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<i>Test Report No.:</i>					
Auftraggeber: <i>Client:</i>		KYOCERA Document Solutions Inc. 1-2-28 Tamatsukuri, Chuo-ku ,Osaka-shi,Osaka,540-8585 Japan			
Gegenstand der Prüfung: Multi Function Printer <i>Test item:</i>					
Bezeichnung: <i>Identification:</i>		ECOSYS M3560idn		Serien-Nr.: <i>Serial No.:</i>	
				Prototype	
Wareneingangs-Nr.: <i>Receipt No.:</i>		A000028355-1		Eingangsdatum: 2013-11-11 <i>Date of receipt:</i>	
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>		Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>			
Prüfort: <i>Testing location:</i>		TÜV Rheinland Japan Ltd. 4-25-2, Kita-Yamata, Tuzuki-ku, Yokohama 224-0021, Japan Phone:+81-45-914-0239 Fax:+81-45-914-3347 e-mail: telecom-lab@jpn.tuv.com			
Prüfgrundlage: <i>Test specification:</i>		EG 201 121 V1.1.3 (2000 - 02)			
Prüfergebnis: <i>Test Result:</i>		Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n). <i>The test item passed the test specification(s).</i>			
Prüflaboratorium: <i>Testing Laboratory:</i>		TÜV Rheinland Japan Ltd. 4-25-2, Kita-Yamata, Tuzuki-ku, Yokohama 224-0021, Japan Phone:+81-45-914-0239 Fax:+81-45-914-3347 e-mail: telecom-lab@jpn.tuv.com			
geprüft/ tested by:			kontrolliert/ reviewed by:		
<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"> 2013-11-26, Y.Miura  <div style="display: flex; justify-content: space-between; font-size: small;"> Datum <i>Date</i> Name/Stellung <i>Name/Position</i> Unterschrift <i>Signature</i> </div> </div> <div style="text-align: center;"> 2013-11-26, T.Kuriyama  <div style="display: flex; justify-content: space-between; font-size: small;"> Datum <i>Date</i> Name/Stellung <i>Name/Position</i> Unterschrift <i>Signature</i> </div> </div> </div>					
Sonstiges/ Other Aspects: DE08/NO02/ES01 are applied without 60mA current limit. AN003, AN004, AN013, AN014, AN015, AN017, DE17, GR02/P10 and P04 are not applied. Accredited Testing Laboratory under the terms of ISO 17025 D-PL-12059-01-03 <div style="text-align: center; margin-top: 20px;">  Deutsche Akkreditierungsstelle </div>					
* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested					
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.</i>					

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Test result:

No deviations have been found from the technical requirements during the tests.



The deviations from the technical requirements found during the tests are enclosed this report.



Questions about the test report please inform Mr. M. Zietz.

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Climatic conditions during testing

Temperature: 23 - 25 °C

Air pressure: 1020 - 1020 hPa

Humidity: 45 - 55 %

Appliance documentation

Hardware: -

Software: -

User manual: ECOSYS M3560idn Specifications

Circuit diagram: FAX SUB PCB(1/1)

Test system configuration

Hardware: ECOSYS M3560idn

Software: 001.006

Test Sample Configuration

☐ One - Port - TE (only a1/b1)

☒ Two - Port TE (a1/b1 and a2/b2)

☒ DTMF dialling function

☐ Decadic pulse dialling function

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Measurement equipment list

Measuring instrument	Identification	
Automatic Measurement System AMS from ESP-Telekom	TL-9000	
Outband Receiver and Ringer Amplifier ARE1000 from ESP-Telekom	TL-9001	
International Feeding Bridge ISB1000 from ESP-Telekom	TL-9002	
Digital Multimeter Fluke	TL-9108	
Oscilloscope Tektronix TDS210	TL-9008	
Tastkopf I / II / Voltage Probe I / II	TL-9036, TL-9037	
Connector Box	TL-9010	
Resistor Box	TL-9011	
Reference Impedance Zref-quer TBR21, Type28	TL-9020, TL-9021	
Reference Impedance Zref-längs TBR21, Type 29	TL-9022	
Reference Impedance 150 Ohm crosswise, Type 50	TL-9033	
Polarity Switch	TL-9042	

