

TEST

SITE

QUALIFICATION

REPORT

TITLE:

Surface Art as an Alternate Test Site for DUST PCA Products

PCN Number:

PCN 23_0225

REVISION:

A

DATE:

November 09, 2023

SUMMARY:

The LTP5901_-IPM/-IPR/-WHM, LTP5902_-IPM/-IPR/-WHM and LTP5900_-WHM are SmartMesh IP™ Node 2.4GHz 802.15.4e Wireless Mote Module. SmartMesh IP™ wireless sensor networks are self-managing, low power Internet Protocol (IP) networks built from wireless nodes called motes. It features a highly integrated, low power radio as well as an ARM 32-bit microprocessor running the embedded SmartMesh IP networking software that enables all motes in the time-synchronized network to either route, source or terminate data transmitted via the corresponding chip / connector antenna. Both the LTP5901 and the LTP5902 are designed for surface mount assembly while the LTP5900 is pin-to-socket mount assembly.

TEST AND PRODUCT INFORMATION :

Device:	LTP5900-WHM
	LTP5901-IPM
	LTP5901-IPR
	LTP5901-WHM
	LTP5902-IPM
	LTP5902-IPR
	LTP5902-WHM
Package:	PCA Castellated
Leads:	66-Lead (Surface Mount)
Part Number:	LTP5901IPC-PMA#PBF
	LTP5902IPC-PMA#PBF
Tester:	ADI Custom DUST Tester
Handler:	None (Manual Handling)

ADI intends to do Qualification By Similarity (QBS) as a blanket approach of maximizing the scope of affected devices based on the technical reason of device similarities in form, fit and function without compromising quality & reliability. LTP5901IPC-PMA#PBF and LTP5902IPC-PMA#PBF are the pilot devices for the qualification and initial phase of implementation. Scope of implementation will cover all active devices under these product lines:

- PCA, LTP5901IPC, GENERIC CASTELLATED
- PCA, LTP5902IPC, GENERIC CASTELLATED
- PCA, LTP5900IPC, GENERIC LEADED

As part of the Test Operation, Bake and Pack processes are also included in this qualification.

In collaboration with Surface Art, ADI was able to come up with the needed infrastructure and acted accordingly to the tasks involved in facilitating the qualification process. Result of the qualification is hereby presented through this report.

DESCRIPTION AND TEST RESULTS:

- All software and hardware used for the Test Systems, fixtures, computers, peripherals, materials, processes and procedures provided to Surface Art for use and compliance are exact copy of what ADI have on production.
- All software and hardware that includes the Test Systems, fixtures, systems and peripherals were tried and tested to work properly at ADI production site before installing these to Surface Art.
- Proper training and orientation were given to Surface Art operation personnel.
- Performed 100% QA Test Data and Product Verification.
- Performed 100% Visual / Mechanical Inspection on the materials.

Table 1 below provides the qualification material information, description of the qualification conducted, the corresponding qualification criteria and the qualification target results.

Table 1: Qual Lot Information and Qualification Criteria

Generic	Part Name	Surface Art 100% Test & V/M Inspection		ADI QA Product Verification & Inspection			
		Lot #	GOOD Qty	Lot #	Lot Qty	Qual Criteria	Target RESULT
Castellated Russian	LTP5901IPC- IPMA#PBF	D6104121.1	286	D6104121.1	286	PASS on 0, FAIL on 1	PASS
Castellated Canadian	LTP5902IPC- IPMA#PBF	D6098001.1	198	D6104121.1	198	PASS on 0, FAIL on 1	PASS

- The Functional Test data & results collected from both Surface Art and ADI databases corresponding to each of the 10 units QA Test samples (S/S = 5 units from each of the Qual Lots) showed all parameter settings and measured values are correct and are within the standard specifications and limits.
- The above results serve as basis to Accept / Pass the qualification of Surface Art as an additional Test Site for the ADI products covered by this report.