



<b>EXHIBIT 1 - MAXIMUM PERMISSIBLE EXPOSURE</b>	
<b>ELECTRONICS TESTING EMC TEST FACILITY</b>	
<b>TEST REPORT NUMBER</b>	UFA 2213IND642-5-A1
<b>TEST REPORT ISSUE DATE</b>	12 July 2022
<b>TEST REPORT VERSION</b>	1.02
<b>MANUFACTURER</b>	TE CONNECTIVITY INDIA PVT. LTD,
<b>EUT NAME</b>	TE Connectivity's AMP Weld Smart E Controller
<b>EUT MODEL</b>	2388292-1
<b>CONDITION OF EUT WHEN RECEIVED</b>	Good
<b>ISSUED TO : NAME AND CONTACT INFORMATION OF CUSTOMER</b>	<b>TE CONNECTIVITY INDIA PVT. LTD,</b> SAHASRA SHREE FIRST FLOOR NO. 88P EXPORT PROMOTION INDL, WHITEFIELD ROAD, BANGALORE, 560066
<b>ISSUED BY : NAME AND ADDRESS OF TEST LABORATORY</b>	<b>Tarang Labs, Wipro Limited</b> Sy. No. 69P, 71/4P, 78/8AP, 134P, 76P, 77P, 80P, 70P, 79/1P, Unit 1, Sarjapur Road, Doddakannelli Village, Varthur Hobli, Bengaluru (Bangalore) Rural, Karnataka - 560035 Tel: +91-80-30292929, Fax: +91-80-30298200 Email: tarang-planet@wipro.com Web: <a href="http://www.wipro.com">www.wipro.com</a>

Template Number: TARANG/T/052	Template Version:1.02	Template Date: 20 Aug 2021
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## AMENDMENT HISTORY

Amendment Number	Amendment Date	Author of Amendment	Previous Report Version	Previous Report Date
01	12 <sup>th</sup> Jul 2022	Venkatesha B S	1.0	11 <sup>th</sup> Jul 2022
Amendment Details	The EUT Operational RF Output Power is modified from +8dBm to 0dBm as product was tested in same configuration.			



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# 1 TEST REPORT SUMMARY

<b>Applicant</b>	TE CONNECTIVITY INDIA PVT. LTD,
<b>Manufacturer</b>	TE CONNECTIVITY INDIA PVT. LTD,
<b>EUT Name</b>	TE Connectivity's AMP Weld Smart E Controller
<b>EUT Model</b>	2388292-1
<b>EUT Serial Number</b>	TE-1639468569 and TE-1639040963
<b>Date of receipt of test item</b>	1 April 2022
<b>EUT Category / Type of Equipment</b>	Industrial/Table top
<b>EUT Operating Voltage</b>	Battery operated (18VDC to 22VDC)
<b>EUT Operating Frequency</b>	NA
<b>Carrier Frequency (Intentional radiator)</b>	2400 MHz
<b>Operational RF Output Power</b>	+0 dBm
<b>Date of Test</b>	1 April 2022
<b>Venue of Test</b>	Tarang Labs-EMC


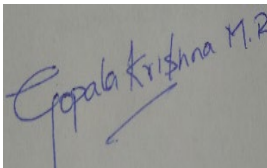
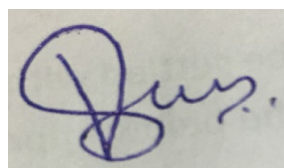
Applicable Standard	Applicable Test	Frequency range/ Class/ Test level	Applicable port	Results- Criterion
CFR47 FCC Part 2: Section 2.1093; CFR47 FCC Part 1: Section 1.1310	Maximum Permissible Exposure Assessment	1 mW/cm <sup>2</sup>	Antenna Port	Complies

**Note 1:** Antenna gain declared as maximum 1.8dBi by the manufacturer.

**TE Connectivity's AMP Weld Smart E Controller** was tested by Tarang Labs as per the standards that are listed in the table above. Based on the observations during the test and interpretations by Tarang labs, results have been indicated. The test results produced in this report shall apply only to the above sample that has been tested under the specific conditions and modes of testing as described in the report. Other similar equipment may not necessarily reproduce same result due to production tolerances and measurement uncertainties. Any measurement uncertainties listed in this report are for information purpose only.

The results shall stand invalid, in case there are any modifications / additions / removals to the hardware or software or end use atmosphere to the product tested. This report shall not be modified or in any way revised unless it is expressly permitted and endorsed by Tarang labs, through a duly authorized representative. Particulars on Manufacturer / Supplier / Product configuration / performance criteria, given in this report, are based on the information given by the customer, along with test request. Tarang labs does not assume any responsibility for the correctness of such information for the above-mentioned equipment under test.

Customer acknowledges that this is a test report and not a certificate to gain market access for the product. To gain market access, Customer needs appropriate clearance from the Government or authorized agency for the target market. For markets that allow self-declaration, customer needs to follow the procedure defined by the target market.

