



**SPIRE/DRCU Instrument
Herschel Mission**



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SPIRE Declared Components List

User Code: FSDRCC

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Prepared by :	Date :
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Checked by :	Date :
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Document change record

Révision			Modifications
Issue - rev.	Date	Approved by	
0	23/08/00		Preliminary List, including capacitors, connectors, crystals, diodes, integrated circuits, resistors, wires & cables, and miscellaneous. No quantities.
1	18/09/00		<ul style="list-style-type: none"> Quantities for parts types: OP400, PM139, HS303, HS508BRH, HS1840, ADC7809, DAC 7545, HS-26C31, HS-26C32, FPGA, resistors and MAT02. components eliminated: HS-508ARH (new version: B), wires & cables, and miscellaneous.
2	9/10/00		Parts type to be eliminated: resistors CMS type SMC3 (obsolete)
3	27/10/00		<ul style="list-style-type: none"> Obsolete parts for space: OP27, OP297, OP497, OP482, AD580, AD7545G Standardisation proposals: LM124 (instead of OP400) , AD565ATD (instead of 7545ARP, AD584TH (instead of AD580 & REF-02), SEI7809LPRP (instead of ADS7809).
4	29/11/00		Components definitely eliminated: OP27, OP297, OP497, OP482, HS1840 (obsolete) and AD584TE-LCC20 (to be replaced by AD584TH-TO99), and ADS7809 (replaced by 7809LPRP.
5	16/01/01		<ul style="list-style-type: none"> new quantities (<u>more actual</u>), and for all parts we are sure to use, <u>including attritions</u>. Components definitely eliminated: OP400AY-DIP14 & LM124 (no accepted by CEA), AD580TH (no need) New components: UT54LVDS031 (item 18), UT54LVDS032 (item 19) Type reduction accepted: RT54SX32S-1 CQ208E (instead of all FPGA types).



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6	02/01/01	<ul style="list-style-type: none"> • Components definitely eliminated: HS1840; AD584TH (replaced by REF02AL) ; AD565 (standardisation refused) & 1N5617 (replaced by 1N4148) • New components: 1N4148 (item 1), 54HC137 (item 20), 54HC164 (item 21), HS117RH (item 22). For these new parts types, the package is to be confirmed.
7	14/03/01	<ul style="list-style-type: none"> • a new colon “WIH” to identify cables/connectors for Warm Interbox Hardness (no crio harness). Today only connectors because cables not identified yet. • PM139: any need more (quantity: 0) • New connector type: HE801 144P • New colons for costing • Attrition for STM parts • Quantity identified for connectors accessories • Components eliminated of the list: ADS7809, OP400AY, AD584, AD589, old version of FPGAs.
8	14/06/01	<ul style="list-style-type: none"> • New components: capacitor KM-94 220nF(item 19), 54HC595 (item 23), OP215 (item 24) • Quantities have changed for: UT54LVDS032, HS-508RH, MAT-02, HS-033RH, SEI7809, 26C31, 26C32, AMP02, 1N4148, 2N2222A, 2N2907A, 7545ARP • Components eliminated of the list:PM139 • Components self-procured: OP400, DAC8800, REF02AL (only for QM) and OP15AL (only for QM) because don't exist in FP & QM quality level
9	23/07/01	<ul style="list-style-type: none"> • new components: CMS1206 100nF (item 21) to replace CMS1210, CHPHR0505 10R (item 62), 1R (item 70), diode 1N6642, PHR0603 143K (item 72), 17K (item 73), 29K (item 74), 475R (item 75), 51.1K & 6.65K, CHPHR0805 1K (item 77), PHR0603 4K (item 78), fifo 16K*9 FP28 ref: 672061EV-15 • Quantities have changed for: CHPP0603 200R (item 24), CHP0805 470pF, 47pF, CEC 47nF (item 10), KM94-1 220nF, OP400, TAJC 10µF 16V, HS508BRH, SEI7809LPRP, CMS1210 100nF, UT54LVDS031, OP215, TAJC 10µF 16v, REF02AL, CHPHR0805 100R & 10K, PHR0603 4.99K, CHPHR0805 200R



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9	04/09/01	1	<ul style="list-style-type: none"> New components: OP15AL & AMP01 (parts types existing in PACS's list FPBOLC) Quantities have changed for SEI 7545
10	23/10/01		<ul style="list-style-type: none"> New components: 54HC14 , MMDP-65656GV-40sB Quantities have changed for AD590 Parts eliminated: T1507 16MHz & 20MHz to replace by T807 20MHz Correction of Part Number for SMDP-67206 Modification for attrition rules (only for CHIP capacitors and resistors)
11	06/12/01		<ul style="list-style-type: none"> New components: <ul style="list-style-type: none"> Capacitor CMS 0805 T1 1,5nF (item 5) HE801connectors: KNB0965510110 (item 10), KNB0964430121 (item 11), KNC1605510110 (item 14) & KNC1604430121 (item 15) - savers: KNB096 44 91 944 (item 24) & KNC160 44 91 944 (item 26) quartz 10 MHz T807 resistors: RLR07/2H4 1R (item 37) Chip CMS P0603 type P(0,01%) 9K76 (item 38), 13K3 (item 39), 17K4 (item 40), 18K2 (item 41), 27K4 (item 42), 61K (item 43), 90K9 (item 44), 95K3 (item 45), 97K6 (item 46) , 102K (item 47) & 267R (item 48). Relays: type TL, GP2 & EL210 Parts to be eliminated: <ul style="list-style-type: none"> quartz T1507 @ 11,0592 MHz (STC 3665) 3549_350100933B Chip CMS P0603 type P(0,01%): 200R (item 20), 475R (item 21), 6.65K (item 24), 8K (item 25), 16K9 (item 28), 28K7 (item 30), 65K (item 32), 143K (item 35) & 147K (item 36). CHPHR 0505: 10R2 (item 2), 10K (item 6). Capacitor CMS 0805 T1 470pF Quantities have changed for: 2N2222, 2N5154, 1N5618, AD589, OP215, OP15, AD590 & HS508



