
STSR30D	STM1061N38WX6F	STMPS2171STR
TS507CLT	LD39015M10R	TL082BCDT
M95512-DRDW8TP/K	TD350ETR	TS942AIDT
STM6823TWY6F	M24512-WDW6TP	UC3845BD1
TL1431CDT	LMV821ICT	STM692AM6F
STM6823LWY6F	TSV632AIDT	M95512-WMN6TP
LDK120C30R	STTS751-1DP3F	M24C16-FMC5TG
M24SR64-YDW6T/2	TS952IYDT	MC34063EBD-TR
TSV911AILT	TSX7192IST	TSH80IYLT
LMV821IYLT	M95320-DRDW3TP/K	M95256-RMN6TP
LK112SM50TR	TSV631ILT	M93C66-RDW3TP/K
M95128-RDW6TP	LD2981ABM33TR	TSV6293AIST
TS7221AI1LT	LM393ST	M74HC04YTTR
M24SR64-YMC6T/2	STM1811LWX7F	STM6825SWY6F
STM6719SFBWB6R	M95640-DRDW8TP/K	M41T81M6F
M95040-DRMF3TG/K	TSV611AILT	TSX634AIYPT
M24512-WMN6TP	LM211DT	LD39020DTPU18R
ST202EBTR	LDK220PU40R	ST232ABTR
LM2903YPT	TSV6191ICT	M24C32-FMC6TG
TSV6294IPT	TS912AIYDT	LM224PT
M24128-DFMC6TG	M24LR16E-RMC6T/2	TL081IDT
TS4061BICT-1.25	STM1811MWX7F	TSX562AIYST
LD2985BM28R	STM8L151F3P3	STPIC6D595TTR
TSV621ICT	STM8L101F2P6TR	LD2980CM50TR
STC3100IST	M24SR16-YDW6T/2	M24C08-DRMN8TP/K
L78L08ABD13TR	M95640-RDW6TP	L6574D
ST1CC40PUR	M24C64-RMN6TP	M24C64-RDW6TP
LDK220PU-R	L78L33ABD-TR	LDK130C29R
M24C08-RMN6TP	STM32L011F4P6	ST1CC40DR
M24256-BFDW6TP	M24C16-FMH6TG	TSX9292IQ2T





## Public Products List

M95160-WMN6TP	TSM1014ID	TSM1011AID
SR2LABU	STM6321MAWY6F	TS922IYDT
LDK715M50R	TSV855IPT	STM6601AQ2BDM6F
STM8S103F3P6	M24128-DRDW8TP/K	LDK120C32R
M24256-BWMN6TP	LD39020ADTPU18R	M95128-DRMN8TP/K
M95020-WMN6TP	TL1431IDT	L6562AD
TL082ACDT	LM2931AD33R	TS7221AILT
TSV522AIQ2T	M24M01-DWDW3TP/K	LDK130PU33R
STM1815RWX7F	TS4061AICT-1.25	M34E02-FMC6TG
TSU101RILT	LM4041BICT-1.2	M74HC4060YTTR
ST232CDR	TD352IDT	ST490ABDR
LDS3985M18R	TSV6191AICT	TS924IPT
TD310ID	M24C08-FMC5TG	STM6524AUARDL6F
LK112M33TR	STP16CPPS05XTTR	STM8S103F3P3TR
HCF4094YM013TR	LM217LD13TR	TSX7192IYDT
STLQ50C33R	STWD100NYWY3F	TSV611ICT
M74HC151YTTR	LK112M55TR	M95160-WDW6TP
M24128-BWDW6TP	STM6524ALARDL6F	MC34063ECD-TR
TSX634IYPT	TSV854AIPT	TS321ILT
TSV851ILT	M95640-RMN6TP	ULN2002D1013TR
STM8S103F2P6	ST1S06PUR	M24C04-RDW6TP
STM6321RWY6F	STM6720SFWB6F	STM32F031F6P7
UC2842BD1	M95080-WMN6TP	M24128-DFDW6TP
STLD40DPUR	STM705M6F	STLQ50C18R
LMV824IPT	M24C04-FMC5TG	TS912IDT
LDL112PUR	M93C46-WDW6TP	M24C04-FDW6TP
STCS05ADR	TSV912AIDT	STM6719TWWB6F
M95128-RMC6TG	M24SR02-YMC6T/2	TSV630ICT
STMPS2171MTR	TS524IDT	LDK120M15R
M24C01-RDW6TP	LM258WYPT	M95080-WDW6TP
LM2902PT	TS952IDT	STM6524ALABDL6F
M24C02-WMN6TP	ST1S32PUR	STP16DPPS05MTR
STM706RM6F	M24C32-WDW6TP	TS951ILT
STM8S903F3P3	L79L12ACD13TR	STM804RM6F
LMV331ILT	LDK130M29R	TSV324AIYPT
STMPS2262MTR	M93C76-RMN3TP/K	SR2PARU
LM258WDT	M95320-DRMN3TP/K	M24C64-FDW6TP
L4931CD50-TR	L78L05ACD13TR	M24C01-WMN6TP
STM32L031F6P6	M24C16-WMN6TP	TS391IYLT
LDK120C25R	TS331ICT	STM32L011F3P6
L6384ED013TR	LD3985M27R	TL062ID
L6563TR	M93S56-WMN6TP	STM704TM6F
LED2000PUR	ST232EBTR	ULN2004D1013TR
TSM103WAIDT	ST715M25R	STG3684AUTR
M95160-DRMN8TP/K	STM6601CM2DDM6F	TSV6292IDT
M41T82RM6F	M93C66-RMC6TG	M95320-DWDW4TP/K
TSV6391AICT	LD39020ADTPU30R	MC34063ABD-TR
LD2980ABM33TR	TSV522AIYST	TS27M2AIDT
STM6321SWY6F	LDL112PU18R	TSV623IST
STM32L031F4P6	M95256-WDW6TP	STG3157CTR



