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**Digital cellular telecommunications system (Phase 2+);
Radio Transmission and Reception
(3GPP TS 05.05 version 8.20.0 Release 1999)**



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Foreword

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1 Scope

The present document defines the requirements for the transceiver of the pan-European digital cellular telecommunications systems GSM.

Requirements are defined for two categories of parameters:

- those that are required to provide compatibility between the radio channels, connected either to separate or common antennas, that are used in the system. This category also includes parameters providing compatibility with existing systems in the same or adjacent frequency bands;
- those that define the transmission quality of the system.

This EN defines RF characteristics for the Mobile Station (MS) and Base Station System (BSS). The BSS will contain Base Transceiver Stations (BTS), which can be normal BTS, micro-BTS or pico-BTS. The precise measurement methods are specified in 3GPP TS 11.10 and 3GPP TS 11.21.

Unless otherwise stated, the requirements defined in this EN apply to the full range of environmental conditions specified for the equipment (see annex D).

In the present document some relaxations are introduced for GSM 400 MSs, GSM 900 MSs and GSM 850 MSs which pertain to power class 4 or 5 (see subclause 4.1.1). In the present document these Mobile Stations are referred to as "small MS".

MSs may operate on more than one of the frequency bands specified in clause 2. These MSs, defined in 3GPP TS 02.06, are referred to as "Multi band MSs" in this EN. Multi band MSs shall meet all requirements for each of the bands supported. The relaxation on GSM 400 MSs, GSM 900 MSs and GSM 850 MSs for a "small MS" are also valid for a multi band MS if it complies with the definition of a small MS.

The RF characteristics of repeaters are defined in annex E of this EN. Annexes D and E are the only clauses of this EN applicable to repeaters. Annex E does not apply to the MS or BSS.

This document also includes specification information for mixed mode operation at 850 MHz and 1900 MHz. (MXM 850 and MXM 1900). 850 MHz and 1900 MHz mixed-mode is defined as a network that deploys both 30 kHz RF carriers and 200 kHz RF carriers in geographic regions where the Federal Communications Commission (FCC) regulations are applied or adopted.

The requirements for a MS in a mixed-mode system, MXM 850 and MXM 1900, correspond to the requirements for GSM 850 MS and PCS 1900 MS respectively.

1.1 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
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[1] 3GPP TR 01.04: "Digital cellular telecommunications system (Phase 2+); Abbreviations and acronyms".

[2] 3GPP TS 02.06: "Digital cellular telecommunications system (Phase 2+); Types of Mobile Stations (MS)".

[3] 3GPP TS 03.64: "Digital cellular telecommunications system (Phase 2+); General Packet Radio Service (GPRS); GPRS Radio Interface Stage 2".