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12	01/03/2002	<ul style="list-style-type: none">• New components:<ul style="list-style-type: none">- Resistor PHR0603 115R 0.02% (variant 01)- Connectors DEMA9S, DAMA15S, DAMA15P, DDMA50S, DEBMA9PS, DABMA15PS & DCDMA50PS- OP484AM (item 33)• Quantities have changed for:<ul style="list-style-type: none">- 1N4148, 1N6642, AD590MF, 2N2907A, 2N2222A, OP15, AMP01, REF02, HS303RH, SMDP67206.- Capacitors CMS1206 100nF&10nF, TAJ 16v 10% 10μF- Resistors CHP0805 1% 10R,10K&100K; PHR0603 0.01% 10K- Connectors DBMA25S,DEBMA9PS-QM,DCBMA25PS, & DDBMA50PS screw-lock, dust-caps..., HE801 160P, HE801 160S• Parts to be eliminated:<ul style="list-style-type: none">- Connectors DBMA44S, DCMA62S (+ savers..)- AD589, 1N5617
13	23/05/02	<ul style="list-style-type: none">• New components:<ul style="list-style-type: none">- Transistors 2N2905A (item 5)- Resistor PHR0603 15K2 (instead of 15K17 not existing)- IC UC1834 (item 34)• Quantities have been changed for:<ul style="list-style-type: none">- Transistors 2N2222A & 2N2907A



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14	10/02/2003	<ul style="list-style-type: none">• New components:<ul style="list-style-type: none">- Capacitors 0805 NPO 33pF (item 21), 100pF (item 22), & 220pF (item 23)- Capacitors 1210 NPO 2.2nF (item 24) & 4.7nF (item 25)- Capacitors 1210 BX 1nF (item 26) & 22nF (item 27)- Capacitor 1812 BX 330nF (item 28)- Capacitor 2220 BX 1μF (item 29)- Capacitor TAJ 4.7μF (item 30)- Diode 1N5615 (item 4)- Inductance MSCI series 20K 680μH (item 1)- IC OP27A (item 35)- IC 54AC14 (item 36)- Resistors RLR07/2H4 10R (item 49)- Resistors CHP0805 1% 22R1 (item 51), 47R5 (item 52) & 1MR (item 53)- Resistors PHR0603 0.01% 15K2 (item 56),- Resistors PHR0805 0.01% (item 58 to 88)- Resistor MS1 1% 5.11MR (item 90)- Resistors RM2010 3M32 (item 91) & 10M (item 92)- Transistors 2N2219A (item 6), BUX77 (item 7) & BUX78 (item 8)• Parts to be eliminated:<ul style="list-style-type: none">- IC AMP02AZ (item 25)- IC 54HC14 (item 32) & 54HC137 (item 20)
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Distribution list

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			✓



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I. Acronyms

ABCL	As Built Configuration List	MOC	Mission Operations Centre
AD	Applicable Document	MOS	Margin Of Safety
AO	Announcement of Opportunity	MRB	Material Review Board
API	Application Programming Interface	N/A	Not Applicable
AIT	Assembly Integration & Test after delivery	NCR	Non Conformance Report
AIV	Assembly Integration & Verification before delivery	OAT	Osservatorio Astronomico di Trieste
AVM	Avionics Model	OBDH	On Board Data Handling
BOL	Begin Of Life	OGS	Operational Ground Segment
CC	Configuration Control	PA	Product Assurance
CCS	Central Checkout System	PDF	Portable Document Format (Adobe Acrobat)
CIDL	Configuration Item Data List	PFM	Proto-Flight Model
CEA	Commissariat à l'Énergie Atomique	PGSE	Pneumatic Ground Support Equipment
CMB	Cosmic Microwave background	PI	Principal Investigator
Co-I	Co-Investigator	PLM	Payload Module
COTS	Commercial Off The Shelf Software	PM	Project Manager
CQM	Cryogenic Qualification Model	PO	Parts Order
DMS	Document Management System	PR	Public Relations
DPC	Data Processing Centres	PS	Project Scientist
DPCM	Data Processing Centres Manager	PSF	Point-Spread-Function
EGSE	Electric Ground Support Equipment	QA	Quality Assurance
EOL	End Of Life	QLA	Quick Look Analysis
EP	Entrance Pupil	RAL	Rutherford Appleton Laboratory
ESA	European Space Agency	RD	Reference Document
ESOC	European Space Operations Centre	RFW	Request For Waiver
ESTEC	European Space Technology and Research Centre	RH	Relative Humidity
FINDAS	FIRST Integrated Network And Data Archive System	RMS	Root Mean Square
FIRST	Far InfraRed and Sub-millimetre Telescope	RTA	Real Time Analysis
FOV	Field-Of-View	S/C	Spacecraft
FPA	Focal Plane Assembly	SAMBA	Satellite for Measurement of Background Anisotropies
FPU	Focal Plane Unit	SAp	Service d'Astrophysique
FS	Flight Spares	SCMP	Software Configuration Management Plan
HK	House-Keeping	SE	System Engineer
HTML	Hyper Text Mark-up Language	SIP	Science Implementation Plan
HTTP	Hyper Text Transport Protocol	SPIRE	S
H/W	Hardware	SPMP	Software Project Management Plan
ICD	Interface Control Document	SQAP	Software Quality Assurance Plan
IDIS	Integrated Data and Information System	SRR	Software Requirements Review
IDIS-DT	IDIS Development Team	SS	Survey Scientist
IDIS-MT	IDIS Management Team	SSD	Space Science Department (ESTEC)
IID-A	Instrument Interface Document, Part A	S/W	Software
IID-B	Instrument Interface Document, Part B	TBC	To Be Confirmed
IS	Instrument Scientist	TBD	To Be Determined
LAM	Laboratoire d'Astrophysique de Marseille	TBN	To Be Nominated
LAN	Local Area Network	TBW	To Be Written
LEOP	Launch & Early Orbit Phase	TC	Tele-Command
LM	Local Manager	TM	TeleMetry
LOS	Line Of Sight	TRB	Test Review Board
MGSE	Mechanic Ground Support Equipment	URD	User Requirements Document
		WFE	Wave Front Error
		WWW	World Wide Web



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1. INTRODUCTION

1.1 Purpose and scope

This document provides a list of the electrical components which would be used in the flight model of the DRCU system (DCU & SCU).

