

MA8020 Raptor X Series

EN50155 and EN45545 Certified Rail Antenna

Certification Summary

The **MA80xx.A Raptor X Series** underwent a comprehensive railway qualification programme to assess compliance with EN 50155 and EN 45545-2 requirements. Independent testing covered environmental durability, vibration and shock, EMC, electrical safety, temperature and humidity exposure, and fire performance of key materials and components. The test results provide objective evidence of the product's suitability for railway applications and demonstrate compliance with the applicable requirements detailed below.

EN50155 Test Results certification test results summary

Certification	Test Type	Standard / Clause	Result	Source File
EN50155	Shock & Vibration Test, including Functional Random Vibration, Simulated Long-Life Random Vibration, and Mechanical Shock	EN50155	PASS	165603232-1_SHOCK AND VIBRATION TEST.pdf
EN50155	DC Power Supply Test	EN50155:2021	PASS	1654017724_B0171-02_DC POWER SUPPLY TEST.pdf
EN50155	Insulation Test	BS EN 50155:2021, Clause 13.4.7.2	PASS	1654017725-1_INSULATION TEST.pdf
EN50155	Low Temperature Storage Test	BS EN 50155:2021, Clause 13.4.6; IEC 60068-2-1:2004 Test Ab	PASS	1656003233-1_LOW TEMPERATURE TEST STORAGE TEST.pdf
EN50155	Low Temperature Start-up Test	BS EN 50155:2021, Clause 13.4.4; IEC 60068-2-1:2004 Test Ab	PASS	1656003234-1_LOW TEMPERATURE STARTUP TEST.pdf
EN50155	Cyclic Damp Heat Test	BS EN 50155:2021, Clause 13.4.8; IEC 60068-2-30:2005 Test Db Variant 2	PASS	1656003235-1_CYCLIC DAMP HEAT TEST.pdf
EN50155	Dry Heat Test	BS EN 50155:2021, Clause 13.4.5.2; IEC 60068-2-2:2007 Test Bd	PASS	1656003236-1_DRY HEAT TEST.pdf
EN50155 / EN50121-3-2	Radiated Immunity, Antenna Method	EN50155:2021; EN50121-3-2:2016; EN50121-3-2:2016/A1:2019	PASS	1654017720_B0171-01_EMC_TEST 1.pdf
EN50155 / EN50121-3-2	Radiated Emission, Antenna Method	EN50155:2021; EN50121-3-2:2016; EN50121-3-2:2016/A1:2019	PASS	1654017720_B0171-01_EMC_TEST 1.pdf
EN50155 / EN50121-3-2	Conducted Susceptibility Test	EN50155:2021; EN50121-3-2:2016; EN50121-3-2:2016/A1:2019	PASS	1654017720_B0171-01_EMC_TEST 1.pdf
EN50155 / EN50121-3-2	Electric Fast Transient Test	EN50155:2021; EN50121-3-2:2016; EN50121-3-2:2016/A1:2019	PASS	1654017720_B0171-01_EMC_TEST 1.pdf
EN50155 / EN50121-3-2	Electrostatic Discharge Test	EN50155:2021; EN50121-3-2:2016; EN50121-3-2:2016/A1:2019	PASS	1654017720_B0171-01_EMC_TEST 1.pdf

Environmental Consideration & Testing

Water Ingress Protection	IP69K	Storage Temperature	-40°C to + 85°C
Impact Resistance Rating	IK10	Operating Temperature	-40°C to + 85°C
		Humidity	Non-condensing 65°C / 95% RH

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EN45545 Test Results certification test results summary

Certification	Part / Requirement Set	Test Type	Standard / Method	Result	Source Test Report
EN45545-2:2020+A1:2023	Cable, R15 / R16	Vertical flame propagation, single insulated wire/cable	T09.01, EN 60332-1-2	PASS	AJFTS25007825R01-1_EN45545_Cable_R15 & R16.pdf
EN45545-2:2020+A1:2023	Cable, R15 / R16	Smoke density / light transmission	T13, EN 61034-2	PASS	AJFTS25007825R01-1_EN45545_Cable_R15 & R16.pdf
EN45545-2:2020+A1:2023	Cable, R15 / R16	Toxicity index, ITC	T15, EN 50305	PASS	AJFTS25007825R01-1_EN45545_Cable_R15 & R16.pdf
EN45545-2:2020+A1:2023	PCB, R24	Oxygen Index	T01, EN ISO 4589-2	PASS	AJFTS25007851R01-1_EN45545_PCB_R24.pdf
EN45545-2:2020+A1:2023	Base Mechanical Part, R22	Oxygen Index	T01, EN ISO 4589-2	PASS	AJFTS26000142R01-1_EN45545_Base_Mechanical_R22 & R23.pdf
EN45545-2:2020+A1:2023	Base Mechanical Part, R22	Smoke Density	T10.03, EN ISO 5659-2, 25 kW/m2	PASS	AJFTS26000142R01-1_EN45545_Base_Mechanical_R22 & R23.pdf
EN45545-2:2020+A1:2023	Base Mechanical Part, R22	Toxicity	T12, EN 17084 Method 2, 600 C	PASS	AJFTS26000142R01-1_EN45545_Base_Mechanical_R22 & R23.pdf
EN45545-2:2020+A1:2023	Base Mechanical Part, R23	Oxygen Index	T01, EN ISO 4589-2	PASS	AJFTS26000142R01-1_EN45545_Base_Mechanical_R22 & R23.pdf
EN45545-2:2020+A1:2023	Base Mechanical Part, R23	Smoke Density	T10.03, EN ISO 5659-2, 25 kW/m2	PASS	AJFTS26000142R01-1_EN45545_Base_Mechanical_R22 & R23.pdf
EN45545-2:2020+A1:2023	Base Mechanical Part, R23	Toxicity	T12, EN 17084 Method 2, 600 C	PASS	AJFTS26000142R01-1_EN45545_Base_Mechanical_R22 & R23.pdf
EN45545-2:2020+A1:2023	Top Mechanical Part, R22	Oxygen Index	T01, EN ISO 4589-2	PASS	AJFTS26000142R02-1_EN45545_Top_Mechanical_R22 & R23.pdf
EN45545-2:2020+A1:2023	Top Mechanical Part, R22	Smoke Density	T10.03, EN ISO 5659-2, 25 kW/m2	PASS	AJFTS26000142R02-1_EN45545_Top_Mechanical_R22 & R23.pdf
EN45545-2:2020+A1:2023	Top Mechanical Part, R22	Toxicity	T12, EN 17084 Method 2, 600 C	PASS	AJFTS26000142R02-1_EN45545_Top_Mechanical_R22 & R23.pdf
EN45545-2:2020+A1:2023	Top Mechanical Part, R23	Oxygen Index	T01, EN ISO 4589-2	PASS	AJFTS26000142R02-1_EN45545_Top_Mechanical_R22 & R23.pdf
EN45545-2:2020+A1:2023	Top Mechanical Part, R23	Smoke Density	T10.03, EN ISO 5659-2, 25 kW/m2	PASS	AJFTS26000142R02-1_EN45545_Top_Mechanical_R22 & R23.pdf
EN45545-2:2020+A1:2023	Top Mechanical Part, R23	Toxicity	T12, EN 17084 Method 2, 600 C	PASS	AJFTS26000142R02-1_EN45545_Top_Mechanical_R22 & R23.pdf