Prepared by	Reviewed by	Approved by
 <b>6<sup>th</sup> Jul 2022</b> <b>Punith Gowda</b>	 <b>7<sup>th</sup> Jul 2022</b> <b>Gopal Krishna</b>	 <b>12<sup>th</sup> Jul 2022</b> <b>Venkatesha B S</b>
<b>EMC Test Engineer</b>	<b>Technical Lead</b>	<b>Functional Head Authorized Signatory</b>

## 2 GENERAL INFORMATION

### 2.1 ACCREDITATION DETAILS

Following are the accreditation and listing details for Tarang: Product Qualification and Compliance Planet

Accreditation / Listing body	Registration / Company / Certificate Number
NABL, India	Certificate No: TC-5992 <a href="http://www.nabl-india.org/">http://www.nabl-india.org/</a>
TELECOMMUNICATION ENGINEERING CENTRE (TEC)	Certificate no 1: TEC/MRA/CAB/IND-D/7-II Certificate no 2: TEC/MRA/CAB/IND-D/67 <a href="http://www.tec.gov.in/list-of-cabs-designated-by-india/">http://www.tec.gov.in/list-of-cabs-designated-by-india/</a>
American Association for Laboratory Accreditation	Certificate No: 5148.01 <a href="https://cabportal.touchstone.a2la.org/index.cfm?event=directory.index">https://cabportal.touchstone.a2la.org/index.cfm?event=directory.index</a>



## 2.2 MAXIMUM PERMISSIBLE EXPOSURE-MPE

### 2.2.1 SPECIFICATION

Standard Reference	CFR47 FCC Part 2: Section 2.1093 CFR47 FCC Part 1: Section 1.1310
Operating Frequency band	2400 to 2483.5 MHz
Calculated by	Punith G
Date	1 April 2022

### 2.2.2 MAXIMUM PERMISSIBLE EXPOSURE LIMITS

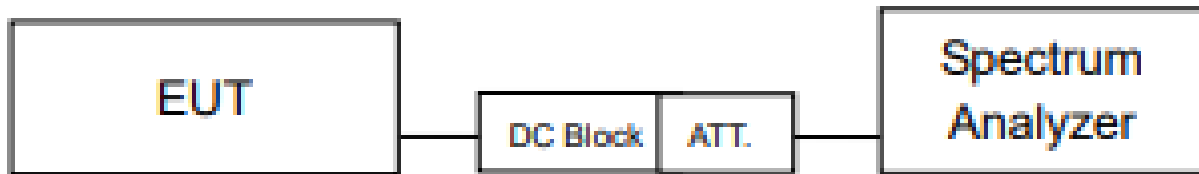
Maximum permissible Exposure level as per CFR47 FCC Part 2: Section 2.1093 / CFR47 FCC Part 1: Section 1.1310 as shown below:

TABLE 1 TO §1.1310(E)(1)—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
<b>(i) Limits for Occupational/Controlled Exposure</b>				
0.3-3.0	614	1.63	*(100)	≤6
3.0-30	1842/f	4.89/f	*(900/f <sup>2</sup> )	<6
30-300	61.4	0.163	1.0	<6
300-1,500			f/300	<6
1,500-100,000			5	<6
<b>(ii) Limits for General Population/Uncontrolled Exposure</b>				
0.3-1.34	614	1.63	*(100)	<30
1.34-30	824/f	2.19/f	*(180/f <sup>2</sup> )	<30
30-300	27.5	0.073	0.2	<30
300-1,500			f/1500	<30
1,500-100,000			1.0	<30

f = frequency in MHz. \* = Plane-wave equivalent power density.

### 2.2.3 SETUP



### 2.2.4 PROCEDURE

The EUT was, connected to Spectrum analyzer to measure the conducted RF Output power. Based on the RF power measured MPE is calculated using “friss” formula to get the power density of the EUT. Calculated Power density value, compared, with the CFR47 FCC Part 1: Section 1.1310 table to declare the compliance.

### 2.2.5 CALCULATION

Friss Formula referred for Power Density calculation is as shown below,

Friss Transmission Formula:  $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where:

- $P_d$  = power density in mW/cm<sup>2</sup>
- $P_{out}$  = output power to antenna in mW
- $G$  = gain of antenna in linear scale
- $\pi$  = 3.1416
- $R$  = Distance between observation point and the center of radiator in cm

Channel	Frequency (Hz)	Maximum measured RF output power at antenna terminal (dBm)	Tune-up tolerance (dB)	Antenna Gain in linear scale	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
1	2402M	-5.271	1	1.514	0.000089	1
21	2442M	-7.106	1	1.514	0.000059	1
40	2480M	-7.612	1	1.514	0.000052	1

**Note:** Below formula used to convert dBi to Gain in linear scale.

$$G = 10^{\frac{G(dBi)}{10}}$$



## 2.2.6 ASSESMENT RESULT

The below table summarize the MPE assessment result

Frequency (Hz)	Calculated Power density using Friss formula (mW/cm <sup>2</sup> )	Power Density Limit as per FCC 1.1310 (mW/cm <sup>2</sup> )	Result
2402M	0.000089	1	Complies
2442M	0.000059	1	Complies
2480M	0.000052	1	Complies

**END OF REPORT**