The harness connectors are not included in this list, only savers on warm electronics and cryogenics connectors are included.

1.2 Documents

1.2.1 Applicable Documents

1.2.2 Reference Documents

- [RD1] ESA/SCC QUALIFIED PARTS LIST (15-01-00)
- [RD2] EUROPEAN PREFERRED PARTS LIST (15-02-00)
- [RD3] CNES / QFT / IN0500 Liste préférentielle des composants
- [RD4] FIRST/Planck Preferred Part List ref. : FP-TLG-LI-0001 (07-06-2000)



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2. LEGEND OF LIST COLUMNS

Generic Name : Part Name

Manuf : Manufacturer

Pkg. : Preferred Package / Housing

Part Description : Details / Features of the component

Radiation Harness : Radiation marker

FLT Part Type: Flight Part Type

Preferred Proc-Spec : Preferred Procurement Specification

Level : Required Quality Level

LAT: Lot Acceptance Tests

FM parts : Quantity for Flight Model

FS parts : Quantity for Flight Spare

Needs CEA : Total quantity (PFM + FS)

Attr parts : Attrition quantity

PO : Total quantity for order (Needs CEA + Attr)

3. RADIATION CONSTRAINTS

3.1 Abbreviations

TD : Total Dose effects

SEE : Single Event Effect

SEU : Single Event Upset

SEL : Single Event Latch up (Soft error due to heavy ions)



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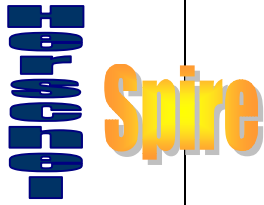


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4. LIST OF COMPONENT MANUFACTURERS

5. LIST OF COMPONENT MANUFACTURERS

Code	Country	Manufacturer	Address / Seller
TBD		To Be Defined	
ACTEL	USA	Actel Corporation	
AND	USA	Analog Devices	1500 Space Park Drive CA 95052 Santa Clara USA Tel /Fax: 1(0)408 5627408/526 www.analog.com
ATMEL W.M. (ex MHS)	France	Atmel	La Chantrerie/Route de Gachet, B.P. 70602 44306 Nantes Cedex 03 France Telephone No. +33 (0)2 40181818 Fax No. 33 (0)2 40181920 www.atmel.com
AVX	UK	AVX	AVX Limited Ballylorne Industrial Estate 1 Ballyhampton Road BT 40 1ST arne, Northern Ireland United Kingdom Telephone No. +44 (0)1574 260777 Fax No. +44 (0)1574 260464 www.avxcorp.com
BB	USA	Burr Brown	
CAN	F	ITT Cannon	ITT Cannon BP 359 Av; du Mal deLattre de Tassigny F-39105 DOLE Cedex Tel/Fax: 33(1)84729469/9593 www.ittcannon.com
CEPE	F	CEPE	C-MAC France 44, avenue de la Glacière BP165 F-95100 ARGENTEUIL Tel/Fax : 33(0)139983633/50 Cepe.com@hol.fr
DEU	F	DEUTSCH	Compagnie Deutsch 17, rue Lavoisier 27006 EVREUX France www.compagnie-deutsch.com
EFD	F	Eurofarad	23, rue Jeanne d'Arc F-77400 LAGNY Te/Fax : 33(0)160317000/64305063 www.eurofarad.com



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FCI	France	Framatome Connector International	3, rue de Vallon Hameau d'activités n°2 F-91550 Marolles-en-brie Tel/Fax: 33(0)145107844/40 www.fciconnect.com
FRB		Hypertac S.A.	31, rue Isidore Maille F-76410 St Aubin Les Elboeufs Tel/Fax: 33(0)232969176/70 www.frb-connectron.com Frb.connectron.ama@wanadoo.fr
HAR	USA	INTERSIL (ex HARRIS)	INTERSIL 2401 Palm Bay Road, N.E. FL 32905 Palm Bay USA Tel/Fax: 1(0)407 7279207/95361 www.semi.harris.com
HON	USA	Honeywell	12001 State Highway 55 MN 55441 PLYMOUTH USA Tel/Fax: 1(0)6129542888/257 www.honeywell.com
KEM	USA	KEMET	KEMET ELECTRONICS Corp. P.O. Box 5928, SC 29606 Greenville USA Telephone No. +1 (0)803 9636300 Fax No. +1 (0)803 9636521 www.kemet.com
LCC	UK	LCC/AVX LTD	Long Road 7Q4 7ER Paignton Devon England Tel/fax : 44(0)1803528046/6223 www.avxcorp.com
LEA	France	LEACH	LEACH INTERNATIONAL Europe Zone Industrielle de Saint Liguair, Rue Sainte Claire de Ville 79000 Niort France Telephone No. +33 (0)549 790844 Fax No. +33 (0)549 799191 www.leachintl.com
LM	USA	Lockheed Martin	
LT	USA	Linear Technology	Mac Carthy Boulevard



