

In accordance with MIL-PRF-38535

#	Process Flow Steps	Method / Condition	Sampling
1	Wafer Lot Acceptance	MIL-STD-883 TM5007	By diffusion Lot
2	Die Sawing and Select	Internal procedure and MIL-STD-883 TM2010 / A	100%
3	Die attach	Internal procedure	100%
4	Die shear or Stud pull	MIL-STD-883 TM2019 or TM2027	Monitoring
5	Wire bonding	Internal procedure	100%
6	Destructive Wire Bond pull	MIL-STD-883 TM2011	Monitoring *
7	Wire Bond shear	Internal procedure / ASTM F 1269-06	Monitoring
8	Internal Visual Inspection	Internal procedure and MIL-STD-883 TM2010 A / ESCC 20400	100%
9	Customer / e2v inspector inspection	MIL-STD-883 TM2010 / A (Internal source)	By assay lot
10	Lid attach / Sealing	Internal procedure	100%
11	Stabilization	MIL-STD-883 TM1008	100%
12	Temperature Cycling	MIL-STD-883 TM1010 / C / 10 cycles	100%
13	Constant acceleration	MIL-STD-883 TM2001 / E	Substituted *
14	PIND test	MIL-STD-883 TM2020 / A	100%
15	Marking & serialization	Internal procedure / per Device Specification	100%
16	Xray inspection	MIL-STD-883 TM 2012 / 1 view / +datalog	100%
17	Pre-Burn-in electrical	Per Device Specification / +25°C / +datalog	100%
18	Burn-In	MIL-STD-883 TM1015 / 240h / 125°C	100%
19	Post-Burn-In (Interim) Electrical	Per Device Specification / +25°C / +datalog	100%
20	Static Burn-in	MIL-STD-883 TM1015 / 144h / 125°C	100%
21	Post-Burn-In (Static burn-in) Electrical	Per Device Specification / +25°C / +datalog	100%
22	Drift calculation	Per Device Specification (amb temp) / +datalog	100%
23	PDA	5% PDA (amb temp) / +datalog	By lot
24	PDA	3% functional parameters (amb temp) / +datalog	By lot
25	Extreme temp. Electrical (+Group A)	Per Device Specification / +125°C / -55°C / +datalog	100%
26	Solder Columns attach	Internal procedure or 6 Sigma assembly or n/a if LGA package	100%
27	Fine & Gross leaks test	MIL-STD-883, TM1014 / A / C	100%
28	Physical dimension control	Per Device Specification	100%
29	Final Electrical (+Group A)	Per Device Specification / +25°C	100%
30	External Visual	MIL-STD-883 TM2009	100%
31	Customer / e2v inspector inspection	MIL-STD-883 TM2009 / A (final source)	By lot
32	Packing	Internal procedure	100%
33	Certificate of Compliance	MIL-PRF-38535	By delivery

Quality Conformance Inspection (QCI)	Method / Condition	Termination	Sampling
Group A - Ambient temp. Elect. test	MIL-PRF-38535 - Table III - in accordance with SMD	Yes	All lots
Group A - Extreme temp. Elect. test	MIL-PRF-38535 - Table III - in accordance with SMD	No	All lots
Group B – Assembly Capability	MIL-PRF-38535 - Table II - Subgroup 1, 2, 3, 4	Yes	All lots
Group C - Steady-state life test	MIL-PRF-38535 - Table IV - Subgroup 1	No	Per diffusion lot
Group D - Package related test	MIL-PRF-38535 - Table V - Subgroup 1, 2, 3, 4, 5, 6	No	All lots
Group E – RHA	MIL-PRF-38535	-	If required in PO

* Quality notes	Sampling
Screening for LGA / CCGA / CI-CGA packages	-
100% Non Destructive Bond Pull test TM2023 substituted by monitoring Destructive Bond Pull test per TM2011	All lots
100% Constant acceleration substituted by QCI Group D4 on each lot	All lots
Flight Models delivered with CD-rom including :	By delivery
- Flight Model traceability / Final source inspection report	
- Internal source inspection report	
- Wafer Lot Acceptance report	
- SEM analysis (Die construction analysis)	
- X-Ray report	
- Electrical measurements of delivered FM	
- QCI report	
- CoC	

