

Process Qualification Report

Reliability By Design

Qualification Description:

The information contained herein represents proof of Reliability and Performance of the baseline process technology listed below in accordance with the Qualification Plan and test methods referenced in Section 8.0, after exposure to a variety of environments (electrical, thermal, humidity, etc) and mechanical events that may occur during installation and operational lifetime of the product. Upon conclusion of the testing the product continued to operate within specification limits, demonstrating its capability of reliable operation throughout its lifetime.

The purpose of this report is to present Qualification Test results of the of referenced process technology. The Pericom product data presented in this report qualifies all products manufactured using the exact semiconductor materials and processing techniques used in the baseline process and its off-shoot processes. The report describes the qualification test program, procedures used, criteria enforced (at the time of product validation), and the resulting test data obtained during the Qualification Test. The materials and processing techniques used in the baseline process are incorporated into the off-shoot processes, so the quality/integrity of the baseline and off-shoots (i.e.: 2PxM, 1PxM) processes will be equivalent.

Lot Background Information:

 Qual Test Date:
 Jul-2010 update: Jan-2015

 Process Technology:
 0.50um 3P2M

 Foundry & Code:
 MGN (G)

 Qual Test Number:
 QU-05013 / QU10004 / QU-13004

 Feb-2009 DHTOL test
 Nov-2011 ELFR test

By Ext. Process: 0.50um 3PxM
0.50um 2PxM
0.50um 1PxM

Qual Vehicle(s): PT7C5022A1ATAE
PT7M8202B33TA5E
PT7C5022A5ATAE
PT5PD2461ZEE / PI5A3157BC6E
PT7C4311ZEE

Pericom's Qualification Test Results:

Stress Test	Test Procedure	Test Conditions	Duration (hrs)	# of Lots	Samples per Lot	Results Pass/Fail
Dynamic High Temp	JESD22-A108	1000 hrs 5.5V 150°C	168	1	77	77 / 0
Operating Life (DHTOL)		1000 hrs 5.5V 150°C	500	1	77	77 / 0
PT7C5022A5ATAE		1000 hrs 5.5V 150°C	1000	1	77	77 / 0
Dynamic High Temp	JESD22-A108	1000 hrs 5.5V 150°C	168	1	77	77 / 0
Operating Life (DHTOL)		1000 hrs 5.5V 150°C	500	1	77	77 / 0
PT7M8202B33TA5E		1000 hrs 5.5V 150°C	1000	1	77	77 / 0
Dynamic High Temp	JESD22-A108	1000 hrs 5.5V 150°C	168	1	80	80 / 0
Operating Life (DHTOL)		1000 hrs 5.5V 150°C	500	1	80	80 / 0
PT7C5022A1ATAE		1000 hrs 5.5V 150°C	1000	1	80	80 / 0
Dynamic High Temp	JESD22-A108	1000 hrs 6.0V 125°C	168	3	77	231 / 0
Operating Life (DHTOL)		1000 hrs 6.0V 125°C	500	3	77	231 / 0
PI5PD2561ZEE (3 lots)		1000 hrs 6.0V 125°C	1000	3	77	231 / 0
Dynamic High Temp	JESD22-A108	1000 hrs 6.6V 125°C	168	1	77	77 / 0
Operating Life (DHTOL)		1000 hrs 6.6V 125°C	500	1	77	77 / 0
PI5A3157BC6E		1000 hrs 6.6V 125°C	1000	1	77	77 / 0
Dynamic High Temp	JESD22-A108	1000 hrs 6.6V 125°C	168	3	77	231 / 0
Operating Life (DHTOL)		1000 hrs 6.6V 125°C	500	3	77	231 / 0
PT7C4311ZEE (3 lots)		1000 hrs 6.6V 125°C	1000	3	77	231 / 0
Early Life Failure Test	JESD22-A108	48 hrs 6.0V 125°C	168	3	1000	3000 / 0
PI5PD2561ZEE (3 lots)						
	ELFR based on 3000 units	ELFR (55C, 0.7eV, 5.5V, 60%)	40.6 7.6			
	ELFR after 48 hrs FIT Based on 773 units	FIT Rate (55C, 0.7eV, 5.5V, 60%)				
	HTOL after 1000 hrs.	Calculated MTBF (hours)		132,103,152		
Temp Cycle Test	JESD22-A104	-65°C to 150°C, 500cyc	100 cycles	3	77	231 / 0
PT7C5022A5A, PT7M8202B33, PT7C5022A1A (1 lot ea)		-65°C to 150°C, 500cyc	500 cycles	3	77	231 / 0
Temp Cycle Test	JESD22-A104	-65°C to 150°C, 500cyc	100 cycles	3	77	231 / 0
PI5PD2560A, PI5PD2561, PI5PI	D2561A (1 lot ea)	-65°C to 150°C, 500cyc	500 cycles	3	77	231 / 0
High Temp Storage	JESD22-A103	1000hrs, 0V, 150°C	168 hrs	3	77	231 / 0
(HTS)		1000hrs, 0V, 150°C	500 hrs	3	77	231 / 0
PT7C5022A5A, PT7M8202B33, PT7C5022A1A (1 lot ea)		1000hrs, 0V, 150°C	1000 hrs	3	77	231 / 0
High Temp Storage	JESD22-A103	1000hrs, 0V, 150°C	168 hrs	3	77	231 / 0
(HTS)		1000hrs, 0V, 150°C	500 hrs	3	77	231 / 0
PI5PD2560A, PI5PD2561, PI5PD2561A (1 lot ea)		1000hrs, 0V, 150°C	1000 hrs	3	77	231 / 0
Latch Up Test	JESD78	Report available by Device				
ESD-HBM Test						