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			CA 95035 MILPITAS USA Tel/Fax: 1(0)4084321900/40507 www.linear-tech.com
MAXIM	USA	Maxim	
	USA	Microsemi	2830 S. Fairview Street PO Box 26890 CA 92704 Santa Anna Tel/Fax: 1(0)7149798220/5575989 www.microsemi.com
NS	USA	National Semiconductor	2900 Semiconductor Drive PO Box 58090 CA 95052 Santa Clara Tel/Fax: 1(0)4087215000/399803 www.national.com
SEI	USA	Space Electronic Inc.	REP' France
STM	F	STMicroelectronics	3, Rue de Suisse, B.P. 4199 F-35041 Rennes Cedex 2 Telephone No. +33 (0)2 99264800 Fax No. +33 (0)2 99515053 www.st.com
TI	USA	Texas Instruments - Unitrode	7 Continental Boulevard NH 03054 MERRIMACK USA Tel/Fax: 1(0)034242410/3460 www.unitrode.com
VIS	F	Vishay S.A. division Sfernice	199, Bld de la Madeleine BP 1159 F-06003 NICE Cedex 1 Tel/fax: 33(0)493372727/26
YSP	USA	YELLOWSPRINGS	1725 Brannum Lane 45387, Ohio Yellow Springs Telephone No. +1 (0)513 7677241 Fax No. +1 (0)513 7679353



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6. GENERAL ATTRITION RULES FOR FLIGHT AND SPARE MODELS

The following table shows the attrition quantities to be applied for parts families. For high cost semiconductor parts, the attrition quantities will be done case by case in the next chapter.

Net Quantity	Chip Capacitors and resistors	Other resistors, capacitors and filters	Semiconductors, relays and connectors with fixed contacts	Connectors bodies, saver bodies and crystals
1 - 5	+10	+4	+3	+2
6 - 8	+10	+5	+4	+2
9 - 15	+10	+6	+5	+3
16 - 25	+15	+7	+6	+4
26 - 40	+20	+10	+8	+5
41 - 60	+20	+13	+10	+6
61 - 100	+25	+17	+15	+10%
101 - 150	+25	+25	+20	+10%
151 - 250	+35	+37	+28	+10%
>= 251	+15%	+15%	+11%	+10%

7. SPECIAL ATTRITION RULES FOR HIGH COST SEMICONDUCTOR PARTS

High cost parts	Net Quantity : 1 - 5	Net Quantity : >5
PROM	+100%	+100%
FPGA RT54SX32S	+2	+4



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8. LIST OF PARTS

8.1 Family Codes

Family Code	Group Code	Family	
01	01	Capacitors	Ceramic
	02	Capacitors	Ceramic Chip
	03	Capacitors	Tantalum Solid
02	01	Connectors	Circular
	02	Connectors	Rectangular
	03	Connectors	Printed Circuit Board
	07	Connectors	Microminiature
03	01	Piezo-Electric Devices	Crystal Resonator
	99	Piezo-Electric Devices	Miscellaneous
04	01	Diodes	Switching
	02	Diodes	Rectifier
	03	Diodes	Voltage Regulator
	04	Diodes	Voltage Reference
	05	Diodes	R/F microwave schottky-si
07	01	Inductors	RF Coils
	02	Inductors	Cores
	03	Inductors	Chip
08	10	Microcircuits	Microprocess / Micro control/
	20	Microcircuits	Memory SRAM
	21	Microcircuits	Memory DRAM
	22	Microcircuits	Memory PROM
	23	Microcircuits	Memory EPROM
	24	Microcircuits	Memory EEPROM
	30	Microcircuits	Programmable Logic
	40	Microcircuits	ASIC Technologies Digital
	41	Microcircuits	ASIC Technologies Linear
	42	Microcircuits	ASIC Technologies Mixed
	50	Microcircuits	Linear Sample & Hold Amplifier
	51	Microcircuits	Linear sample and hold amplifier
	52	Microcircuits	Linear Voltage regulator
53	Microcircuits	Linear voltage comparator	
54	Microcircuits	Linear switching regulator	
99	Microcircuits	Miscellaneous	
09	01	Relays	Non latching
	02	Relays	Latching
10	01	Resistors	Metal oxide
	02	Resistors	Wire wound precision-including surface mount
	08	Resistors	Metal film
	09	Resistors	Chip all
	10	Resistors	Network all
	11	Resistors	Heaters, flexible
11	01	Thermistors	Temperature compensating
	02	Thermistors	Temperature measuring
	03	Thermistors	Temperature sensor
12	01	Transistors	Low power, NPN, < 2 watts



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02	Transistors	Low power, PNP, < 2 watts
03	Transistors	High power, NPN, < 2 watts
04	Transistors	High power, PNP, < 2 watts
05	Transistors	FET N channel
06	Transistors	FET P channel
07	Transistors	Multiple
08	Transistors	Switching