Measurement uncertainties

	Measuring	Measurement Uncertainty K=2	
AN 01	Automatic Dialling	Time : ±0.24 ms	
AN 02	Ringing signal detector sensitivity	AC Voltage : ±0.28 V	
AN 03	Variation of signals supplied by the PSTN	Time : ±0.24 ms	
AN 04	DTMF and CEPT recommendations	Level : ± 1dB	
AN 05	Automatic line clearing	Time : ±58 ms	
AN 06	Resistance to earth	Resistance : ±0.17MΩ	
AN 07	Control requirements in case of power failure	Time : ±8.2µs DC Current _(10mA) : ±0.12 mA DC Current _(0.5mA) : ±0.006 mA	
AN 09	Instantaneous voltage tested over a wider freq. Range	Level:±0.28V	
AN 10	Sending levels according to TBR 15	30Hz-200Hz:Level:±2.1dB 200Hz-4.3kHz:Level:±1.6dB	
AN 11	Establishment of loop for automatic answer	Time : ±1.2 ms Voltage : ±0.26 V	
AN 12	Transition after change to opposite polarity	Time : ±59 ms Current : ±0.74 mA	
AN 13	Test Methods of TBR21 to voice stimulated TE	Maximum mean sending level	Level : ±1.0 dB
		Maximum instantaneous voltage	Level:±0.28V
		Maximum voltage in 10Hz bandwidth	30Hz-200Hz:Level:±2.1dB 200Hz-4.3kHzLevel:±1.6dB
DE 03/GR 03/N 01	Sending level in quiescent state should be same as in loop state		
DE 04/GR 04/	Receiving signals having a long duration	Time : ±12 ms Voltage _(63V) : ±0.36 V Voltage _(85V) : ±0.44 V	
DE 05/GR 01/P 08	Seizing the line without making a call		
DE 08	Lower limit voltage in DC characteristics	Voltage:±0.06V Current:±0.82mA	
DE 09	Return loss during DTMF dialing	Return loss : ±0.36 dB	
DE 12	Output signal balance during DTMF	Level: : ±0.28dB	
DE 14	Improvement for transition from loop to quiescent state	Time:±8.2µs Current(10mA):±0.12mA Current(0.5mA): ±0.006mA	
DE 17	Definition of a feeding bridge		
GR 02/P 10			
P 03	Impedance in quiescent state for voice and 12kHz signals	Impedance : ±35 Ω	
P 04	Series DC resistance	DC Current _(10mA) : ±0.2 mA Resistance : ±1.0Ω	
P 04	Insertion loss at series connection	Insertion loss : ±0.095 dB	
ES 01/NO 02	DC current and loop resistance	"Voltage:±0.06V Current:±0.82mA"	

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Summary Report: EG 201 121

All Countries					
Requirements				N/A N/T fail OK	Appendix A
ATAAB AN 002, ATAAB AN 003 Ringing signal detector sensitivity: Ringing Voltage: 24Vrms - 90Vrms Ringing Frequency: 20 Hz - 62.5Hz Feeding Voltage: 48 VDC - 66VDC Ringing Cadence: 0.8s / 6s, 1.2s/4s				<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	3-4
Dial tone detection				<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-
Frequency	Level	Timing	Start dialling after		
300 Hz	- 35 dBm / 0 dBm	Continue	s / s	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
425 Hz	- 35 dBm / 0 dBm	Continue	s / s	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
550 Hz	- 35 dBm / 0 dBm	Continue	s / s	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
570 Hz	- 35 dBm / 0 dBm	Continue	s / s	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
600 Hz	- 35 dBm / 0 dBm	Continue	s / s	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
630 Hz	- 35 dBm / 0 dBm	Continue	s / s	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
425 Hz	- 35 dBm	1000/ 100 ms	s	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
425 Hz	- 5 dBm	320 / 20 ms	s	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
ATAAB AN 004 DTMF signalling: Unwanted frequencies in the range 250Hz to 4300Hz in the presence of dial tone: > 20 dB Measurement Result: > dB				<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-

ATAAB AN 013					
Voice stimulated TE					
Requirements				N/A N/T fail OK	Appendix A
Mean sending level				<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-
Instantaneous voltage				<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-
Voltage level in a 10Hz bandwidth				<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-
Sending level above 4.3 kHz during communication				<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-
Output signal balance				<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-
Longitudinal conversion loss				<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-