Qualification by Extension Information:

It is valid to use the reliability data of a particular process technology and apply to all products within this process technology family. All parts within the same family are designed to the same rules (layout & electrical), and manufacturing is controlled by SPC. Within a product family, a device can only be fabricated on one process technology option.

If there are any questions about this qualification, please contact Quality Support at: customerquestion@pericom.com

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 Date:
 Jul-2010 update: Jan-2015

 Subject:
 Pericom Process Qualification Report

 Mfg-Fab-Process:
 MGN (G)
 0.50um 3P2M
 by extension: 3PXM, 2PXM, 1PXM

 Qual Vehicle(s):
 PT7C5022A1ATAE, PT7M8202B33TA5E, PT7C5022A5ATAE, PI5PD2561ZEE, PI5A3157BC6E

Part Numbers qualified by extension using this Fab and Process:

PI4ULS5V102GAE	PT7C5020ALC-2GWF	PT7C5024AL4TAE	PT7M7809TTE	PT7M8202B28TA5E
PI4ULS5V104GAE	PT7C5020ALC-2WF	PT7C5027B1-2DE	PS8A0143BPE	PT7M8202B33TA5E
PI5A3157BC6E	PT7C5020ALC-5GDE	PT7C5027B1-5GWF	PT8A3227AWE	PT7C5036A1-2GDE
PI5A3158BZAE	PT7C5020ALC-5GWF	PT7C5027B2-2DE	PT8A3227APE	PT7M8206B12TA5E
PS8A0040CPE	PT7C5006ANC-2DE	PT7C5027B3-2DE	PT7M7809TUWF	PT7C5036A1-2DE
PS8A0040APE	PT7C5020ALF-2GDE	PT7C5027C1-2DE	PT7M7809ZTE	PT7C5036A1-2WF
PS8A0040AWE	PT7C5020ALF-2GWF	PT7C5027C1-2WF	PT7M7809ZTE	PT7M8206B18TA5E
PS8A0040AWE	PT7C5020ALF-2WF	PT7C5027C1-5GDE	PT7C5027J1-5GDE	PT7C5037A1-2GDE
PS8A0040CWE	PT7C5020ALF-5GDE	PT7C5027C1-5GWF	PT7M7810RTE	PT7C5037A1-2GWF
PS8A0040CWE	PT7C5020ALF-5GWF	PT7C5027C1-5UWF	PT7M820125TA3E	PT7C5037A1-2DE
PS8A0123ASE	PT7C5021AATAE	PT7C5027C2-2DE	PT7M7810STE	PT7C5037A1-2WF
PS8A0123BSE	PT7C5021AATAE	PT7C5027C2-2WF	PT7M7810TTE	PT7M820518TA3E
PS8A0125BSE	PT7C5006ANC-2WF	PT7C5027C2-5GDE	PT7C5035ALD-2DE	PT7M820525TA3E
PS8A0089QWE	PT7C5006ANCWE	PT7C5027C2-5GWF	PT7C5035ALD-2GDE	PT7M820528TA3E
PS8A0089SWE PS8A0089TWE	PT7C5006AND-2DE PT7C5006AND-2WF	PT7C5027C3-2DE	PT7C5035ALD-5GDE	PT7M820530TA3E PT7M820533TA3E
PS8A00891WE PS8A0106SE		PT7C5027C3-5GDE	PT7C5035ALD-2GWF	