8.2 D.C.L.

12 pages

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NEW	* new components last list				FLT Part Type	FLT Generic Spec	FLT Detail Spec	Level	entirety	approving	Lot	Ref	FLT Description	Status	Manuf	Pkg	L14	L15	L16	Total Need	FO	self present	P3 parts	P3 parts	Back Panel DCU	cont. L1A-P	cont. L1A-S	cont. DAC-FP	cont. BMS	Back Panel DCU	S.C.U. (ex-ECLU)				W/HI						
	Item N°	Family Code	Group Code	GENERIC NAME																											comments	La1	La2	La3		La4	La5	La6	La7	La8	La9
Connectors																																									
27	2-		DEMA 9S		3401 00201 B DEMA 9S NMB FO	ESASCC 3401	ESA/SCC 3401.002-01	B				D Subminiature Rectangular Connector without contacts	OPL/ESA	CANF							5	5																			
28	2-		DAMA 15P		3401 00201 B DAMA 15P NMB FO	ESASCC 3401	ESA/SCC 3401.002-01	B				D Subminiature Rectangular Connector without contacts	OPL/ESA	CANF							6	6																			
29	2-		DAMA 15S		3401 00201 B DAMA 15S NMB FO	ESASCC 3401	ESA/SCC 3401.002-01	B				D Subminiature Rectangular Connector without contacts	OPL/ESA	CANF							6	6																			
1	2-		DBMA 25P		3401 00201 B DBMA 25P NMB FO	ESASCC 3401	ESA/SCC 3401.002-01	B				D Subminiature Rectangular Connector without contacts	OPL/ESA	CANF							33	33																			
2	2-		DBMA 25S		3401 00201 B DBMA 25S NMB FO	ESASCC 3401	ESA/SCC 3401.002-01	B				D Subminiature Rectangular Connector without contacts	OPL/ESA	CANF							29	29																			
54	2-		DCMA37P		3401 00201 B DCMA 37P NMB FO	ESASCC 3401	ESA/SCC 3401.002-01	B				D Subminiature Rectangular Connector without contacts	OPL/ESA	CANF							12	12																			
3	2-		DCMA 37S		3401 00201 B DCMA 37S NMB FO	ESASCC 3401	ESA/SCC 3401.002-01	B				D Subminiature Rectangular Connector without contacts	OPL/ESA	CANF							5	5																			
4	2-		DBMA 44-S		3401 00201 B DBMA 44S NMB FO	ESASCC 3401	ESA/SCC 3401.002-02	B				D Subminiature Rectangular High Density Clamp Connector without contacts	OPL/ESA	CANF							0	0																			
5	2-		DDMA50P		3401 00201 B DDMA 50P NMB FO	ESASCC 3401	ESA/SCC 3401.002-01	B				D Subminiature Rectangular Connector without contacts	OPL/ESA	CANF							28	28																			
30	2-		DDMA 50S		3401 00201 B DDMA 50S NMB FO	ESASCC 3401	ESA/SCC 3401.002-01	B				D Subminiature Rectangular Connector without contacts	OPL/ESA	CANF							5	5																			
6	2-		DCMA 62S		3401 00201 B DCMA 62S NMB FO	ESASCC 3401	ESA/SCC 3401.002-02	B				D Subminiature Rectangular High Density Clamp Connector without contacts	OPL/ESA	CANF							0	0																			
7	2-		DDMA 78 S		3401 00202 B DDMA 78S NMB FO	ESASCC 3401	ESA/SCC 3401.002-02	B				D Subminiature Rectangular High Density Clamp Connector without contacts	OPL/ESA	CANF							5	5																			
8	2-		HE 801 65 P/MC		3401 016 01 B 05 MC 343 00 343 KNB 065 13 55 110	ESASCC 3401	ESA/SCC 3401.016	B				HE 801 PCB Connector, Plug 3 rows equipped with 65 solder 90° male contacts	OPL/ESA	HYPG							6	18																			
9	2-		HE 801 65 E/FD		3401 016 01 B 17 FD 36 00 36 KNB 065 44 30 121	ESASCC 3401	ESA/SCC 3401.016	B				HE 801 PCB Connector, Receptacle 2 rows equipped with 65 solder straight through female contacts	OPL/ESA	HYPG							6	18																			
10	2-		HE 801 96 P/MC		3401 016 01B 08 MC 33 00 33 KNB 096 55 10 110	ESASCC 3401	ESA/SCC 3401.016	B				HE 801 PCB Connector, Plug 2 rows equipped with 96 solder 90° male contacts	OPL/ESA	HYPG							4	6																			