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Requirements	N/A N/T fail OK	Appendix A
ATAAB AN 014 Reduction of the range of line currents: The resistor of 3200 Ohm shall be replaced by a resistor of 2800 Ohm. If declared by manufacturer for use only on lines providing a loop current of 18 mA or greater, the resistor of 2800 Ohm shall be replaced by a resistor of 2300 Ohm.	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-
ATAAB AN 015 Alternative connection methods: Connection method of multi-line TE, please insert if other than socket: Type of connection	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-
ATAAB AN 016 Test for compliance of resistance to earth (On-Hook): Resistance to earth with removed feeding bridge and test equipment directly connected to the TE under test. <input checked="" type="checkbox"/> as tested by TBR 21, refer to report 50001072 001. <input type="checkbox"/> with relaxation of this Advisory Note.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	-
ATAAB AN 016 Test for compliance of resistance to earth (Off-Hook): Resistance to earth with removed feeding bridge and test equipment directly connected to the TE under test. <input checked="" type="checkbox"/> as tested by TBR 21, refer to report 50001072 001. <input type="checkbox"/> with relaxation of this Advisory Note.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	-
ATAAB AN 017 Test impedance for compliance above 4.3 kHz: Applies to TBR 15, TBR 17. Replaced resistor of 120 Ohm with Zr from TBR 21, which means a resistance of 270 Ohms in series with a parallel combination of 750 Ohms and 150 nF.	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-

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Germany					
ATAAB Advisory Notes					
Requirements	N/A	N/T	fail	OK	Appendix A
ATAAB AN 005 Automatic clearing of automatically originated or answered PSTN calls: Limit: t < 180s Measurement Result: t = 55.4 s	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6
ATAAB AN 006 Resistance to earth: Limit: U = 150 V DC => R > 100 kΩ Measurement Result: R > 50000 kΩ	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	7
ATAAB AN 007 Liberation of Loop condition by the TE in the event of power failure: Limit: In quiescent state within: t < 30 s Measurement Result: t < 1.67 s	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	8-9
ATAAB AN 009 Instantaneous Voltage in a frequency range from 5 Hz to 4300 Hz: Limit: Upp < 5.0 V Measurement Result: Upp < 1.22 V Refer also to test report 50001072 001.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10-16
ATAAB AN 010 Sending level in 10 Hz bandwidth: Limit: according TBR15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17-25

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German Advisory Notes					
Requirements	N/A	N/T	fail	OK	Appendix A
DE03 Control of sending level in quiescent state:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	32-34
DE04 Inter-working after receiving ringing signal having a long duration: $U_{TE\text{ eff}} = 75\text{ V}\sim, 25\text{ Hz}, t = 6.5\text{s}$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	35
DE05 Restriction on seizing the line without the intent of making a call: Measurement Result: Automatically seizing the line only with the intention to make a call	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-
DE08 DC Characteristics: Lower limit of voltage in DC Characteristics, see figure: 'DE 08.1'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	36-37
DE09 Impedance during DTMF signalling: Limit for the frequency range from 600 Hz to 1700 Hz: > 14 dB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	38-41
DE12 Output signal balance: Limits see figure: 'DE 12.1'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	42-45
DE14 Transition from loop to quiescent: Limits: Decrease of the current to 0.05 mA within 1s Measurement Result: t = 0.0 ms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	46
DE17 Definition of the feeding bridge: Measurement Result: The feeding bridge fulfills all requirements	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-

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Greece

ATAAB Advisory Notes

Requirements	N/A N/T fail OK	Appendix A
ATAAB AN 005 Automatic clearing of automatically originated or answered PSTN calls: Limit: $t < 360s$, for different clearing conditions, see table: 'AN 05.1' Measurement Result: $t = 55.4 s$	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	5
ATAAB AN 006 Resistance to earth: Limit: $U = 150 V DC \Rightarrow R > 100 k\Omega$ Measurement Result: $R > 50000 k\Omega$	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	7

Greece Advisory Notes

Requirements	N/A N/T fail OK	Appendix A
GR01 Restriction on seizing the line without the intent of making a call: Measurement Result: Automatically seizing the line only with the intention to make a call	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	-

