E.5 HSDPA DL Physical channels

E.5.1 Downlink Physical Channels connection set-up

Table E.5.1 is applicable for the measurements for tests in subclause 9.2.1 and 9.3. Table E.5.2 is applicable for the measurements for tests in subclause 9.2.2. Table E.5.3 is applicable for the measurements for tests in subclause 9.2.3. Table E.5.4 is applicable for the measurements for tests in subclause 9.4.

Table E.5.1: Downlink physical channels for HSDPA receiver testing for Single Link performance.

Physical Channel	Parameter	Value	Note
P-CPICH	P-CPICH_Ec/Ior	-10dB	
P-CCPCH	P-CCPCH_Ec/Ior	-12dB	Mean power level is shared with SCH.
SCH	SCH_Ec/Ior	-12dB	Mean power level is shared with P-CCPCH – SCH includes P- and S-SCH, with power split between both. P-SCH code is S_dl,0 as per [14] S-SCH pattern is scrambling code group 0
PICH	PICH_Ec/Ior	-15dB	
DPCH	DPCH_Ec/Ior	Test-specific	12.2 kbps DL reference measurement channel as defined in Annex C.3.1
HS-SCCH_1	HS-SCCH_Ec/Ior	Test-specific	Specifies fraction of Node-B radiated power transmitted when TTI is active (i.e. due to minimum inter-TTI interval).
HS-SCCH_2	HS-SCCH_Ec/Ior	DTX'd	No signalling scheduled, or power radiated, on this HS-SCCH, but signalled to the UE as present.
HS-SCCH_3	HS-SCCH_Ec/Ior	DTX'd	As HS-SCCH_2.
HS-SCCH_4	HS-SCCH_Ec/Ior	DTX'd	As HS-SCCH_2.
HS-PDSCH	HS-PDSCH_Ec/Ior	Test-specific	.
OCNS		Necessary power so that total transmit power spectral density of Node B (Ior) adds to one	OCNS interference consists of 6 dedicated data channels as specified in table E.5.5

Table E.5.2: Downlink physical channels for HSDPA receiver testing for Open Loop Transmit Diversity performance.

Physical Channel	Parameter	Value	Note
P-CPICH (antenna 1)	P-CPICH_Ec1/Ior	-13dB	1. Total P-CPICH_Ec/Ior = -10dB
P-CPICH (antenna 2)	P-CPICH_Ec2/Ior	-13dB	
P-CCPCH (antenna 1)	P-CCPCH_Ec1/Ior	-15dB	1. STTD applied. 2. Total P-CCPCH Ec/Ior is –12dB.
P-CCPCH (antenna 2)	P-CCPCH_Ec2/Ior	-15dB	
SCH (antenna 1/2)	SCH_Ec/Ior	-12dB	1. TSTD applied. 2. Power divided equally between primary and secondary SCH.
PICH (antenna 1)	PICH_Ec1/Ior	-18dB	1. STTD applied. 2. Total PICH Ec/Ior is –15dB.
PICH (antenna 2)	PICH_Ec2/Ior	-18dB	
DPCH	DPCH_Ec/Ior	Test-specific	1. STTD applied.
HS-SCCH_1	HS-SCCH_Ec/Ior	Test-specific	1. STTD applied. 2. Specifies fraction of Node-B radiated power transmitted when TTI is active (i.e. due to minimum inter-TTI interval).
HS-SCCH_2	HS-SCCH_Ec/Ior	DTX'd	1. UE assumes STTD applied. 2. No signalling scheduled, or power radiated, on this HS-SCCH, but signalled to the UE as present.
HS-SCCH_3	HS-SCCH_Ec/Ior	DTX'd	1. As HS-SCCH_2.
HS-SCCH_4	HS-SCCH_Ec/Ior	DTX'd	2. As HS-SCCH_2.
HS-PDSCH	HS-PDSCH_Ec/Ior	Test-specific	1. STTD applied.
OCNS		Necessary power so that total transmit power spectral density of Node B (Ior) adds to one	1. STTD applied. 2. Balance of power I_{or} of the Node-B is assigned to OCNS. 3. Power divided equally between antennas.

Table E.5.3: Downlink physical channels for HSDPA receiver testing for Closed Loop Transmit Diversity (Mode-1) performance.