11	2-		HE 801 96 E/FD		3401 016 01B 17 FD 36 00 36 KNB 096 44 30 121	ESASCC 3401	ESA/SCC 3401.016	B				HE 801 PCB Connector, Receptacle 2 rows equipped with 96 solder straight through female contacts	OPL/ESA	HYPG							4	6																			
12	2-		HE808 144 P/MC		3401 039 01B 144 55 10 110 KMC 144 55 10 110	ESASCC 3401	ESA/SCC 3401.039	B				HE 808 High Density PCB Connector, Plug 3 rows equipped with 144 solder 90° male contacts	OPL/ESA	HYPG							3	3																			
13	2-		HE808 144 E/FD		3401 39 01B 144 44 30 121 KMC 144 55 10 110	ESASCC 3401	ESA/SCC 3401.039	B				HE 808 High Density PCB Connector, Receptacle 3 rows equipped with 144 solder straight through female contacts	OPL/ESA	HYPG							3	3																			
14	2-		HE 801 160 P/MC		3401 016 01B 12 MC 34 00 34 KNC 160 55 10 110	ESASCC 3401	ESA/SCC 3401.016	B				HE 801 PCB Connector, Plug 2 rows equipped with 96 solder 90° male contacts	OPL/ESA	HYPG							0	0																			
15	2-		HE 801 160 E/FD		3401 016 01B 24 MC 36 00 36 KNC 160 44 30 121	ESASCC 3401	ESA/SCC 3401.016	B				HE 801 PCB Connector, Receptacle 2 rows equipped with 96 solder straight through female contacts	OPL/ESA	HYPG							0	0																			
Contact																																									
31	2-		2020 Pin		PIN 3401-005-01B	ESASCC 3401	ESA/SCC 3401.005 01B	B				Male Contact strip for DPMA connectors, AWG 20,22 & 24	OPL/ESA	CANF							603	2156																			
32	2-		2020 Socket		SOCK 3401-005-02B	ESASCC 3401	ESA/SCC 3401.005 02B	B				Female Contact strip for DPMA connectors, AWG 20,22 & 24	OPL/ESA	CANF							174	736																			
33	2-		2020 Pin/Socket		PIN SOCKET 3401-021-01B	ESASCC 3401	ESA/SCC 3401.021 01B	B				Male/Female Contact strip for DPMA connectors - 2020	OPL/ESA	CANF							100	3216																			
34	2-		2026 Pin		PIN 3401-005-03B	ESASCC 3401	ESA/SCC 3401.005 03B	B				Male Contact strip for DPMA connectors, AWG 20,24-26	OPL/ESA	CANF							603	2156																			
35	2-		2026 socket		SOCK 3401-005-04B	ESASCC 3401	ESA/SCC 3401.005 04B	B				Female Contact strip for DPMA connectors, AWG 20,24-26	OPL/ESA	CANF							174	736																			
36	2-		2222 Pin		PIN 3401-005-07B	ESASCC 3401	ESA/SCC 3401.005 07B	B				Male Contact strip for DPMA connectors, AWG 22,24 & 26	OPL/ESA	CANF							0	0																			
37	2-		2222 socket		SOCK 3401-005-08B	ESASCC 3401	ESA/SCC 3401.005 08B	B				Female Contact strip for DPMA connectors, AWG 22,24 & 26	OPL/ESA	CANF							156	234																			
Screw-lock																																									
38	2-		Male DA, DE		3401 022 02B D 20419-74	ESASCC 3401	ESA/SCC 3401.022 02B	B				male Screw-Lock for DA,DE (pin or socket)	OPL/ESA	CANF							24	78																			
39	2-		Male DB, DC		3401 022 03B D 20419-48	ESASCC 3401	ESA/SCC 3401.022 03B	B				male Screw-Lock for DB,DC pin (without Back shell)	OPL/ESA	CANF							18	72																			
40	2-		Male DD		3401 022 04B D 20420-67	ESASCC 3401	ESA/SCC 3401.022 04B	B				male Screw-Lock for DD socket (without Back shell)	OPL/ESA	CANF							3	12																			
41	2-		Male DD		3401 022 05B D 20420-49	ESASCC 3401	ESA/SCC 3401.022 05B	B				male Screw-Lock for DD pin (without Back shell)	OPL/ESA	CANF							12	44																			
42	2-		female		3401 022 01B D 20418-52	ESASCC 3401	ESA/SCC 3401.022 01B	B				female Screw-Lock for all sizes pin and	OPL/ESA	CANF							62	206																			
43	2-		Screw-lock saver DMA		3401 022 06B D 20418-70	ESASCC 3401	ESA/SCC 3401.022 06B	B				Screw-lock for DMA savers	OPL/ESA	CANF							62	206																			

