* Electrical Specifications

ISDN SPLITTER

NO	Test Item	Measure Frequency	Specification	Remark
1	Insertion Loss	1KHz-40KHz	+/-0.8dB MAX	Zt=Zl= 135Ω(2B1Q)
		40KHz-80KHz	+/- 2.0dBmax	
		1KHz-60KHz	+/- 1.2dBbmax	Zt=Zl= 150Ω(4B3T)
		60KHz-80KHz	+/-2.0dBMAX	
2	Group Delay Distortion In ISDN band	0.0 ~80KHz	20μs MAX.	2B1Q and 4B3T
3	Return Loss	1KHz-40KHz	16dB MIN.	Zt=Zl =135Ω
		40KHz-80KHz	14dB MIN	
		1KHz-60KHz	16dB MIN	Zt=Zl =150Ω
		60KHz-80KHz	14dB MIN	
4	Longitudinal conversion Loss	300Hz-30KHz 30KHz-1104KHz 1104KHz-5.0MHz	40dB MIN 50dB MIN 30dB MIN	Test must be Performed for ITU-T Recommend. G.117
5	Attenuation ADSL band	150KHz-1104KHz	65dB MIN	Zt=Zl=135Ω
		150KHz-1104KHz	65dB MIN	Zt=Zl=150Ω
6	Isolation For DC &DCResistance	Tip to Ring & Tip to Ground, Ring to Ground Tip to Ring	20 MΩ MIN. 5 MΩ MIN. 12.5Ω MAX.	Term= ∞ Ω ;100V DC Term= ∞ Ω ;100V DC Term= 0 Ω
7	DC bias rating	DC15mA-80mA MAX	Operating performance	any terms of Each conditions For operating test
8	Ringing	Maximum peak signal power in 25-50 Hz Loop current	No Define	Standard did not Fix till now.
9	Noise Level For ISDN	Noise power (dBmp)	No Define	Standard did not Fix till now.
10	Capacitance of Line	L1 to L2 (Capacitance) L1,L2 to Ground	80nFmax 1.0nFmax	At 30Hz, Without ZHP
11	IMPEDANCE	0Hz-80KHz	Ref. 135/150Ω	Ref term=135Ω, or 150Ω

12	Inter Modulation At POTS	4 tone method at –9dBm POTS signal	2^{nd} & 3^{rd} harmonic distortion shall be min.57 & 60dB	Refer to ITU-T. Recomm. O.42 With 12.5dBm(up), 19.9dBm(down) ADSL signal
13	Common-Mode Attenuation (Filtering for common-mode)	200kHz	Min.3.5kΩ	Common choke's Impedance shall be Measured at Term.= ∞
		400kHz	Min.6.0kΩ	
		600KHz	Min.8.3kΩ	
		800KHz	Min.11kΩ	
		1000KHz	Min.13.5kΩ	
		1100KHz	Min.15kΩ	
14	ADSL INSERTION LOSS	120KHz-170KHz	Max 3dB	Zt=Zl= 100Ω
		170KHz-1104KHz	Max 1dB	
15	Surge Protection	ITU-T. K.20 Resistibility of Telecomm.switch equipment to Over-voltages & over- currents	No Break-down & any troubles	ITU-T. Recommendation K.20

*** Above terms of specification are based on the international standards,

ETSI TR 101 388 V1.2.1
-Coexistence of ADSL and ISDN-BA on the same pair ,
ISDN/ADSL splitters

ANSI T1.413 issued 2
-Asymmetrical Digital Subscriber Line(ADSL) Metallic Interface

ITU-T Recommendation G. 992.1
-(G.dmt) Asymmetric Digital Subscriber Line, ANNEX B
-(G.dmt) Asymmetric Digital Subscriber Line, ANNEX E.3 , Type for ISDN-BA

ITU-T Recommendation Q.552
-Transmission characteristics at 2-wire analogue interfaces of digital exchanges
ITU-T Recommendation K.20
-Reliability of telecomm switching equipment to over-voltages & over-currents

3.2.Standard in Functions

-On performance of PSTN and HOOK = On/Off, there should not be any errors on ATU-R MODEM.