GR02 Loop disconnect signalling		
Requirements according ETS 300 001	N/A N/T fail OK	Appendix A
Dialling pulse timing: Limit: Make time ($t_e - t_i$) = 38.5ms \pm 3ms ($I_h = 12$ mA, $I_g = 18$ mA) Break time ($t_h - t_g$) = 61.5ms \pm 3ms ($I_e = 18$ mA, $I_i = 12$ mA) Frequency = 10 Hz \pm 1 Hz Measurement Result: Make time: $t_{M \min} =$ ms; $t_{M \max} =$ ms Brake time: $t_{B \min} =$ ms; $t_{B \max} =$ ms Frequency: $f_{\min} =$ Hz; $f_{\max} =$ ms	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-
Break and make pulse period current and loop resistance: Limit: Brake time ($t_e - t_i$) - 6 ms; $I_B < 0.5$ mA Make time ($t_h - t_g$) - 4 ms $I_M > 20, 35, 55$ mA Measurement Result: $t(I_B < 0.5$ mA) = ms; $t_{M \max} =$ ms Brake time: $t_{B \min} =$ ms; $t_{B \max} =$ ms Frequency: $f_{\min} =$ Hz; $f_{\max} =$ ms	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-
Inter-digital pause: Limit: Automatic dialling: $t_h - t_g = 720$ ms - 1000ms Manual dialling : $t_h - t_g > 400$ ms Current $t(I > 20, 35, 55$ mA) $> t_h - t_g - 80$ ms Measurement Result: Automatic dialling: $t_h - t_g =$ ms Manual dialling : $t_h - t_g =$ ms Current $t(I > 20, 35, 55$ mA) = ms	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-
Post pulsing period: Limit: $t(I > 20, 35, 55$ mA) < 100 ms Measurement Result: $t(I > 20, 35, 55$ mA) = ms	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-
Spark quenching: Limit: $R = 100\Omega - 200\Omega$ $C = 1.5 \mu F$ Measurement Result: $R =$ Ω $C =$ μF	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-

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Greece Advisory Notes		
Requirements	N/A N/T fail OK	Appendix A
GR03 Control of sending level in quiescent state:	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	32-34
GR04 Inter-working after receiving ringing signal having a long duration: $U_{TE\text{ eff}} = 75\text{ V}\sim, 25\text{ Hz}, t = 6.5\text{ s}$	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	35

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Portugal		
ATAAB Advisory Notes		
Requirements	N/A N/T fail OK	Appendix A
ATAAB AN 001 Automatic Dialling: Limit: Dialling without dial tone: $t = 2.7s - 5s$ Dialling with dial tone: $t < 5s$ Measurement Result: <input checked="" type="checkbox"/> Dialling without dial tone: $t = 4.04 s$ <input checked="" type="checkbox"/> Dialling with dial tone: $t = 0.95 s$	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	1-2
ATAAB AN 005 Automatic clearing of automatically originated or answered PSTN calls: Limit: $t < 360s$ Measurement Result: $t = 55.4 s$	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	5
ATAAB AN 006 Resistance to earth: Limit: $U = 150 V DC \Rightarrow R > 100 k\Omega$ Measurement Result: $R > 50000 k\Omega$	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	7
ATAAB AN 007 Liberation of loop condition by the TE in the event of power failure: Limit: Return to quiescent state within: $t < 30 s$ Measurement Result: $t < 1.67 s$	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	8-9
ATAAB AN 011 Establishment of loop for automatic answer: Limit: $t < 2 min$ Measurement Result: $t = 7.11 s$	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	26-27

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Portugal Advisory Notes		
Requirements	N/A N/T fail OK	Appendix A
P03 Input impedance for voice band signal and billing signal in quiescent state: Limit: (Test Signal = 1.5 Vrms) 300 Hz - 4000 Hz $Z > 15 \text{ k}\Omega$ 4 kHz - 15 kHz $Z > 6 \text{ k}\Omega$ Measurement Result: 300 Hz - 4000 Hz $Z > 37.9 \text{ k}\Omega$ 4 kHz - 15 kHz $Z > 10.3 \text{ k}\Omega$	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	47-48
P04 2 - Port - TE 4.1 Series DC resistance in loop state: Limit: $R < 100 \Omega$ Measurement Result: $R = \quad \Omega$	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
P04 2 - Port - TE 4.2 Transition from quiescent state to loop state: Limit: $t < 100 \text{ ms}$ Measurement Result: $t = \quad \text{ms}$	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
P04 2 - Port - TE 4.3 Insertion Loss of a Series Terminal Equipment Limit: Insertion Loss $< 1 \text{ dB}$ ($V_{\text{rms}} = 1.5\text{V}$: $300 \text{ Hz} < f < 3400 \text{ Hz}$) Measurement Result: Maximum Insertion Loss = $\quad \text{dB}$	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
P08 Restriction on seizing the line without the intent of making a call: Measurement Result: Automatically seizing the line only with the intention to make a call.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	-