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NEW	Item N°	Family Code	Group Code	GENERIC NAME	commute	FLT Part Type	FLT Generic Spec	FLT Detail Spec	Level	Availability	Approved	Lot	Rad	FLT Description	Status	Manuf	Pkg	LL1	Self	Amr	Neck CEA	LL3	Total Need	FO	Self procured	F3M parts	F3S parts	Back Panel DCU	cont. IAS-P	cont. IAS-S	cont. DAC-EF	cont. BAS	Back Panel DCU	CCIR-EF	Emp	Dash	S.C.U. (of ECU)	WH1																					
																																							10K	100K	1M	100K	100K	100K	100K	100K	100K	100K	100K	100K	100K								
																																							100K	100K	100K	100K	100K	100K	100K	100K	100K	100K	100K	100K	100K								
	31	8-		65656G		SMDP-65656GV-40SV	MIL-PRF-38535	QML-V	V					324% Very Low Power CMOS SRAM Rad Tolerant (4Kb)	QML-38535	AMS-F	FP28						6	4		2	1																																
				ADC																																																							
	7b	8-	4	SEI 7809LPRP				7809LPRP0901.99	K	Y				A/D converter, 16 bit serial, tech protected	QML-38535	SEI	FP24					Y	33	20		18	9				7		1	1																									
				DAC																																																							
	8c	8-	4	7545A		7545ARP		7545ARP0610.99	S					CMOS 12 bit Rad-tolerant Multiplying DAC	QML-38535	SEI-U	FP20					Y	114	98		66	33					26		7																									
				E/R diff																																																							
	9	8-		HS-26C31RH		HS9-26C31RH-QS9000	MIL-PRF-38535	5962P9666301VXC	V					Quad EIA 8542: Radiation Hardened CMOS Differential Receiver with 3 State Output	QML-38535	HAR-U	FP16					N	10	4*		4	2			1		0	1																										
	10	8-		HS-26C32RH		HS9-26C32RH-QS9000	MIL-PRF-38535	5962P9568901VXC	V					Quad EIA 8542: Radiation Hardened CMOS Differential Receiver with 3 State Output	EPPL-QML-38535	HAR-U	FP16					N	10	4*		4	2			1		0	1																										
	18	8-		UT54LVD5031		UT54LVD5031UCC	MIL-PRF-38535	5962R9583302VXC	V					Quad CMOS Differential Line Driver: LVDS, Rad-Hard	QML-38535	UTMC-U	FP16					N	27	27		14	7			7																													
	19	8-		UT54LVD5032		UT54LVD5032 UCC	MIL-PRF-38535	5962R9583402VXC	V					Quad CMOS Differential Line Receiver: LVDS	QML-38535	UTMC-U	FP16					N	81	81		52	14			4	4		2																										
				FGPA																																																							
	11c	8-		RT 54SX32S		RT54SX32S CQ208E	SA-0320-8VC	SMD + Mfr Amend						32000-Gauss-X-A Family FPGA, Rad-Tolerant and Hot	QML-38535	ACTU	CQFP-208					N	16	16		10	2			0		1	0		1																								
Total Self-procured																																																											
Resistors																																																											
				RLR07/2H4 1% 100ppm 1/8W 200V																																																							
				CHP HR 0505 1/8W 1% 50V +/-100 ppm																																																							
	37	10-	8-	1R		400100601C1R00F4	ESASCC-4001	ESA/SCC 4001.006-01	C					High Reliability Resistor, Flood, Chip termination (with under coating)	EPPL	SFER	305						25	72		97	76		54	18			3	3	3	4		2																					
*	49	10-	8-	10R		400100601C10R0F4	ESASCC-4001	ESA/SCC 4001.006-01	C					High Reliability Resistor, Flood, Chip termination (with under coating)	EPPL	SFER	305						10	3		13	0		2	1						1																							
	3	10-	9-	36F3	0	100R	0505 TRD	400101601C1000F4	ESASCC-4001	ESA/SCC 4001.016-01	C			High reliability Resistor, Flood, Chip termination (with under coating)	EPPL	SFER	305						4791	3194	P	3673	3071		2562	632			222	188		0																							
	4	10-	9-	0	0	1K		400101601C1001F4	ESASCC-4001	ESA/SCC 4001.016-01	C			High reliability Resistor, Flood, Chip termination (with under coating)	EPPL	SFER	305						717	478	N	550	550		384	94			34	26																									
	5	10-	9-	0	0	4K99		400101601C5001F4	ESASCC-4001	ESA/SCC 4001.016-01	C			High reliability Resistor, Flood, Chip termination (with under coating)	EPPL	SFER	305						672	448	N	515	515		360	88			32	24																									
	6	10-	9-	0	0	10K		400101601C1002F4	ESASCC-4001	ESA/SCC 4001.016-01	C			High reliability Resistor, Flood, Chip termination (with under coating)	EPPL	SFER	305						1629	1086	N	1249	1249		888	198			58	2																									
	7	10-	9-	0	0	15K		400101601C1502F4	ESASCC-4001	ESA/SCC 4001.016-01	C			High reliability Resistor, Flood, Chip termination (with under coating)	EPPL	SFER	305						2849	1366	N	1571	1571		1098	268			98	72																									
	8	10-	9-	0	0	30K1		400101601C3012F4	ESASCC-4001	ESA/SCC 4001.016-01	C			High reliability Resistor, Flood, Chip termination (with under coating)	EPPL	SFER	305						1844	896	N	1030	1030		720	176			64	48																									
	9	10-	9-	0	0	100K		400101601C1003F4	ESASCC-4001	ESA/SCC 4001.016-01	C			High reliability Resistor, Flood, Chip termination (with under coating)	EPPL	SFER	305						2014	1344	N	1546	1546		1080	264			96	72																									
	10	10-	9-	0	0	1Mg		400101601C1004F4	ESASCC-4001	ESA/SCC 4001.016-01	C			High reliability Resistor, Flood, Chip termination (with under coating)	EPPL	SFER	305						1344	896	N	1030	1030		720	176			64	48																									
				CHP CMS 0805 1/5W 1% 75V +/-200 ppm (1-10R)																																																							
	50	10-	9-	0	0	1R		400101801C1R00F6	ESASCC-4001	ESA/SCC 4001.018-03	C			Resistor, Flood, Chip termination (with under coating)	EPPL	SFER	305						10	30	N	40			20	10					10																								
	11	10-	9-	178	0	10R		400101801C10R0F6	ESASCC-4001	ESA/SCC 4001.018-03	C			Resistor, Flood, Chip termination R: gold/platinum (with under coating)	EPPL	SFER	305						35	141	N	176	148		94	47			0	41		4	2																						
				CHP CMS 0805 1/5W 1% 75V +/-100 ppm																																																							
*	51	10-	9-			22R1		400101801C22R1F4	ESASCC-4001	ESA/SCC 4001.018-01	C			Resistor, Flood, Chip termination R: gold/platinum (with under coating)	EPPL	SFER	305						15	24	N	39	0		16	8				8																									
*	52	10-	9-	408	0	47R5		400101801C47R5F4	ESASCC-4001	ESA/SCC 4001.018-01	C			Resistor, Flood, Chip termination R: gold/platinum (with under coating)	EPPL	SFER	305						52,68	351	N	404	0		234	117				43	74																								
	53	9-	2			1M		400101801C1004F4	ESASCC-4001	ESA/SCC 4001.018-01	C			Resistor, Flood, Chip termination R: gold/platinum (with under coating)	EPPL	SFER	305						10	12	N	22			8	4				4																									