## Public Products List

M24LR16E-RDW6T/2	ST202BDR	M24LR64-RMB6T/2
STM32F031F4P7	LM2904WHDT	LM258PT
STM6824SWY6F	M24C32-WMN6TP	M24SR02-YMN6T/2
STM8AF6223PCU	L6562ATDTR	STM806SM6F
CR95HF-VMD5T	TS4990IST	STMPS2161STR
STM6720SYWB6F	TL064ACDT	M95010-WMN6TP
TL082IYDT	L6388ED013TR	STP16DPP05MTR
UC2845BD1013TR	LMV821AIYLT	LD3985M47R
LDK220C27R	TS3022IDT	M93C86-RDW6TP
ST485ABDR	M95010-WDW6TP	M24C01-RMN6TP
LD2985BM33R	TSM103WIDT	LD39015M15R
VIPER12AS-E	LDS3985M30R	TSV6392IDT
LMV821ILT	STM706PM6F	M95040-DRDW8TP/K
LMV321RILT	STM6779SWB6F	TSV912IDT
TSX393IPT	STM690RM6F	TSB572IYST
LD39020ATPU33R	L6725TR	TS3021ILT
STM6822LWY6F	LDK220PU50R	LDK120M25R
LM2901YPT	ST715M33R	STM8S003F3U6TR
M24C02-WDW6TP	L6562ADTR	M95128-DRDW3TP/K
M95160-RMC6TG	STM708RAM6F	L78L15CD-TR
LD39020ADTPU08R	M24C64-DFDW6TP	M95256-WMN6TP
M41T93SQA6F	L78L33CD-TR	ST715MR
TL1431AIDT	TSV991AILT	M24128-DRMN3TP/K
M24512-RMN6TP	M24512-DFMN6TP	ST715PUR
M95080-DFDW6TP	LD39020TPU33R	TSV992AIDT
STTS2004B2DN3F	TSC103IPT	M24C08-FDW6TP
STP16DPS05XTTR	TSV358IYPT	LM2904AYPT
M34E02-FDW6TP	M95512-WDW6TP	UC2843BD1
STM8L051F3P6	L4931CD120-TR	STG3682QTR
ST8024LCDR	TSZ122IYST	LMV358LIPT
M95040-WMN6TP	M24C02-FMN6TP	LDK320M-R
MC33078D	M24C08-RMC6TG	TL1431ACL3T
M24SR16-YMC6T/2	STM6522AAAAADG6F	LDK120M10R
M93C46-WMN6TP	STM6822SWY6F	STM6600DA55DM6F
TS912IYDT	M95020-RMN6TP	M95640-WMN6TP
TSM1014AIDT	M24C02-RDW6TP	LED2000DR
TS3021IYLT	LDK130PU12R	AS21P2TLRQ
STM6321LWY6F	STM806TM6F	TS831-4IDT
TSM104WAID	LDK130PU15R	MC33078YDT
STM32F031F6P6	STM6779TWB6F	LM293PT
LM239APT	TSZ121ICT	M24C32-DRDW3TP/K
M24C32-DRDW8TP/K	LD2981CM50TR	STM8L151F2P6TR
STM8S003F3P6	STM6520AQRDDG9F	STM6717SFWY6F
TL072CDT	TL431AIL5T	CS70P
STM817LM6F	STM704SM6F	STM6904SFEDS6F
LDK120C31R	STPIC6C595TTR	TSX712IST
STM795SM6F	M95M01-DFMN6TP	ST202ECCR
TSV854AIYPT	STOD13CMTPUR	M74HC4851YTTR
M24C32-RMN6TP	TSV712IQ2T	STM6777SVWB6F
TLVH431BICT	M95320-WDW6TP	M40SZ100WMQ6F



## Public Products List

STM32F031F6P7TR	M41T01M6F	LDK120PU33R
STM809TWX6F	TSV6191AALT	M95320-RDW6TP
TSV324IPT	LDK120M11R	ST3232ECTR
STM6513SEIEDG6F	TSV991IQ2T	STBP120AVDK6F
TSV6290ICT	TSM1013IDT	LD2979M30TR
STP16CPPS05MTR	LM324PT	M95080-RMN6TP
TS7221BILT	LD39020DTPU31R	TL084IPT
ST1S41PUR	ST3232CDR	STM810RWX6F
ST25TA02K-DC6H5	M24C16-RMN6TP	STP16CPC05MTR
STM6824TWY6F	RX95HF-VMD5T	STM6601DS2BDM6F
TSX564IPT	LDK130PU-R	LF351D
M95512-DFDW6TP	STM704M6E	M24C08-DRDW3TP/K
LMV824IYPT	TS334IPT	TSM104WIDT
STM1818TWX7F	STM817MM6F	LMV823AIST
M34F04-WMN6TP	M95512-RDW6TP	M24512-DRMN3TP/K
TS522IDT	TS922AID	L6565DTR
TSV711ICT	L6388ED	TSV992IDT
STM690TM6F	STM6825MWY6F	TS974IYPT
STM8S103F2P3TR	STC3115AIQT	M41T11M6F
STM6719SVWB6F	STM8S903F3U6TR	STBP112CVDJ6F
STEF033APUR	M95512-DFMN6TP	KF50BD-TR
LDL112D33R	M24256-DFMC6TG	STM6710KWB6F
M95M01-RDW6TP	TL431IDT	M95256-DRDW8TP/K
STM6905PWEDS6F	STM8AF6223IPCX	M74HC4851YRM13TR
TSV851IYLT	M24256-DRMN3TP/K	LMV821AICT
STLQ015M15R	M24C64-DRMF3TG/K	TSV358IDT
LDK220M25R	STM818MM6F	M93S46-WMN6TP
STM6719TZWB6F	LDK120PU-R	TL082ID
LM2904WYPT	TL431ACDT	TS462CDT
M95M02-DRMN6TP	TS9224IDT	LM2902WYPT
TSV521AICT	M95128-DRMF3TG/K	LD2985BM18R
STM6824MWY6F	STM6519AUARUB6F	LD39020DTPU33R
TSX712IDT	VIPER12ASTR-E	STM6321TWY6F
LDK130C32R	STWD100NWWY3F	TL431CDT
STM6778TZWB6F	ULN2003D1013TR	M74HC151YRM13TR
L79L05ABD13TR	M24C16-FDW6TP	STM32F030F4P6TR
TD221ID	TL1431CCT	TL431AICT
LDK120M29R	L6562D	STG3693QTR
UC2844BD1013TR	M24C32-FDW6TP	STM32F031F4P6
TL1431ACCT	M93C76-RDW3TP/K	ST26C32ABTR
STG3696EQTR	TSV632AIQ2T	STM6778SVWB6F
M24LR04E-RMN6T/2	M74HC4094YTTR	STVM100DS6F
M41T0M6F	STM6904TZEDS6F	UC3842BD1
TSV630ILT	M24C32-RDW6TP	M24256-DFMN6TP
TSH22IDT	M95256-DRMF3TG/K	STM6777TWWB6F
TL082IDT	LD2985BM25R	TS514AID
MC33171DT	LD3985M29R	M24128-DRDW3TP/K
TS974IPT	M74HC132YTTR	STMPS2141MTR
M24256-BRDW6TP	STC3115IQT	L78L08CD13TR
STM1061N17WX6F	ST1S09IPUR	TL082CD



