

UN ECE R10 EMC Test Solution

Immunity Test for eCall

Communications Equipment

Signalling Tester MD8475B

eCall Tester MX703330E

UN ECE R10 Standard and Test Outline

The UN ECE R10*1 standard regulating automobile-related electromagnetic compatibility (EMC) was updated by the R10.06 revision in 2019. As part of this change, a new emergency call (eCall) immunity test was defined to help assure improved safety of drivers, passengers and other road users.

This eCall immunity test uses an environment simulating a cellular network and Public Safety Answering Point (PSAP) to test the operation of the eCall system when subject to electromagnetic interference and confirm that the test vehicle complies with the requirements of the standard.

Testing in accordance with the R10.06 revision will be mandatory from September 2022 when the predecessor R10.05 standard will be superseded.

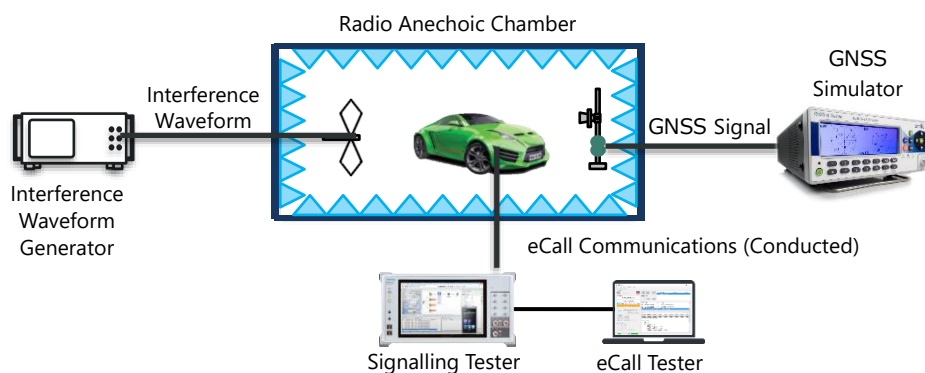


Fig. 1 Immunity Test using eCall

*1: ECE R10 is an international regulation concerning the EMC of automobile equipment based on the 1958 UN international agreement concerning vehicle compatibility type approval. UN ECE R10 ECE is being adopted by the EU, UK, Russia, Switzerland, Japan, and other countries.

eCall Communications Equipment and Immunity Test

The immunity test in a radio anechoic chamber with radio interference confirms the following.

- (1) Can an emergency call be established normally between the automobile and PSAP server simulated by the eCall tester?
- (2) Can the MSD (Minimum Set of Data) be transmitted normally from the test vehicle without data loss to the eCall tester?
- (3) Can voice messages be exchanged clearly between the vehicle and eCall tester?
- (4) Can the vehicle receive GNSS signals correctly?

Anritsu eCall Test Solution

Combining the Signalling Tester MD8475B with the eCall Tester MX703330E supports implementation of efficient R10.06-compliant tests.

- (1) High-reproducibility eCall tests can be implemented via LTE/W-CDMA/GSM cellular networks
- (2) This test solution can be added easily to existing EMC test environments.
- (3) The software can be switched to support national system specifications, such as European eCall, ERA-GLONASS, next-generation NG-eCall (deployment from 2025), etc.

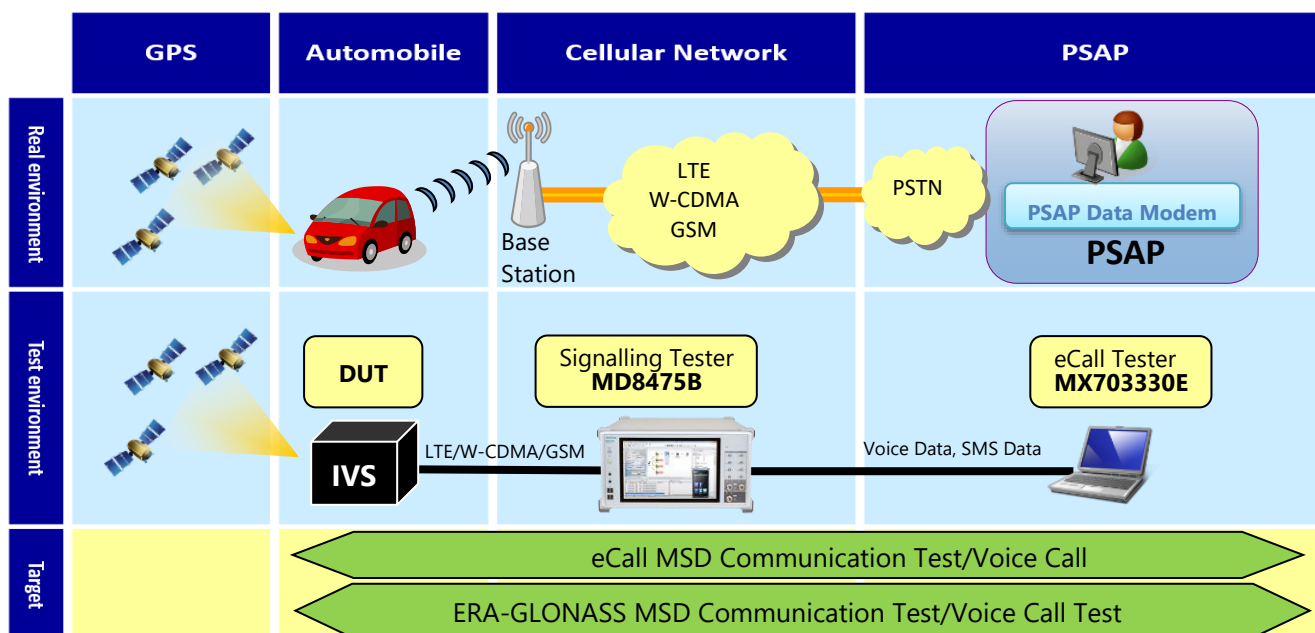


Fig. 2 eCall Actual and Test Environments

Ordering Information

*Consult our Business Section for configuration details.

Model	Name
MD8475B	Signalling Tester (Consult our business section for configuration details.)
MX703330E-PL010	eCall Tester (Perpetual License)
MX703330E-031	MSD ERA GLONASS Option
MX703330E-032	EGTS Server ERA GLONASS Option
MX703330E-041	NG112 LTE eCall Option
MX703330E-042	NG112 LTE eCall Semi Normal test Option