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NEW	Item N°	Family Code	Group Code	GENERIC NAME	comments	FLT Part Type	FLT Generic Spec	FLT Detail Spec	Level	certification	approval	Lot	FLT Description	Status	Manuf	Pkg	L1J	L1J	Total Need	FO	self present	FS part	FS part	S.C.U. (of ECU)				Watt																												
																								Back Plane DCU	cont. ILS-P	cont. ILS-S	cont. ILS-F		cont. ILS-B	Back Plane DCU	CUK-FP	Emp	Flash																							
*	67	10-	9-	1K69		400102301C1681L1	ESA/CC 4001	ESA/SCC 4001.023-01					Resistor, Fixed, Chips, thin film, high precision	EPPL	SFER	805		10	3	13			2	1																																
*	68	10-	9-	2K		400102302C2001F4	ESA/CC 4001	ESA/SCC 4001.023-02	C				Resistor, Fixed, Chips, thin film, high precision	EPPL OPT.ESA	SFER	805		10	18	28			12	6					6																											
*	69	10-	9-	2K05		400102302C2051F4	ESA/CC 4001	ESA/SCC 4001.023-02	C				Resistor, Fixed, Chips, thin film, high precision	EPPL OPT.ESA	SFER	805		10	9	19			6	3																																
*	70	10-	9-	2K67		400102301C2671L1	ESA/CC 4001	ESA/SCC 4001.023-01					Resistor, Fixed, Chips, thin film, high precision	EPPL	SFER	805		10	3	13			2	1																																
*	71	10-	9-	3K01		400102302C3011F4	ESA/CC 4001	ESA/SCC 4001.023-02	C				Resistor, Fixed, Chips, thin film, high precision	EPPL OPT.ESA	SFER	805		10	9	19			6	3																																
*	72	10-	9-	3K16		400102302C3161F4	ESA/CC 4001	ESA/SCC 4001.023-02	C				Resistor, Fixed, Chips, thin film, high precision	EPPL OPT.ESA	SFER	805		10	3	13			2	1																																
*	73	10-	9-	3K32		400102302C3321F4	ESA/CC 4001	ESA/SCC 4001.023-02	C				Resistor, Fixed, Chips, thin film, high precision	EPPL OPT.ESA	SFER	805		10	12	22			8	4																																
*	74	10-	9-	3K48		400102301C3501L1	ESA/CC 4001	ESA/SCC 4001.023-01					Resistor, Fixed, Chips, thin film, high precision	EPPL	SFER	805		10	3	13			2	1																																
*	75	10-	9-	4K75		400102302C4751F4	ESA/CC 4001	ESA/SCC 4001.023-02	C				Resistor, Fixed, Chips, thin film, high precision	EPPL OPT.ESA	SFER	805		10	6	16			4	2																																
*	76	10-	9-	9K 4050		400102302C4991F4	ESA/CC 4001	ESA/SCC 4001.023-02	C				Resistor, Fixed, Chips, thin film, high precision	EPPL OPT.ESA	SFER	805		25	18	43			12	6			4																													
*	77	10-	9-	8K25		400102302C8251F4	ESA/CC 4001	ESA/SCC 4001.023-02	C				Resistor, Fixed, Chips, thin film, high precision	EPPL OPT.ESA	SFER	805		10	3	13			2	1																																
*	78	10-	9-	10K	1071 48	400102302C1002F4	ESA/CC 4001	ESA/SCC 4001.023-02	C				Resistor, Fixed, Chips, thin film, high precision	EPPL OPT.ESA	SFER	805		133,65	891	1025			594	297			18	41	49	189																										
*	79	10-	9-	15K	34 10	400102302C1502F4	ESA/CC 4001	ESA/SCC 4001.023-02	C				Resistor, Fixed, Chips, thin film, high precision	EPPL OPT.ESA	SFER	805		8	6	14			4	2				2																												
*	80	10-	9-	16K2		400102302C1621F4	ESA/CC 4001	ESA/SCC 4001.023-02	C				Resistor, Fixed, Chips, thin film, high precision	EPPL OPT.ESA	SFER	805		10	3	13			2	1																																
*	81	10-	9-	20K		400102302C2002F4	ESA/CC 4001	ESA/SCC 4001.023-02	C				Resistor, Fixed, Chips, thin film, high precision	EPPL OPT.ESA	SFER	805		10	87	97			58	29				3	15	11																										
*	82	10-	9-	24K9		400102302C2492F4	ESA/CC 4001	ESA/SCC 4001.023-02	C				Resistor, Fixed, Chips, thin film, high precision	EPPL OPT.ESA	SFER	805		20	63	83			42	21				21																												
*	83	10-	9-	33,2K		400102302C3322F4	ESA/CC 4001	ESA/SCC 4001.023-02	C				Resistor, Fixed, Chips, thin film, high precision	EPPL OPT.ESA	SFER	805		35	231	266			154	77				7	69	1																										
*	84	10-	9-	40K2		400102301C4022L1	ESA/CC 4001	ESA/SCC 4001.023-01					Resistor, Fixed, Chips, thin film, high precision	EPPL	SFER	805		10	15	25			10	5					5																											
*	85	10-	9-	44K2		400102301C422L1	ESA/CC 4001	ESA/SCC 4001.023-01					Resistor, Fixed, Chips, thin film, high precision	EPPL	SFER	805		10	3	13			2	1																																
*	86	10-	9-	100K	210 24	400102302C1003F4	ESA/CC 4001	ESA/SCC 4001.023-02	C				Resistor, Fixed, Chips, thin film, high precision	EPPL OPT.ESA	SFER	805		35	210	245			140	70				41	7	22																										
*	87	10-	9-	205K		400102302C2053F4	ESA/CC 4001	ESA/SCC 4001.023-02	C				Resistor, Fixed, Chips, thin film, high precision	EPPL OPT.ESA	SFER	805		10	6	16			4	2																																
*	88	10-	9-	249K		400102302C2493F4	ESA/CC 4001	ESA/SCC 4001.023-02	C				Resistor, Fixed, Chips, thin film, high precision	EPPL OPT.ESA	SFER	805		10	3	13			2	1																																
																							MSI 1% 50ppm 1/4W																																	
*	89	10-	9-	3,9-M		400102203C3904F3	ESA/CC 4001	ESA/SCC 4001.022-03	C				Resistor, Fixed, Surface Mount Film, Non-Hermeticity Sealed, Precision Low-MSI	ESA OPT	VISHAY	Mult 1405		44	3	47			3	4																																
*	90	10-	9-	5,11M		400102203C5114F3	ESA/CC 4001	ESA/SCC 4001.022-03	C				Resistor, Fixed, Surface Mount Film, Non-Hermeticity Sealed, Precision Low-MSI	ESA OPT	VISHAY	Mult 1405		10	6	16			4	2																																
																							RM2010 1or2% 100 or 300ppm 0,8W																																	
*	91	10-	9-	3M32 1% 100ppm			MIL-PRF5342	MIL-PRF55342/8					Resistor, Fixed, Chips, thin film	ESA OPT	SOAVU	2010		10	3	13			2	1																																
*	92	10-	9-	10M 1% 100ppm			MIL-PRF5342	MIL-PRF55342/8					Resistor, Fixed, Chips, thin film	ESA OPT	SOAVU	2010		10	6	16			4	2																																
																							Transistors																																	
1	12-			MAT02		MAT02-903H		ADS0011413	S			RT 200K	Low Noise, Matched Drain Monolithic Transistor	AND	TO7H			40,28	448	N	497	497		360	88																															
2	12-			2N2907A		2N2907A AHR 520200103B	ESA/CC 5202	ESA/SCC 5202.001-02	B				Transistor, Low power, PNP	OPT.ESA EPPL	STMPF	TO18		10	51	61			26	25					34																											
3	12-			2N5154		2N5154	ESA/CC 5203	ESA/SCC 5203.010					Transistor, low & high power, NPN	OPT.ESA EPPL	STMPF	TO18		15	102	117			68	34																																
4	12-			2N2222A		2N2222A	ESA/CC 5201	ESA/SCC 5201.002-02	B				Transistor, low power, NPN, switching	OPT.ESA EPPL	STMPF	TO18		8	27	35			14	13					12																											
5	12-			2N2905		2N2905A	ESA/CC 5202	ESA/SCC 5202.002	B				Transistor, Low power, PNP	OPT.ESA EPPL	STMPF	TO18		8	27	35			14	13					12																											