PS8A0143APE	PT7C5006ANE-2DE PT7C5006ANE-2WF	PT7C5027C4-2DE PT7C5027C4-2WF	PT7C5035ALD-5GWF PT7M7811STBE	PT8A3289QWE PT8A3351ALE
PS8A0143BWE	PT7C5006ANE-2VF	PT7C5027C4-2VF	PT8A3227PE	PI4ULS5V102UE
PS8A0143HWE	PT7C5009AL1-2BE	PT7C5027C5-2DE	PT8A3355ALE	PT8A2766EWE
PT7C5002LBWE	PT7C5009AL1WE	PT7C5027KC1-2WF	PT7C5027B3-2WF	PT7M84111228TT6E
PT7C5002LBWE	PT7C5009AL1WE	PT7C5027KC1-2WF	PT7C5027B3-2WF	PT7M8202B2ATA5E
PT7C4302WE	PT7C5009AL2-2DE	PT7C5027KC1-5GWF	PT7C5027B3-5GWF	PT7M8206B2ATA5E
PT7C5002LD-2WF	PT7C5003AL2-2WI	PT7M8201B15TA5F	PT7M84112818TT6F	PT7M8208B30ZUE
PT7C4307WE	PT7C5009AL3-2DE	PT7C5027KC2-5UWF	PT7M820128TA3E	PT7C5035BLC-2GWF
PT7C5002LE-2WF	PT7C5009AL3-2DE	PT7M8201B30TA5E	PT7M820130TA3E	PT7C5035BLC-2GWI
PT7C5002LEWE	PT7C5009AL4-2DE	PT7C5035ALA-2DE	PT7M820112TA3E	PT7C5035BLC-5GWF
PT7C4311WE	PT7C5009AL4-2WF	PT7C5035ALA-2DE	PT8A3263AWE	PT7C5038A1-2GDE
PT7C5006ANB-2WF	PT7C5009AL5-2DE	PT7C5035ALA-2WF	PT8A3263APE	PT7C5038A1-2GWF
PT7C4311ZEE	PT7C5027B1-2WF	PT7C5035ALA-2WF	PS8A0143AWE	PT7C5036G1-2WF
PT7C5006ANDWE	PT7C5027B1-5GDE	PT7C5035ALB-2WF	PT7M820118TA3E	PT7C5036G1-2DE
PT7C5006ANEWE	PT7C5009AL5WE	PT7C5035ALC-2DE	PT7M820133TA3E	PT7C5036G1-2GDE
PT7C5009AL2WE	PT7C5009AN1-2WF	PT7C5035ALC-2WF	PT7M8206B25TA5E	PT7C5036G1-2GWF
PT7C5009AL3WE	PT7C5027B2-2WF	PT7C5035ALD-2WF	PT7M8206B28TA5E	PT8A2766AWE
PT7C5009AL4WE	PT7C5027B2-5GDE	PT7C5035ALF-2DE	PT7M8206B30TA5E	PT8A2766DWE
PT7C5002LB-2DE	PT7C5027B2-5GWF	PT7C5035ALF-2WF	PT7M8206B13TA5E	PI5A4157CE
PT7C5009AL6-2DE	PT7C5009AN2-2WF	PT7C5036A1-2GWF	PT7M8206B15TA5E	PI5PD2065UEE
PT7C5009AL6WE	PT7C5035ALA-2GDE	PT7C5036B1-2GWF	PT7M8202B13TA5E	PI5A4158ZAE
PT7C5009AN1-2DE	PT7C5009AN3-2WF	PT7C5037B1-2GWF	PT7M8201B12TA5E	PT7C5027C2-5UWF
PT7C5002LB-2WF	PT7C5035ALA-5GDE	PT7M6122NLTA3E	PT7M8202B30TA5E	PT7C5027C3-2WF
PT7C5009AN1WE	PT7C5035ALA-5GWF	PT8A3298PE	PI5PD2065WE	PT8A2766ITAE
PT7C5009AN2-2DE	PT7C5035ALB-2DE	PT8A3298WE	PI5PD2065TAE	PT7C5027C3-5GWF
PT7C5002LC-2DE	PT7C5035ALB-2GDE	PT8A3353ASE	PI5PD2069WE	PT7C5027C3-5UWF
PT7C5009AN2WE	PT7C5035ALB-2GWF	PT8A3353BSE	PI5PD2068-1UWF	PT8A2767FWE