Portugal Advisory Notes		
P10 Loop disconnect signalling Requirements according 25.01.51.001 - 5.6.1 Decimal Pulse Dialling	N/A N/T fail OK	Appendix A
5.6.1.1 Corresponding of digits and series of pulses Measurement Result: Each digit corresponds to a series of pulse equal to its value. Only '0' is 10 pulses.	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-
5.6.1.2 / 3 Break and make pulse period ratio: Limit: Fig. 5.15 (48V; 400Ω) Measurement Result: Make time: $t_M =$ ms Brake time: $t_B =$ ms Frequency: $f =$ Hz	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-
5.6.1.4 Pre dialling stage Limit: Fig. 5.16 (45V - 55V; 300Ω - 1800Ω) Measurement Result: The voltage and current of the pre dialling stage are within the limit of Fig.5.16.	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-
5.6.1.5 Current during loop openings: Limit: not more than 2 mA after 4 ms and fall of 0.5mA after 6ms. after 6ms the loop current $I < 0.5$ mA (48V; 400Ω) Measurement Result: $I < 2$ mA after ms $I < 0.5$ mA after ms	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-
5.6.1.6 Current during loop closing stages: Limit: after 4ms see limit of Fig.5.16 (45V - 55V; 300Ω - 1800Ω) Measurement Result: I (Fig.5.16) after ms	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-
5.6.1.7 Inter-digital pause time: Limit: $t_i = 600$ ms - 1000ms (48V; 400Ω) Measurement Result: $t_i =$ ms	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-
5.6.1.8 Inter-digital pause current: Limit: after 4ms see limit of Fig.5.16 (45V - 55V; 300Ω - 1800Ω) Measurement Result: I (Fig.5.16) after ms	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-
5.6.1.9 Inter-digital pause, Dialling with current interruption: Limit: no alteration by 110 ms loop interruption, 100 ms after the pulse train. $I > 20$ mA, 10 ms after the loop current interruption. (48V; 400Ω) Measurement Result: No alteration to its normal operation caused by loop current interruption	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-

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5.6.1.10 Post pulsing period: Limit: after 4ms of last opening see limit of Fig.5.16 (45V-55V; 300Ω-1800Ω) Measurement Result: I (Fig.5.16) after ms	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	-
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Spain		
ATAAB Advisory Notes		
Requirements	N/A N/T fail OK	Appendix A
Spain Advisory Notes		
ATAAB AN 005 Automatic clearing of automatically originated or answered PSTN calls: Limit: t < 360s Measurement Result: t = 55.4 s	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	5
ATAAB AN 007 Liberation of Loop condition by the TE in the event of power failure: Limit: In quiescent state within: t < 30 s Measurement Result: t < 1.67 s	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	8-9
ATAAB AN 012 Transient after change to the opposite polarity: Limit: see Figure AN 12.1 Measurement Result: Current within the limits of Figure AN 12.1	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	28-31
ES 01 DC current and loop resistance: Limit: see Table ES 01.1	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	36-37

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Switzerland		
ATAAB Advisory Notes		
Requirements	N/A N/T fail OK	Appendix A
Switzerland Advisory Notes		
ATAAB AN 002 Ringling signal detector sensitivity: Measurement Result: Detecion of 24Vrms ringing signal	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	3-4

Norway		
ATAAB Advisory Notes		
Requirements	N/A N/T fail OK	Appendix A
Norwegian Advisory Notes		
ATAAB AN 002 Ringling signal detector sensitivity: Measurement Result: Detecion of 24Vrms ringing signal	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	3-4
ATAAB AN 005 Automatic clearing of automatically originated or answered PSTN calls: Limit: $t < 180s$ Measurement Result: $t = 55.4s$	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	6
ATAAB AN 007 Liberation of Loop condition by the TE in the event of power failure: Limit: In quiescent state within: $t < 30 s$ Measurement Result: $t < 1.67 s$	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	8-9
NO01 Control of sending level in quiescent state:	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	32-34
NO02 DC current and loop resistance: Limit: see Table NO 02.1	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	36-37