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STM8L151F2U6TR	M95040-RDW6TP	M24LR64E-RMN6T/2
LD2985BM50R	TSV630IQ1T	M41T56M6F
M24C02-DRDW3TP/K	STWK01TR	TSM1012ID
HCF4060YM013TR	ULQ2004D1013TR	TS922IYPT
TSV850AILT	STM1061N19WX6F	ST8034ATDT
LE50ABD-TR	LMV825AIPT	STM809LWX6F
M95256-DRMN3TP/K	SR1LARU	ST1480ABDR
LMV339IPT	UC3843BD1013TR	TS9511IYLT
STM708TAM6F	L78L12CD13TR	LDK120C-R
M95080-DRDW3TP/K	LMV822IQ2T	LDK130PU10R
LD39015M125R	TSV321RAIYLT	L78L12ACD13TR
M95320-DRDW8TP/K	TS4994IST	TS464CPT
STM6710FWB6F	STM805LM6F	M24512-DFMC6TG
LDK120M-R	LD39200DPUR	TSV6392AIDT
L6561D013TR	LM334DT	STM1061N31WX6F
M74HC4852YRM13TR	TSV522IYST	M24256-DRDW6TP
LDK130C10R	STM1061N21WX6F	TS3011IYLT
M24C04-FMC6TG	STM1817TWX7F	TSV6394AIPT
TSV6390AILT	STBP120BVDK6F	M95320-RMN6TP
LDK220PU27R	STM8L101F3U6TR	LDK120PU30R
M95080-RMC6TG	TS339CPT	STG719STR
STM704RM6F	ST890DTR	STM32L021F4U6TR
TS4990IQT	STM6824RWY6F	ST26C32ABDR
STM32L031F4P3	L6565D	TSV611AICT
STM1001LWX6F	TL072ACDT	TL1431AIYDT
TS321IYLT	TSV991AIQ1T	UC3844BD1013TR
M24C64-FMN6TP	LDK120C28R	MC33078DT
STM1831L24WY6F	TS27M2IDT	STCS05DR
LD2981ABM50TR	LD2980ABM50TR	STM6905SFEDS6F
LF351DT	ST890CDR	SR2UABU
TS4871IDT	LDK120PU10R	TS4061BICT-1.225
OA2NP34S	M24C32-XMC5TG	STM8L151F3U6DTR
STM6524AHARDL6F	STM1061N23WX6F	TL061IDT
TS1872AIDT	TS924AIYPT	M24512-DFDW6TP
STM6524APARDL6F	M93C56-RDW3TP/K	ST662ACD-TR
L4931ABD33-TR	M24C64-DRDW8TP/K	L78L24CD-TR
STM6717TGGWY6F	M24C64-DRMN3TP/K	LDK120PU25R
LM393EDT	M93C66-RMN3TP/K	LDK120M31R
ST485CDR	TL064IDT	STTS75M2F
TS27M2CDT	ST1S10PUR	LDK130M08R
LDCL015M33R	M95640-DRMN8TP/K	STM809RWX6F
LM258ADT	MC34063ACD-TR	TS922AIYPT
TSV625IPT	TS27L4IPT	MC4558CPT
LF353DT	STM8L151F3U6TR	TSX564IYPT
STM6718SFWY6F	TS9224IYPT	TSV321RILT
STPIC6C595MTR	TSV914IYPT	LDK130PU32R
STM690AM6F	TL064CDT	STM1810LWX7F
LDK120PU29R	TSV6390AICT	STM6778TGWB6F
M41T80M6F	M95640-DFMC6TG	TSV634IPT
LM2903WHYST	L6387ED	ST202BTR



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STM708SM6F	TS9222IDT	M93C56-RMN8TP/K
TS971IDT	ST715PU33R	LD59015C33R
STM1812MWX7F	STM6322SWY6F	TS1874AIYPT
STSR2PCD-TR	M93C56-RDW8TP/K	L6563A
LD39015M18R	TS27L4AIPT	STM6503SEAADG6F
STLQ50C25R	TS1871IYLT	M95040-WDW6TP
L78L18CD13TR	TL431ACCT	TS1874IYPT
LM2904YPT	STEF033PUR	LDK130C-R
STM6322MWY6F	TSX564AIPT	TD351ID
TS1872IDT	TSX7192IDT	STM1816RWX7F
L78L09CD13TR	STM6322RWY6F	TSV621AILT
LMV321ILT	LM4041AECT-1.2	LD3985M25R
LM2902WPT	M24M02-DRMN6TP	TSV914IPT
STM32F042F4P6	TS881ILT	M24C04-FMN6TP
STM6780TWB6F	TSV624AIPT	M24LR04E-RMC6T/2
STOD13ASTPUR	LM201ADT	L78L33ACD13TR
ST715PU25R	TSX631ILT	LMX321ILT
STM8TL52F4P6TR	L6562ATD	STM6600AS24DM6F
STWD100NPWY3F	TSZ122IDT	TSV6292AIDT
STM6719SFWB6F	TS952IPT	TSV633AIST
TSV632IQ2T	STM8L151F3P6TR	STM6821MWY6F
STSR30D-TR	STM706TM6F	TSZ122IST
LDS3985M28R	M95020-DRMN3TP/K	LMX324IPT
M74HC259YTTR	STTS75DS2F	STSR2PCD
STM706SM6F	LDK130M33R	LE45CD-TR
TSX393IQ2T	TS4061AICT-1.225	STM6823SWY6F
LDK120M18R	M95128-DFDW6TP	M24C08-FMN6TP
STM6717SJWY6F	STM6710LWB6F	STM8S003F3P6TR
OA1MPA22C	ST232ACTR	STLQ015M30R
ST3232EBTR	M95512-DRMF3TG/K	TSV6295IPT
TS924AIPT	LDK120C33R	STM6519AHARUB6F
STM6822YWY6F	TS922IDT	M24256-DRMF3TG/K
TS971IYLT	TSM1013AID	M24C16-RMC6TG
TS954IPT	STM1810MWX7F	M41T83SQA6F
M74HC365YTTR	M24M01-DWMN3TP/K	M24C32-FMN6TP
STM6710DWB6F	STAP16DPPS05XTTR	TSV6395AIPT
TS912ID	LM258DT	LDL112PU33R
STG3856QTR	M95040-DRMN3TP/K	M24LR64-RMN6T/2
TS3704IPT	TSV631AILT	ST232BDR
SR1PARU	TL082AIYDT	L6386ED013TR
TSV621ILT	LE50CD-TR	TSB611ILT
TSV994IPT	TSV6290ILT	STM6905TWEDS6F
STM6601AU2DDM6F	L79L15ACD13TR	LDK130PU08R
TS482IDT	LMV358LIDT	STM6821LWY6F
TLVH431AICT	TSX564AIYPT	OA2NP22Q
STM802LM6F	MC33079YDT	M93C46-RMN3TP/K
SR2UARU	LK115D50-TR	TSV6391ICT
M93C86-RMN6TP	STM8S103F3P3	STM6825TWY6F
TSM108IDT	STM1061N34WX6F	M24C64-DFMC6TG
LM234DT	STM1818RWX7F	M24512-DRDW3TP/K