PT7C5009AN3-2DE	PT7C5009AN4-2WF	PT8A3355ASE	PT8A3298AWE	PT8A3222WE
PT7C5002LC-2WF	PT7C5035ALB-5GDE	PT8A3355BSE	PT8A3298APE	PT7C5027C4-5GDE
PT7C5009AN4-2DE	PT7C5035ALB-5GWF	PT8A3410WE	PT7M8208B28ZUE	PT7C5027C4-5GWF
PT7C5002LD-2DE	PT7C5014AL1-2DE	PT8A3411PE	PT7M8208B12ZUE	PT7C5027C4-5UWF
PT7C5009AN5-2DE	PT7C5035ALC-2GDE	PT8A3411WE	PT7M8208B18ZUE	PT7C5020ALF-2GDE
PT7C5009AN5-2WF PT7C5009AN6-2DE	PT7C5035ALC-2GWF	PT8A3412PE	PT7M8201B18TA5E	PT8A3227WE
	PT7C5020ALA-2DE	PT8A3412WE	PT7M8201B25TA5E	PT7C5020ALF-5GDE
PT7C5009AN6-2WF	PT7C5035ALC-5GDE	PT8A3413PE PT8A3413WE	PT7M8201B28TA5E	PT7C5020ALF-2GWF
PT7C5002LDWE PT7C5014AL1-2WF	PT7C5035ALC-5GWF PT7C5020ALB-2DE		PT7M8201B33TA5E PT8A3222PE	PT7C5020ALF-2WF PT7C5020ALF-5GWF
		PT7M6130NLTA3E		A CONTROL OF THE CONT
PT7C5014AL1-3DE PT7C5015AL1-2DE	PT7C5020ALC-2DE PT7C5020ALD-2DE	PT7M6133NLTA3E PT7M6142NLEC3E	PT7M8202B12TA5E PT7C5036B1-2WF	PT7C5035ALF-2GDE PT7C5035ALF-5GDE
PT7C5015AL1-2DE	PT7C5020ALD-2DE	PT7M6427NLTA3E	PT7C5036B1-2WF	PT7C5035ALF-5GDE
PT7C5015AL1-2WF	PT7C5020ALF-2DE PT7C5020ALF-2DE	PT7M6427NLTA3E PT7M6430NLTA3E	PT7C5036B1-2DE PT7C5036B1-2GDE	PT7C5035ALF-2GWF
PT7C5002LE-2DE	PT7C5020ALF-2DE PT7C5020ALS-2DE	PT7M7803RTE	PT7M8202B18TA5E	PS8A0389MWE
PT7C5020ALA-2GDE	PT7C5020ALS-2DE PT7C5021ABTAE	PT7M7803STE	PT7C5037B1-2WF	PS8A0389QWE
PT7C5020ALA-2WF	PT7C5021ACTAE	PT7M7803TTE	PT7C5037B1-2WF	PS8A0389UWE
PT7C5020ALA-5GDE	PT7C5021ACTAE PT7C5021ADTAE	PT7M8202B15TA5E	PT7C5037B1-2GDE	PS8A0399MWE
PT7C5020ALA-5GWF	PT7C5021ABTAE PT7C5021AETAE	PT7M7809RTE	PT7M8202B25TA5E	PS8A0399QWE
PT7C5006ANB-2DE	PT7C5021KDTAE	PT7M7809RTE	PT7C5037G1-2WF	PS8A0399UWE
PT7C5006ANB-2DE	PT7C5021RDTAE	PT7M7809RUWF	PT7C5037G1-2WF	PT7C5027C5-2WF
PT7C5020ALB-2GDE	PT7C5022A1ATAE PT7C5022A3ATAE	PT7M7809ROWF	PT7C5037G1-2DE	PT7C5027C5-5GDE
		Lander-Artificial Without Participation	PT7C5037G1-2GUE	PT7C5027C5-5GWF
	PT7C5022A5ATAE			
PT7C5020ALB-2WF	PT7C5022A5ATAE	PT7M7809STE PT7M8206B33TA5E		
PT7C5020ALB-2WF PT7C5020ALB-5GDE	PT7C5022A7ATAE	PT7M8206B33TA5E	PT7C5038B1-2GDE	PT7C5027C5-5UWF
PT7C5020ALB-2GWF PT7C5020ALB-5GDE PT7C5020ALB-5GWF PT7C5006ANBWE				