Useful address / Link	
Mil Specs and Drawings	<a href="http://www.landandmaritime.dla.mil">www.landandmaritime.dla.mil</a>
Contact Teledyne-e2v Marketing	<a href="mailto:semiconductors.MKT@Teledyne-e2v.com">semiconductors.MKT@Teledyne-e2v.com</a>
Visit teledyne-e2v website	<a href="http://www.Teledyne-e2v.com">www.Teledyne-e2v.com</a>

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#	Process Flow Steps	Method / Condition	Sampling
1	Wafer Lot Acceptance	MIL-STD-883 TM5007	By diffusion Lot
2	Die Sawing and Select	Internal procedure and MIL-STD-883 TM2010 / A	100%
3	Internal Visual Inspection	Internal procedure / MIL-STD-883 TM2010 A / ESCC 20400	100%
4	T-e2v Precap (flip chip) / Customer precap	MIL-STD-883 TM2010 A / ESCC 20400	100%
5	Flip Chip die attach / cure	Internal or Subcontractor procedure	100%
6	Underfill dispense / cure / C-SAM	Internal procedure / MIL-STD-883 TM 2030	100%
7	SMD attach / reflow	Internal procedure	100% / If appl.
8	Solder balls attach / reflow	Internal procedure	100% / If appl.
9	Internal Visual Inspection	MIL-STD-883 TM2010 / ESCC 20400	100%
10	T-e2v Precap	Internal procedure / MIL-STD-883 TM2010 / ESCC 20400	100%
11	Lid attach / Sealing	Internal procedure	100%
12	PIND test	MIL-STD-883 TM2020 / A	100%
13	Constant acceleration	MIL-STD-883 TM2001 / E / Y1 orientaion	100% / If appl.
14	Marking	Internal Procedure / per Device Specification	100%
15	Serialization Marking	Internal Procedure / per Device Specification	100%
16	Temperature Cycling	MIL-STD-883 TM1010 Cond C / +150°C / -65°C / 10cy	100%
17	Xray inspection	MIL-STD-883 TM 2012	100%
18	C-SAM	Internal procedure / 1 view per interface	100% / If appl.
19	Pre-Burn-in electrical	Per Device Specification / +25°C / +datalog	100%
20	Dynamic Burn-In	MIL-STD-883 TM1015 / 240h / 125°C	100%
21	Post-Burn-In (Interim) Electrical	Per Device Specification / +25°C / +datalog	100%
22	Static Burn-in	MIL-STD-883 TM1015 / 144h / 125°C	100%
23	Post Static Burn-In Electrical	Per Device Specification / +25°C / +datalog	100%
24	Drift calculation	Per Device Specification (amb temp) / +datalog	100%
25	PDA	5% PDA (amb temp) / +datalog	By lot
26	PDA	3% functional parameters (amb temp) / +datalog	By lot
27	Extreme temp. Electrical (+Group A )	Per Device Specification / +125°C / -55°C / +datalo g	100%
28	Termination attach	Internal or Subcontractor procedure	100% / If appl.
29	Fine & Gross leaks test	MIL-STD-883, TM1014 / A / C	100%
30	Final Electrical (+Group A)	Per Device Specification / +25°C	100%
31	Extreme temp. Electrical	Per Device Specification (-55°C / +125°C)	100% / If appl.
32	Physical dimension control	Per Device Specification	100%
33	External Visual	MIL-STD-883 TM2009	100%
34	Customer / e2v inspector inspection	MIL-STD-883 TM2009 / A (final source)	By lot
35	Packing	Internal procedure	100%
36	Certificate of Compliance	MIL-PRF-38535	By delivery

Quality Conformance Inspection (QCI)	Method / Condition	Termination	Sampling
Group A - Ambient temp. Elect. test	MIL-PRF-38535 - Table III - in accordance with SMD	Yes	All lots
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Group B – Assembly Capability	MIL-PRF-38535 - Table II - Subgroup 1, 2, 3, 4	Yes	All lots
Group C - Steady-state life test	MIL-PRF-38535 - Table IV - Subgroup 1	No	Per diffusion lot
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* Quality notes	Sampling
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Flight Models delivered with CD-rom including :	By delivery
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- Internal source inspection report	
- Wafer Lot Acceptance report	
- SEM analysis (Die construction analysis)	
- X-Ray / C-SAM report	
- Electrical measurements of delivered FM	
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Visit teledyne-e2v website	<a href="http://www.Teledyne-e2v.com">www.Teledyne-e2v.com</a>