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LD1117D33TR	LM358AWPT	LDS3985M15R
STM809MWX6F	STDS75DS2F	STM1061N26WX6F
TD350E	M24C08-DRMN3TP/K	MC33079D
TSV6291ILT	STMPS2151MTR	LMV821AILT
M95010-RMN6TP	MC33079DT	M95320-RMC6TG
LM358D	M24SR04-GMC5T/2	M95320-DRMF3TG/K
TSV625AIPT	M95128-DRMN3TP/K	TSV994AIDT
STM1061N16WX6F	LDK715M42R	STM6778SFWB6F
M95128-DFMC6TG	TSV631IYLT	LMV358IYPT
STM6505WCABDG6F	TSV358AIYPT	LDK120M33R
TS7211BILT	LM2904PT	TSC1031IPT
M24C32-DRMN3TP/K	TS951IDT	STM32F038F6P6TR
TSV992AIYST	STM706AM6F	STM6720TGWB6F
STM8S103F2U6TR	STM6600DU25DM6F	L6571BD013TR
STM1813LWX7F	STWD100YNWVY3F	M24C32-FMH6TG
M24256-DFDW6TP	LD39020ADTPU28R	M95080-DWDW4TP/K
M95128-DFMN6TP	STM813LM6F	L4931ABD50-TR
TL082CDT	LDK220M-R	M95640-DFDW6TP
STM6519APARUB6F	ST662ABD-TR	M95M01-DWMN3TP/K
TS4890IST	UC2843BD1013TR	TSV623AIST
STM708TM6F	MC1458DT	STM6717SYWY6F
TS482IST	TSV321RIYLT	TSC1021BIYPT
M95020-DRDW3TP/K	TSX632IYST	STM8AF6223PDAU
TSV912IQ2T	TL062CD	STM6321MWY6F
STM810TWX6F	LMV324IYPT	LD3985M18R
STM6905SYEDS6F	STCN75DS2F	M95040-DFDW6TP
M95256-DWDW4TP/K	L78L06ACD13TR	LDS3985M33R
TSV6393AIST	STM8S903F3P6TR	STM8L101F2P3
M95M01-DWDW3TP/K	TSB611IYLT	M24SR04-YMC6T/2
SR2LARU	TS1852IDT	LM311DT
TSV911IDT	L6384ED	LD3985M28R
TS942IDT	LDCL015MR	M95M01-DFDW6TP
STLQ015M33R	LK112SM33TR	LDK120PU08R
VIPER22AS-E	STM32F038F6P6	TS274IPT
M95M01-DWDW4TP/K	TL431CCT	LDK320M30R
TSV914AIYPT	TL431ICT	STLQ015M12R
STM6720TWWB6F	M95020-RDW6TP	LMV321IYLT
STM6821SWY6F	TS461CDT	ST8034TDT
M24C16-FMC6TG	LMV824AIPT	ST8024CDR
STM1817RWX7F	STM6720SVWB6F	STM6777SYWB6F
ST8024LACDR	TSV6191ILT	LD3985M122R
STG5123DTR	ST1S12G18R	L6561D
LK112M60TR	LED2001PUR	M95160-DFMN6TP
74VHC14YTTR	M24C02-FDW6TP	STM6905TZEDS6F
LDK130M18R	STM805TM6F	M24SR04-YDW6T/2
STM6601BS2BDM6F	TS1871ILT	TSV991ILT
LM4041AICT-1.2	LM258AWYPT	LMV358IDT
TSV731ICT	M24C08-RDW6TP	M41T82SM6F
UC2845BD1	LM2904WHYST	TSH343IDT
LM211D	TS27L4CPT	LDK120C18R