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Jul-2010 update: Jan-2015
Pericom Process Qualification Report
MGN (G) 0.50um 3P2M Date:

Subject:

Mfg-Fab-Process: 3PxM, 2PxM, 1PxM by extension:

Qual Vehicle(s): PT7C5022A1ATAE, PT7M8202B33TA5E, PT7C5022A5ATAE, PI5PD2561ZEE, PI5A3157BC6E

Part Numbers qualified by extension using this Fab and Process:

		Terroscoro	Teres y a superior a series	Torrace out
PT7C5020ALD-2WF PT7C5020ALD-5GWF	PT7M8216B18XZE PT7M8216B20XZE	PT7C5027C1-5UUWF PT8A2766JTAE	PI6ULS5V9517AZEE PI6ULS5V9517AUE	PT7C5027KC5-2WF
PT7C5020ALD-5GWF	PT7M8218B09CE	PI6C4500DEDR	PI6ULS5V9517AUE	PT7C5027KC5-5GDE PT7C5027KC5-5GWF
PT7C5035ALA-2GDE	PT7M8218B10CE	PI5A3166CE	PT8A3299MWE	PT7C5027KC5-5UWF
PT7C5035ALA-5GDE	PT7M8218B11CE	PI5A3166TAE	PT8A3299QWE	PT8A95A02HE
PT7C5035ALA-2GWF	PT7M8218B12CE	PI3A125BCE	PI3CH3244ZHE+C	PT8A9000HE
PT7C5035ALA-5GWF	PT7M8218B25CE	PI3A125BTAE	PI3CH800ZHE+C	PT7M6127NLTA3E
PT7M8208B33ZUE	PT7M8218B28CE	PT8A3263HWE	PI3CH360LE+C	PT7M6250CLTA3E
PT8A3299UWE	PT7M8218B30CE	PT8A3263IWE	PI3CH480QE+C	PT7M6118NLTA3E
PI4ULS5V4557ZHE	PT7M8218B33CE	PS8A0143IWE	PI3CH281QE+C	PT7M6140NLTA3E
PI4ULS5V4555ZHE PT8A3289TWE	PT7M8218B18CE	PT8A3289SWE	PI3CH200LE+C	PT7M6135NLTA3E
PT8A3351ASE	PT7M8218B20CE PT7M8218B09TAE	PI4ULS5V104ZBE PI5A3158ZAE	PI3CH480LE+C PI3CH401LE+C	PT7M6129NLEC3E PT7M6143NLC4E
PT7M7811RTBE	PT7M8218B10TAE	PI5A3157CE	PI3CH400LE+C	PT7M6122CLTA3E
PT7M7811ZTBE	PT7M8218B11TAE	PI5A3167CCE	PI3CH800LE+C	PT7M6428NLTA3E
PT7M7811MTBE	PT7M8218B12TAE	PI5A3167CTAE	PI3CH1000LE+C	PT7M6529NLXVE
PT7M7811TTBE	PT7M8218B25TAE	PI5A121CCE	PI3CH3244LE+C	PT7M6530NLXVE
PT7M7811LTBE	PT7M8218B28TAE	PI5A121CTAE	PI3CH800QE+C	PT7M7811RTAE
PT7M7812STBE	PT7M8218B30TAE	PT7C5027KC1-5GDE	PS8A0099QWE	PT7M7811STAE
PT8A3353ALE	PT7M8218B33TAE	PT7C5027KC1-2DE	PS8A0099MWE	PI6ULS5V9515AZEE
PI4ULS5V4558ZNE	PT7M8218B18TAE	PT7C5027KC2-2WF	PS8A0099UWE	PI6ULS5V9627AQE
PI5A4599BCE PI5A121BCE	PT7M8218B20TAE PI5A4157TAE	PT7C5027KC2-5GWF PT7C5027KC2-2DE	PT7M820512TA3E PT7M820513TA3E	PT7M6518NLTA5E PT7M6130NLC4E