Physical Channel	Parameter	Value	Note
P-CPICH (antenna 1)	P-CPICH_Ec1/Ior	-13dB	1. Total P-CPICH_Ec/Ior = -10dB
P-CPICH (antenna 2)	P-CPICH_Ec2/Ior	-13dB	
P-CCPCH (antenna 1)	P-CCPCH_Ec1/Ior	-15dB	1. STTD applied. 2. Total P-CCPCH Ec/Ior is –12dB.
P-CCPCH (antenna 2)	P-CCPCH_Ec2/Ior	-15dB	
SCH (antenna 1/2)	SCH_Ec/Ior	-12dB	1. TSTD applied. 2. Power divided equally between primary and secondary SCH.
PICH (antenna 1)	PICH_Ec1/Ior	-18dB	1. STTD applied. 2. Total PICH Ec/Ior is –15dB.
PICH (antenna 2)	PICH_Ec2/Ior	-18dB	
DPCH	DPCH_Ec/Ior	Test-specific	1. CL1 applied.
HS-SCCH_1	HS-SCCH_Ec/Ior	Test-specific	1. [TBD] applied. 2. Specifies fraction of Node-B radiated power transmitted when TTI is active (i.e. due to minimum inter-TTI interval).
HS-SCCH_2	HS-SCCH_Ec/Ior	DTX'd	1. UE assumes [TBD] applied. 2. No signalling scheduled, or power radiated, on this HS-SCCH, but signalled to the UE as present.
HS-SCCH_3	HS-SCCH_Ec/Ior	DTX'd	1. As HS-SCCH_2.
HS-SCCH_4	HS-SCCH_Ec/Ior	DTX'd	2. As HS-SCCH_2.
HS-PDSCH	HS-PDSCH_Ec/Ior	Test-specific	1. CL1 applied.
OCNS		Necessary power so that total transmit power spectral density of Node B (Ior) adds to one	1. STTD applied. 2. Balance of power I_{or} of the Node-B is assigned to OCNS. 3. Power divided equally between antennas.

Table E.5.4: Downlink physical channels for HSDPA receiver testing for HS-SCCH detection performance

Parameter	Units	Value	Comment
CPICH E_c / I_{or}	DB	-10	
CCPCH E_c / I_{or}	DB	-12	Mean power level is shared with SCH.
SCH E_c / I_{or}	DB	-12	Mean power level is shared with P-CCPCH – SCH includes P- and S-SCH, with power split between both. P-SCH code is S_dl,0 as per [14] S-SCH pattern is scrambling code group 0
PICH E_c / I_{or}	DB	-15	
HS-DSCH-1 E_c / I_{or}	DB	-10	HS-DSCH associated with HS-SCCH-1
HS-DSCH-2 E_c / I_{or}	DB	DTX	HS-DSCH associated with HS-SCCH-2
HS-DSCH-3 E_c / I_{or}	DB	DTX	HS-DSCH associated with HS-SCCH-3
HS-DSCH-4 E_c / I_{or}	DB	DTX	HS-DSCH associated with HS-SCCH-4
DPCH E_c / I_{or}	DB	-8	12.2 kbps DL reference measurement channel as defined in Annex C.3.1
HS-SCCH-1 E_c / I_{or}	DB	Test Specific	All HS-SCCH's allocated equal E_c / I_{or}. Specifies E_c / I_{or} when TTI is active.
HS-SCCH-2 E_c / I_{or}	DB		
HS-SCCH-3 E_c / I_{or}	DB		
HS-SCCH-4 E_c / I_{or}	DB		
OCNS E_c / I_{or}	DB	Remaining power at Node-B (including HS-SCCH power allocation when HS-SCCH's inactive).	OCNS interference consists of 6 dedicated data channels as specified in table E.5.5

E.5.2 OCNS Definition

The selected channelization codes and relative power levels for OCNS transmission during for HSDPA performance assessment are defined in Table E.5.5. The selected codes are designed to have a single length-16 parent code.

Table E.5.5: OCNS definition for HSDPA receiver testing

Channelization Code at SF=128	Relative Level setting (dB)	DPCH Data
2	-6	The DPCH data for each channelization code shall be uncorrelated with each other and with any wanted signal over the period of any measurement.
3	-8	
4	-8	
5	-10	
6	-7	
7	-9	