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ST25TA02K-PC6H5	TS7211AILT	STM6322TWY6F
LM339PT	TS931BILT	TS932IDT
LE30CD-TR	TL1431YDT	LMX321ICT
M95080-DRMN8TP/K	ST485ECDR	LM2902DT
TS391ILT	STM8AF6223PAAU	STLQ015M21R
TSX7192IYST	TSX711ILT	M24C08-FMC6TG
ST232EBDR	ST202CDR	LDK130PU29R
M24LR64-RDW6T/2	M95640-DRMF3TG/K	LMV820AILT
M24C32-XDW5TP	M41T00M6F	TSV854IYPT
M24LR16E-RMN6T/2	LM258D	LDK220C40R
LDK130M25R	TSX921ILT	STG3692QTR
STM8AF6223PDX	TL1431ACDT	L79L05ACD13TR
ST232BTR	STVM100DC6F	M41T81SM6F
STM8AF6223PAX	TS4436ICT	TSX634IPT
TS9224IPT	TSV6394IPT	LM2904AWYPT
TSV358AIDT	TSM1012AIDT	M93C76-RDW6TP
L6574D013TR	STM8AF6213PDU	TS332IDT
M34E04-FMC9TG	STP16DP05XTTR	ST3232BDR
TL1431CL5T	M95128-DWDW4TP/K	STM6904TWEDS6F
TS831-5IDT	STG5682QTR	TS921IPT
LM2904Q2T	LE33CD-TR	TSV632IDT
STM6780VWB6F	TS3021ICT	STM6780SWB6F
LD39030DTPU33R	LDK220PU33R	M74HC4060YRM13TR
STP16DPPS05XTTR	LD2985BM30R	M41T00SM6F
M95160-DRMN3TP/K	LDK130M32R	ST25TA02K-PC6C5
LDK120PU32R	STPIC6D595MTR	LD2981CM30TR
SR1PBBU	LK112M25TR	STM6718SVWY6F
TSV852IYST	M95512-DWDW4TP/K	STLD41PUR
M95M02-DWMN3TP/K	LK112SM18TR	M93C46-RDW3TP/K
M24C04-DRMF3TG/K	TSZ121IYLT	L4931CD33-TRY
TS27L4ACPT	L78L09ACD13TR	STM6821RWY6F
STM1001MWX6F	TSV994AIPT	TSX3702IPT
STM804TM6F	STM810LWX6F	TL064CD
LDK220C-R	STM706M6F	LM324APT
LM339APT	M24M01-DFMN6TP	STM1001RWX6F
STM8L101F2U6TR	TD220ID	STM6825LWY6F
M95040-DWDW4TP/K	TSV912IYST	LM4041DICT-1.2
LDK220M50R	TSX922IQ2T	TS924IYPT
STM6780LWB6F	TSV6295AIPT	TS274AIPT
M24C16-DRDW8TP/K	TL062CDT	ST485BDR
STM6601BM2DDM6F	LMX358IQ2T	LD59015C18R
TLVH431LICT	ST3232ECDR	TS941ILT
TSX631AIYLT	ST25TA02K-DC6C5	M24C32-DFDW6TP
LD39020DTPU47R	STM1061N25WX6F	STWD100YNYWY3F
STM6904PWEDS6F	TSB572IST	TS864IPT
LMV321RIYLT	ST4485EBDR	LDS3985M50R
LM4041BECT-1.2	M95160-DRMF3TG/K	M95080-DRMN3TP/K
M41T93ZQA6F	TSM1012IDT	M24C04-DRDW8TP/K
LE80CD-TR	STM6823TJWY6F	STM708M6F
TS331IYLT	M95040-RMN6TP	TSV6391ILT



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TS931AILT	LM2904WDT	TSX3702IQ2T
STM6778SYWB6F	LD2981ABM30TR	TD352ID
STM6519APBBUB6F	STM6510RCACDG6F	M95320-DFMC6TG
LDK130C08R	LM4041CICT-1.2	STM32F031F6P6TR
ST1S31PUR	TSM1011IDT	TS922AIYDT
TS3011ICT	HCF4051YM013TR	STP16CP05XTTR
STM802SM6F	LK112M15TR	LMV823IST
LDK220C33R	TL082BIYDT	TL431IYDT
LDK120DM33R	TSV6290AICT	STM6717SDWY6F
TSV850ILT	STM703M6F	TL061CDT
TS9511ILT	STM6601GU2BDM6F	TSV994AIYPT
TS972IYDT	LD39130SPUR	STM6601CQ2BDM6F
STM1815TWX7F	M95320-DFMN6TP	LD59015C25R
STP16CPS05XTTR	L6563	TSV851AILT
M95256-DFMC6TG	TS1851ILT	UC3843BD1
L78L12ABD-TR	TS922IPT	L6571BD
TS922AIPT	L4931CD80-TR	LM4041DECT-1.2
TSV624IPT	M24C08-DRMF3TG/K	LD59015C15R
TSX632IQ2T	STC3100QIT	TS1872IYPT
ST1S12G12R	TSM103WID	TSM104WAIDT
M24SR16-YMN6T/2	TSV6393IST	STM6777TGWB6F
TL072IDT	STM8TL52F4P6	M95040-DFMN6TP
SR1HARU	LK112M18TR	M41T00AUDD1F
LDK120PU18R	TSX562IQ2T	M95256-DRDW3TP/K
TS4871ID	OA2ZHA34S	M24C16-DRDW3TP/K
TSV852AIYST	L4931ABD120TR	LDK130M-R
L6615D	STM804SM6F	STM6718TZWY6F
STM6519ACARUB6F	M95160-DWDW4TP/K	M24256-DRMN8TP/K
LDK120M28R	M95256-RDW6TP	LD39020ADTPU21R
LDK120M30R	LDK220C50R	TL082IPT
LDK120C11R	ST232ACDR	LM339EPT
TSV994IDT	TSM1012AID	LM2902YPT
STM6823RWY6F	LM293ST	TSV854IPT
STM6777TZWB6F	MC33172DT	TSC102IYPT
STM6600DQ25DM6F	M24LR64E-RDW6T/2	TSV620ICT
STM6600CS25DM6F	TSV620AICT	M41T82ZM6F
TSV634AIPT	TSM103WAID	ST3232EBDR
STM8TL53F4P6	STLM75M2F	M95512-DFMC6TG
STM6600BQ24DM6F	TS271CDT	TD220IDT
M24M02-DWMN3TP/K	TSV6293IST	LM393PT
ST3232CTR	LD39020TPU32R	TS391IQ2T
LD3985M30R	TS507IYLT	M24C04-DRDW3TP/K
STM1816TWX7F	TSV6390ICT	STM6710JWB6F
SR1CARU	M95256-DFDW6TP	STM8SPLNB1P6
TSX634AIPT	STM8AF6223PCAU	ST26C31BDR
TS951IYLT	LM358PT	TSV611ILT
TS9222IYDT	TSX920ILT	HCF4010YM013TR
TSH122ICT	LDK320AM30R	ST232ECCR
STM6503REAADG6F	STP16CPC05XTTR	LDK120C35R
LDK130C18R	STP08CP05TTR	L78L15ACD13TR