PT7C5020ALS-2GDE	PI5A3167TAE	PT7C5027KC2-2DE	PT7M820515TA3E	PI5A221BZEE
PT8A3410PE	PI5PD1922BWE	PI4ULS5V201TAE	PT7C5027B4-5GWF	PT7C5002LB-2WF
PT7C5020ALS-5GDE	PT7M8220B12TD5E	PI4ULS5V202XVE	PT7C5027B4-5GDE	PI6ULS5V9627AZYE
PT7C5020ALS-2GWF	PT7M8220B15TD5E	PT7M6144NLEC3E	PT7C5027B4-2WF	PI5A3157BZUE
PT7C5020ALS-2WF	PT7M8220B18TD5E	PT7M6127NLTA5E	PT7C5027B4-2DE	PI3CH1010LE
PT7C5020ALS-5GWF	PT7M8220B25TD5E	PT7M6128NLTA5E	PT7C4311ZEE	PI3CH3345ZHE
PT7C5037F1-2GDE	PT7M8220B33TD5E	PI6ULS5V9509WE	PT7C4511WE	PT7C5027KC1-6GDE
PT7C5037F1-2DE	PT7M8220B12TD3E	PI6ULS5V9509UE	PI4ULS5V201XVE	PT7C5027KC1-6GWF
PT7C5037F1-2GWF PT7C5037F1-2WF	PT7M8220B15TD3E	PT7M6142NLEXVE	PI4ULS5V202UE	PT7C5027KC2-6GDE
PI3C3125LE	PT7M8220B18TD3E PT7M8220B25TD3E	PT7M6144NLEXVE PT7M6427NLTA5E	PI6ULS5V9306WE PT7M6127NLC4E	PT7C5027KC2-6GWF PT7M6422CHTA3E
PI3C3123LE PI3C32X245BE	PT7M8220B23TD3E	PI5PD2069UEE	PI5PD4610ATAE	PI3CH1012QE
PT7C503818B1-2GDE	PT7M8220B12TA5E	PT7M6430NLXVE	PT8A94B02WE	PT7C5027C6-5GDE
PT7C503818B1-2DE	PT7M8220B15TA5E	PT7M6529NLTA5E	PT7C6035ALC-5GDE	PT7C5027C6-5GWF
PT7C503818B1-2GWF	PT7M8220B18TA5E	PT7M6530NLTA5E	PT7M6223CLTA3E	PT7C5027C6-2GDE
PT7C503818B1-2WF	PT7M8220B25TA5E	PI3VT32X245-ABE	PT8A9010WE	PT7C5027C6-2GWF
PT7C5036F1-2GDE	PT7M8220B33TA5E	PI3VT3245-ALE	PT8A9011WE	PT7C5027C6-2GDE
PT7C5036F1-2DE	PT7M8221B12TD5E	PI3VT3245-AQE	PI6ULS5V9515AUE	PT7C5027C6-2GWF
PT7C5036F1-2GWF	PT7M8221B15TD5E	PT7M6134CLTA3E	PI3C32X245BE	PI5C3305LE
PT7C5036F1-2WF PT7C503818B1-2GDE	PT7M8221B18TD5E PT7M8220B12TA5E	PT7M6136CLTA3E PT7M6430NLXVE	PI3C3245LE PT8A94B02WE	PI5C3306LE PT7C5027C6-5GDE
PT7C503818B1-2DE	PT7M8220B15TA5E	PT7M6529NLTA5E	PT7C6035ALC-5GDE	PT7C5027C6-5GWF
PT7C503818B1-2GWF	PT7M8220B18TA5E	PT7M6530NLTA5E	PT7M6223CLTA3E	PT7C5027C6-2GDE
PT7C503818B1-2WF	PT7M8220B25TA5E	PI3VT32X245-ABE	PT8A9010WE	PT7C5027C6-2GWF
PT7C5036F1-2GDE	PT7M8220B33TA5E	PI3VT3245-ALE	PT8A9011WE	PT7C5027C6-2GDE
PT7C5036F1-2DE	PT7M8221B12TD5E	PI3VT3245-AQE	PI6ULS5V9515AUE	PT7C5027C6-2GWF
PT7C5036F1-2GWF PT7C5036F1-2WF	PT7M8221B15TD5E PT7M8221B18TD5E	PT7M6134CLTA3E PT7M6136CLTA3E	PI3C32X245BE PI3C3245LE	PI5C3305LE PI5C3306LE
