

GDL 82 Environmental Qualification Form

Nomenclature:

GDL 82 UAT Transmitter

Type/Model/Part Number:

GDL 82 Standard GPN 010-01560-0() (Includes 011-03946-0())

GDL 82 GPS GPN 010-01560-3() (Includes 011-03946-4())

TSO Number:

TSO-C154c

See GDL 82 Installation Manual 190-01810-00 for any additional TSO authorizations.

Manufacturer's Specification And/Or Other Applicable Specification:

004-00758-00

Manufacturer:

Garmin Ltd. or its subsidiaries

Address:

Garmin International Inc.
1200 East 151st Street
Olathe, KS 66062
U.S.A.

Date Tested:

June 2017 - September 2017

RTCA DO-160G Conditions	DO-160G Section	Description of Conducted Tests
Temperature and Altitude	4.0	Equipment tested to Categories A2B2F1
In-Flight Loss of Cooling	4.5.5	Operating Temperature -45°C to +70°C Not tested. Cooling Air Is Not Required
Temperature Variation	5.0	Equipment tested to Category B
Humidity	6.0	Equipment tested to Category B
Operational Shocks & Crash Safety	7.0	Equipment tested to Category B
Sustained Crash Safety	7.3.3	Equipment tested to Aircraft Type 5, Test Type R
Vibration	8.0	Equipment tested to Category S, Test Curves B & M and Category U Curve G
Explosive Atmosphere	9.0	Equipment tested to Category H
Waterproofness	10.0	Equipment identified as Category X, no test performed
Fluids Susceptibility	11.0	Equipment identified as Category X, no test performed

Sand and Dust	12.0	Equipment identified as Category X, no test performed
Fungus Resistance	13.0	Equipment identified as Category X, no test performed
Salt Fog	14.0	Equipment identified as Category X, no test performed
Magnetic Effect	15.0	Equipment tested to Category Z
Power Input (DC Equipment)	16.0	Equipment tested to Categories (A,B)XX Equipment tested for 14VDC and 28VDC
Voltage Spike	17.0	Equipment tested to Category A
Audio Frequency Conducted Susceptibility – Power Inputs	18.0	Equipment tested to Category Z (28V & 14V)
Induced Signal Susceptibility	19.0	Equipment tested to Categories ZC
Radio Frequency Susceptibility (Radiated and Conducted)	20.0	Equipment tested to Radiated Category T Equipment tested to Conducted Category T (See Note 1)
Emission of Radio Frequency Energy	21.0	Equipment tested to Category B (See Note 4)
Lightning Induced Transient Susceptibility	22.0	Equipment tested to Categories (A3B2)(XXXX) (See Notes 1, 2 and 3)
Lightning Direct Effects	23.0	Equipment identified as Category X, no test performed
Icing	24.0	Equipment identified as Category X, no test performed
Electrostatic Discharge (ESD)	25.0	Equipment tested to Category A
Fire, Flammability	26.0	Equipment identified as Category C, by analysis of composition
<u>Notes and Remarks:</u> See 005-00329-06 (Supplemental Qualification Summary) for substantiating data. 1. Qualification to additional levels and configurations are shown in Garmin Report 005-00329-06 (Supplemental Qualification Summary) 2. Discrete inputs tested to (A3B3)(XXXX) 3. USB pins were not tested 4. Also meets category M except for transponder harmonics of 2180, 3270, 4360, and 5450 MHz which exceed the category M radiated test.		