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TS461CLT	TS321AILT	STM6717TGWY6F
M24C32-DFMN6TP	LD39015M33R	LM2904AHYPT
LM4041CECT-1.2	TSX3702IST	TSX561ILT
TS954IYPT	TSM1013ID	STM8L151F3P6
STP16CPS05MTR	LK112M80TR	TL062ACDT
STMPS2141STR	STM6904TGEDS6F	TSV324IYPT
STM1812LWX7F	STBP120DVDK6F	SRC0CS25D
M24LR64E-RMC6T/2	TL081CDT	STM819LM6F
LDK120C08R	TSV631AICT	M24C16-FMN6TP
TS881ICT	STM6503VEAADG6F	ST1S03PUR
TL431ACL5T	MC3303PT	M95020-WDW6TP
LMV824AIYPT	TS931ILT	STM6719TGW6F
TSV635IPT	LD2980ABM30TR	TSM108ID
TS339IPT	STM708RM6F	STM8S103F3U3TR
M41T93RQA6F	TS1871AILT	L6386AD
STM802MM6F	TS331ILT	M24LR04E-RDW6T/2
STP16CPC26MTR	STM706RAM6F	74LCX07YTTR
ST715C33R	STM6720TZWB6F	PM8841D
STMAV340TTR	STM8L101F2U6ATR	ST485ERBDR
TSV911AIYLT	ST890BDR	M95640-DFMN6TP
LDL112DR	STM6904SYEDS6F	TS4871IST
M41T94MQ6F	STM6822TWY6F	STM1815SWX7F
STMPS2242MTR	STM8AF6223PCAX	STMPE1600QTR
LMX358IDT	LM2931D-R	STM6778TWWB6F
TS951RIYLT	M35B32-WMC6TG	STM706PAM6F
STM1816SWX7F	LDL112D18R	STM8S103F3U6TR
KF25BD-TR	M95320-DRMN8TP/K	TSX711IYLT
TSX393IST	STM6513REIEDG6F	STM6519APAAUB6F
LDK320M33R	STM1061N28WX6F	TSU101ICT
LM2903WYPT	LDK130M15R	TS925IDT
STWD100PYW83F	STM6824LWY6F	TS391RILT
ST485EXDR	M95040-DRMN8TP/K	LD39020DTPU30R
TSH82IYDT	L78L05ABD13TR	TS9511RIYLT
TSV852IQ2T	M74HC259YRM13TR	ST485EBDR
TS831-3IDT	M24512-DRMF3TG/K	STM8S103F2P6TR
TSV635AIPT	M24C64-DRDW3TP/K	TSV6391AILT
ST8R00WPUR	TSV6291AICT	L6385ED013TR
M93C86-RDW3TP/K	HVLED002	TSX9291ILT
LD39020ADTPU25R	STOD32ATPQR	MC33172D
TSX9291IYLT	STM8L101F2P6	HVLED002TR
TSU102IQ2T	M24C02-DRMN3TP/K	STLQ50C50R
STP16DPS05MTR	TSX564IQ4T	SR1PAAU
ST1480ACDR	LDK130PU25R	M24C64-FMH6TG
STM1001SWX6F	LDK130C12R	STM810MWX6F
LM324EPT	TSX562IYST	M24512-DRMN8TP/K
M95128-DRDW8TP/K	M24C32-DRMF3TG/K	STM6780YWB6F
M95080-DRMF3TG/K	M24256-DRDW8TP/K	STM32L041F6P7
STM819MM6F	M74HC595YRM13TR	STM706TAM6F
TL1431ACL5T	STM6719SHWB6F	ST232ABDR
TSX712IYST	STM6513VEIEDG6F	STM802TM6F



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TSV622AIDT	TL072BIDT	L78L05CD13TR
TS27M4CPT	TS4962IQT	LM2903PT
M24C32-DRMN8TP/K	LDK130M12R	M24256-DRDW3TP/K
TD351IDT	M24C16-DRMF3TG/K	TSX561AILT
L4931CD35-TR	STM6601CA2BDM6F	TS3011ILT
TSV851AICT	TS321AIYLT	STM6822RWY6F
TSV911AIDT	LD39200PU33R	STM1061N27WX6F
TD221IDT	STM1813MWX7F	TSV6291ICT
M95160-DRDW3TP/K	TSV991AIQ2T	STM32F042F6P6
LDK130PU30R	STM690SM6F	M24SR64-YMN6T/2
M24128-DRMN8TP/K	STM8L051F3P6TR	LDK220M36R
LD39015M25R	74LCX125YTTR	STM6822MWY6F
STM6519ALARUB6F	TSM104WID	PM8851D
M74HC14YTTR	LM2901PT	TSM1014AID
OA2MPA22Q	TSU101ILT	LM2902AWYPT
M24SR04-YMN6T/2	LDK130C33R	ST232CTR
TSV521ICT	LMV331ICT	LD2980CM18TR
M24C04-DRMN8TP/K	LM311D	ST3485EBDR
TSX7191ILT	LMV358IYDT	LD1086PUR
TSV633IST	OA1ZHA22C	TSV6294AIPT
M74HC595YTTR	TSV912AIYST	TSV911ILT
LD39020ATPU185R	STM32L011F4U6TR	LDK120M32R
TSU102IST	LDK120C15R	TL072BIYDT
LMV321LICT	TS1854IPT	ST1L05DPUR
TS27M2BIDT	STM8L101F3P6TR	TSV321RAILT
STM6717SVWY6F	M95020-DRMF3TG/K	STM8L101F1U6ATR
LM258AYDT	TS884IPT	M24C02-DRMN8TP/K
STP4CMPQTR	LM2904YST	LMV321LILT
TSV992IYST	TS271IDT	TSC102IPT
TS912BIYDT	M95080-DRDW8TP/K	TS9222IPT
LD39015M08R	KF33BD-TR	M95640-DWDW4TP/K
STM6510SCACDG6F	STM1061N29WX6F	TS3021HIYLT
TSZ121ILT	STP16CP05MTR	STM32F070F6P6
M95160-DRDW8TP/K	LDK220M33R	L6615D013TR
UC3844BD1	M24C08-DRDW8TP/K	TSX631AILT
LM258WPT	TSV732IQ2T	M95512-DRMN8TP/K
M24M01-RDW6TP	M95640-DRMN3TP/K	ST3485ECDR
LD59015C30R	ST202EBDR	STM1001TWX6F
STM6718TGWY6F	OA1NP22C	STM6777SFWB6F
M24C64-DFMN6TP	TSX632AIYST	M95040-DRDW3TP/K
STM6825RWY6F	STM805RM6F	TSV620AILT
TL1431CL3T	STM6822ZWY6F	TSX921IYLT
STM806RM6F	STM32F042F4P6TR	TS925AID
TL062BCDT	STM8AF6223PAU	TSM1014IDT
STM1818SWX7F	M95640-DRDW3TP/K	TSC1021BIPT
ST26C31BTR	M24C32-DFMC6TG	AS11P2TLRQ
TS952IYPT	TSX631IYLT	M24SR02-YDW6T/2
TL084CPT	L78L08ACD13TR	STM6823MWY6F
M74HC126YTTR	STM1817SWX7F	TS972IYPT
TSV630AICT	L6725	ST1S09PUR