PT7C503718B1-2GWF	PT7M8221B161D5E	PT7M6136CLTASE	PT7M6140CLTA3E	PI5C3126QE
PT7C503718B1-2WF	PT7M8221B33TD5E	PT7M6128CLTA5E	PI5A4157ZUE	PI5C3125QE
PT7C503718B1-2GDE	PT7M8221B12TD3E	PT7M6125NLC4E	PT7M6243CLTA3E	PI5C3303TE
PT7C503718B1-2DE	PT7M8221B15TD3E	PT7M6125CLTA3E	PI6ULS5V9515AWE	PI3VT3306LE
PT7C6035ALC-2WF	PT7M8221B18TD3E	PI3CH400ZBE	PI3C34X245BE	PI5A124TE
PT7C6035ALC-2GWF PT7C6035ALC-5GWF	PT7M8221B25TD3E PT7M8221B33TD3E	PI3C3126QE PI3C3245QE	PT7C5027C1-3DE PT7C5027C2-3DE	PI5PD2065UEE+C PI5V331QE
PI5A23159UE	PT7M8221B331D3E PT7M8221B12TA5E	PI6ULS5V9306ZEE	PT7C5027C2-3DE	PI5V331QE PI5V330QE
PI5PD2041BTAE	PT7M8221B15TA5E	PI6ULS5V9509XTE	PT7C5027C4-3DE	PI5C33X257BE
PT7M7809GTE	PT7M8221B18TA5E	PI3C32X384BE	PT7C5027C5-3DE	PI5C3253WE
PT7M8216B09XYE	PT7M8221B25TA5E	PI3C3245LE	PI6ULS5V9617AUE	PI5C3253QE
PT7M8216B10XYE	PT7M8221B33TA5E	PI3C3126LE	PI6ULS5V9617AZEE	PT8A9001QE
PT7M8216B11XYE	PT7M8220B28TD5E	PI3C3306LE	PT7M6248CLTA3E	PT8A9002QE
PT7M8216B12XYE PT7M8216B25XYE	PT7M8220B28TD3E PT7M8220B28TA5E	PI3C3125ZJE PI3C3125WE	PT7C5035BLC-2GDE PT7C5035BLC-2DE	PT8A94B29WE PI3CH3345LE+C
PT7M8216B28XYE	PT7M8221B28TD5E	PI3C3125WE	PT7C6035ALC-2GDE	PI5PD2560AZEE+C
PT7M8216B30XYE	PT7M8221B28TD3E	PI3C3125LE	PT7C6035ALC-2DE	PI5PD2561AZEE+C
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PT7M8216B18XYE	PT8A3382ALE	PI3C3305UE	PT7C5027KC3-2WF	PI5PD2561ZEE+C
PT7M8216B20XYE	PT8A3384ALE	PI3C3305LE	PT7C5027KC3-5GDE	PI5C3309UE
PT7M8216B09XZE	PS8A0382ALE	PI3C32X245BE	PT7C5027KC3-5GWF	PI5C3257QE
PT7M8216B10XZE PT7M8216B11XZE	PS8A0384ALE PI5A3167CE	PI3C3384QE PI3C3861-AQE	PT7C5027KC3-5UWF PT7C5027KC4-2DE	PI3CH3305UE+C PT8A9011WE
PT7M8216B11XZE	PT8A9000HE	PI5PD2051BTAE	PT7C5027KC4-2DE	PT7M6142NLTA5E
PT7M8216B25XZE	PT8A9001HE	PT7C4311WE	PT7C5027KC4-5GDE	PT7M6142NLTA3E
PT7M8216B28XZE	PT8A9002HE	PT7C433833WE	PT7C5027KC4-5GWF	A CONTRACTOR DESCRIPTION
PT7M8216B30XZE	PT8A2562WE	PT7C433833UE	PT7C5027KC4-5UWF	
PT7M8216B33XZE	PT7C5027C1-5BUWF	PI6ULS5V9306UAE	PT7C5027KC5-2DE	