## Public Products List

LDK120M08R	STM8AF6223PDU	TSV6291AILT
TS9224IYDT	STM6779LWB6F	TSX923IST
TSV621AICT	LM317LD13TR	TS507ILT
STM32F042F6P7	TSV911RILT	TSV853IST
LDK130C15R	LM2903Q2T	ST202ECTR
STM8S903F3U3TR	STM795TM6F	TSH24IDT
TSV855AIPT	TS4436AICT	STM1061N30WX6F
STM8L151F2P6	STM6905TGEDS6F	TSM1011AIDT
STMPS2161MTR	STM8S103F3P6TR	LK115D33-TR
STMPS2151STR	LMV822IYST	TSV914IDT
TS334IYPT	TSM1013AIDT	M24C16-DRMN3TP/K
LDK130PU18R	STC3105IQT	TSV991IYLT
TSV851AIYLT	TL061ACDT	TSX712IYDT
UC3842BD1013TR	TSV630IQ2T	STLQ015M18R
HCF4021YM013TR	TSV6290AILT	TSV620ILT
STM1061N22WX6F	STM6718SYWY6F	TS514IDT
M95160-DFDW6TP	STMPS2272MTR	LMV324LIPT
L79L15ABD13TR	STM6719SYWB6F	STP16DPP05XTTR
TS971ILT	STM795RM6F	TSM1011ID
STM8AF6223PCU	L4931CD33-TR	TS1871AIYLT
TS861AILT	TSV630AILT	TSX561IYLT
STM810SWX6F	TSV6390ILT	STM6779YWB6F
M95512-DRMN3TP/K	STM802RM6F	ST1S12GR
STP16CPP05XTTR	TL082CPT	LD39015M12R
TSX561AIYLT	M24C04-DRMN3TP/K	TL431AIYDT
STWD100YNPWY3F	LDK130M10R	STLA02PUR
LD1117D33CTR	TSC1021AIYPT	STM6510WCACDG6F
TSC103IYPT	M24C16-DRMN8TP/K	LDK120C29R
STM6821TWY6F	STC4054GR	TSV851ICT
TS912BIDT	M24C02-DRMF3TG/K	LDK120PU12R
LD39020ADTPU33R	STM704M6F	ST95HF-VMD5T
STM8AF6223PCX	M24C02-DRDW8TP/K	STBP120CVDK6F
STLQ50C-R	TSV634IYPT	M93C86-RMN3TP/K
M74HC08YTTR	LDK220M40R	LDK320AM33R
TS862IDT	TSC1031IYPT	STP16DP05MTR
M24512-DRDW8TP/K	M24M01-DFDW6TP	STM6718TWY6F
STAP16DPS05XTTR	ST75185CDR	STBP110GTDJ6F
L4931CD27-TRY	STP2CMPQTR	STBP110CVDJ6F
TSV6292ILT	L6725ATR	MC1458ID
ST3232CWR	ST232BWR	74V1T08CTR
TSV632ILT	STTS2002B2DN3F	TSV622AILT
M35B32-WDW6TP	L4931ABD35-TR	TS831-5ID
STOD03ASTPUR	L6910G	ST202EBWR
M95040-RMB6TG	ST3232BWR	ST202CWR
STBP110ETDJ6F	TSV6392ILT	TSH62CDT
STG3482QTR	M95080-WMB6TG	L4931ABD35-TRY
L6910	STMPE801QTR	TSV6392AILT
L6910GTR	STOD2540PUR	TSV622ILT
L6725A	TSV6292AILT	STP04CM05MTR
TSV632AILT	L4931CD27-TR	STG5223QTR



## Public Products List

ST232CWR	ST763ACDTR	L6910TR
M95020-RMB6TG		



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## Moisture Barrier Bag for 3-layer and 4-layer PPF / $\mu$ PPF(\*) FPN, SOT, SO & TSSOP REELS and TUBES

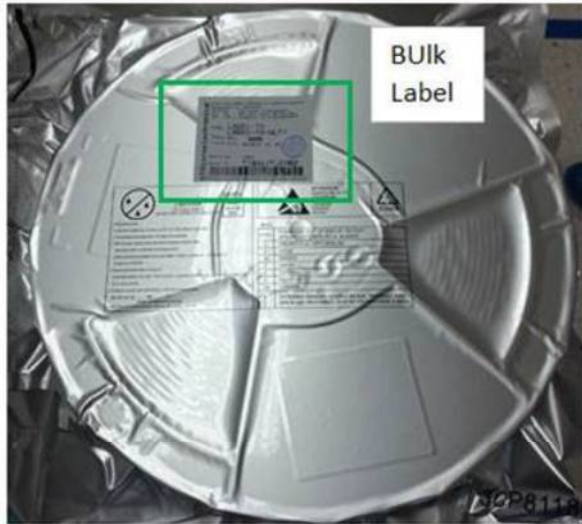
(\*) PPF: Pre plated frame

### What is the change?

The reels and tubes of selected packages with Pre plated lead frames will be packed into a Moisture Barrier Bag (MBB).

The Moisture Barrier Bag will contain desiccant. The Label will be positioned on the MBB. Once the MBB is removed, there is no change for the rest: the reel has a label, not the tubes.

#### A. Carrier Tape



#### B. Tube



The perimeter of this Process Change Information is:

1. 3-layer and 4-layer PPF /  $\mu$ PPF Frame (PrePlatedFrame / Micro PrePlatedFrame),
2. FPN, SOT, SO and TSSOP Packages,
3. Reels and Tubes packing
4. from ST Shenzhen (China), ST Bouskoura (Morocco), ST Muar (Malaysia), ST Calamba (Philippines) and ST Subcontractors (Carsem Semiconductor, Carsem China, UTAC Thai Limited, NFME, AMKOR ATP3, AMKOR ATP1)
5. of MMS, IPD and AMS Groups.

Two documents are related to this PCI:

- PCI CRP/15/9379, has been sent W36 2015.
  - Its perimeter was: 4-layer PPF (PrePlatedFrame) SO8N & TSSOP8 packages from ST Shenzhen (China) of MMS Group.
- PCI MMS/16/9678 has been sent W08 2016.
  - Its perimeter was: the reels of VFQFPN32, UDFFPN8, WDFFPN8, UDFFPN5 packages from ST Calamba (Philippines) & Amkor subcontractor (Philippines) of MMS Group.

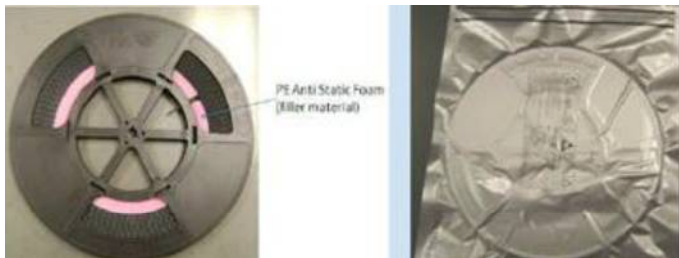
The bags qualified were plastics bags, transparent and antistatic. To further protect the product from uncontrolled environment, Moisture Barrier Bag has been selected.

For STCalamba Back End plant, the bulk quantity is low versus the reel size, so filler foams are used to prevent collapsing on empty pockets during vacuum sealing.

- 1) 13 inch reel for 8 mm carrier tape width: Pink foam only fits the outer reel of the reel type.



- 2) 13 inch reel for 12 mm carrier tape width: Pink foam can fit the inner reel of the reel type.



### Why?

Moisture barrier bag will protect the product during exposure to uncontrolled environment before product usage (transportation/storage).

### When?

The new packing of the 3-layer and 4-layer PPF /  $\mu$ PPF Frame, for FPN, SOT, SO & TSSOP packages:

1. Assembled at ST Shenzhen (China), ST Bouskoura (Morocco), ST Muar (Malaysia) and ST Calamba (Philippines) will start from W20.

2. Assembled at ST Subcontractors (Carsem Semiconductor, Carsem China, UTAC Thai Limited, NFME, AMKOR ATP3, AMKOR ATP1) will start from W20 to W26.
  - a. AMKOR ATP1 : W26
  - b. AMKOR ATP3 : W26
  - c. Carsem China : W20
  - d. Carsem Semiconductor : W26
  - e. UTAC Thai Limited : W20
  - f. NFME : W20

### **How will the change be qualified?**

The packing with the MBB has been qualified using the standard ST Microelectronics Corporate Procedures for Quality & Reliability.

Major steps of the qualification plan are:

- Workability
- Construction checking
- Reliability checking

The Qualification Report will be available:

1. W20 for parts manufactured at ST Shenzhen (China), ST Bouskoura (Morocco), ST Muar (Malaysia) and ST Calamba (Philippines)
2. W20 to W26 for part manufactured at ST Subcontractors (Carsem Semiconductor, Carsem China, UTAC Thai Limited, NFME, AMKOR ATP3, AMKOR ATP1)

### **What is the impact of the change?**

- **Form:** No change
- **Fit:** No change
- **Function:** No change

List of products impacted by this change is attached to this notification.

### **How can the change be seen?**

Change will be seen at unpacking.

### **Appendices**

Appendix A: Product Change Information

Appendix B: Qualification / Reliability Plan



**Appendix A- Product Change Information**

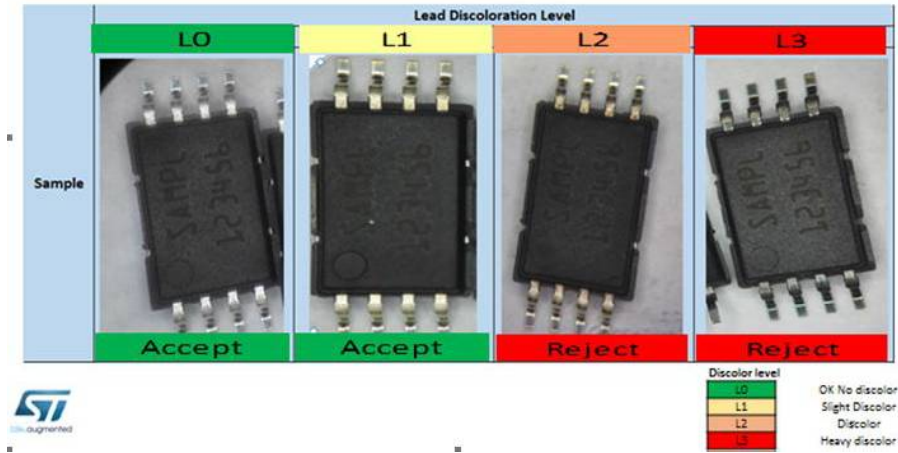
<b>Product family / Commercial products:</b>	FPN, SOT, SO & TSSOP assembled with 3-layer and 4-layer PPF / $\mu$ PPF at ST Shenzhen, ST Bouskoura, ST Muar, ST Calamba and ST Subcontractors
<b>Customer(s):</b>	All
<b>Type of change:</b>	Packing
<b>Reason for the change:</b>	Protection against uncontrolled environment.
<b>Description of the change:</b>	The reels and tubes of the 3-layer and 4-layer PPF / $\mu$ PPF FPN, SOT, SO & TSSOP packages from ST Shenzhen, ST Bouskoura, ST Muar, ST Calamba and ST Subcontractors will be packed into a MBB.
<b>Forecast date of the change:</b>	Week 20 / 2016 (ST Back End plants) Week 20 to 26 / 2016 (ST Subcontractors)
<b>Estimated date of first shipment:</b>	Week 22 / 2016 (ST Back End plants) Week 22 to 27 / 2016 (ST Subcontractors)

**Appendix B- Qualification / Reliability Plan and Results:**

**Test Condition:** Aging at 85deg C, 85% RH, 240hrs

**Discoloration Criteria:**

- Cosmetic discoloration (L0 & L1): ACCEPTABLE
- Heavy discoloration (L2 & L3): REJECT



**Test Flow:**

1. 100% Inspect units before aging test.
  - To ensure L0 discoloration before aging test.
2. Pack units with Dessicant + MBB Bag
3. Vacuum Seal the parts.
4. Subject to Aging Test Chamber.
5. 100% Inspect the units after aging test.

**A. ST Back End Sites**

	Bouskoura	Calamba	Muar	Shenzhen
Package	TSSOP	QFN	SOIC	TSSOP
Visual, 300u	Pass	Pass	Pass	Pass

**B. ST Subcontractors**

	Carsem S	Carsem China	UTAC THAI	NFME	AMKOR ATP1	AMKOR ATP3
Package	SOT	FPN	FPN	FPN	TSSOP	FPN
Visual, 300u	Pass	Pass	Pass	Pass	Pass	Pass