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Anlage A
Appendix A

Messergebnisse
Measuring results

Protocol for Automatic dialling

AN 001 Dialling without dial tone detection

```

=====
Model No.      : M3560idn      Feeding voltage   : 50.0 V
TEUT           : MFP           Polarity             : Normal
Number of TEUT: 214043018      Feeding resistor  : 850.0 Ohm
Manufacturer    : KYOCERA DS Inc. Feeding bridge    : TBR21
Date           : 18.11.13      Receiver impedance: Zr TBR21
Time           : 13:43.21      Gain (internal)   : +0.0 dB

Data set       : AN001
Requirement    : The TE shall start dialling in the limits of  2.7 s ...  5.0s

Remark        : -
  
```

Verdict : PASS

Frequency Hz	Level dBV	T seize s	T dial s	Dialled
No dial tone		4.04	-	1?

Protocol for Automatic dialling

AN 001 Dialling with dial tone detection - Continuous dial tone -

```

Model No.      : M3560idn      Feeding voltage  : 50.0 V
TEUT           : MFP           Polarity            : Normal
Number of TEUT : 214043018     Feeding resistor : 850.0 Ohm
Manufacturer    : KYOCERA DS Inc. Feeding bridge   : TBR21
Date           : 18.11.13      Receiver impedance: Zr TBR21
Time           : 13:44.49      Gain (internal)  : +0.0 dB
  
```

Data set : AN001 with dial tone
 Requirement : The TE shall start dialling in the limits of 0.0 s ... 5.0s

Remark : -

Verdict : PASS

Frequency Hz	Level dBV	T seize s	T dial s	Dialled
300	- 0.7	3.73	0.76	1??
300	-35.7	3.92	0.95	1?
500	-35.7	3.72	0.75	1?
500	- 0.7	3.73	0.76	1?

Protocol for Automatic answering function Auto

AN 002 Ringing signal detector sensitivity (24V) - Auto answer

```

=====
Model No.      : M3560idn      Feeding voltage   : 48.0 V
TEUT           : MFP           Current limitation: 40.0 mA
Number of TEUT: 214043018      Polarity          : Normal
Manufacturer   : KYOCERA DS Inc. Feeding resistor  : 850.0 Ohm
Date           : 18.11.13      Trigger event     : 1. pos. Edge
Time           : 13:49.30      Gain (internal)   : -30.0 dB

Data set       : AN-02-03 N
Requirement    : The TE shall be able to respond to ringing signals of 24 Vrms.

Remarks       : Tested were also further ringing signals as advised in AN 003
                  and listed below.
                  -
    
```

Verdict : PASS

Cycles	Frequency	Ute	1.Pulse	Pulse	Pause	Answering
13	20.0	24.0	800	800	6000	7.88
13	60.0	24.0	1200	1200	4000	6.30
13	20.0	90.0	1200	1200	4000	6.31
13	60.0	90.0	800	800	6000	7.90

Protocol for Automatic answering function Auto

AN 002 Ringing signal detector sensitivity (24V) - Auto answer

```

=====
Model No.      : M3560idn      Feeding voltage   : 48.0 V
TEUT           : MFP           Current limitation: 40.0 mA
Number of TEUT : 214043018     Polarity          : Normal
Manufacturer    : KYOCERA DS Inc. Feeding resistor  : 850.0 Ohm
Date            : 18.11.13      Trigger event     : 1. pos. Edge
Time            : 13:53.36      Gain (internal)   : -30.0 dB
  
```

Data set : AN-02-03 I
 Requirement : The TE shall be able to respond to ringing signals of 24 Vrms.

Remarks : Tested were also further ringing signals as advised in AN 003 and listed below.

Verdict : PASS

Cycles	Frequency	Ute	1.Pulse	Pulse	Pause	Answering
13	20.0	24.0	800	800	6000	7.88
13	60.0	24.0	1200	1200	4000	6.30
13	20.0	90.0	1200	1200	4000	6.28
13	60.0	90.0	800	800	6000	7.90

Protocol for Liberation of loop condition

Liberation of loop condition
EG 201 121/AN-05

Date	: 18.11.13	Feeding Voltage	: 50.0 V
Time	: 13:58.49	Polarity	: Normal
Operator	: Y. Miura	Current limitation	: 100.0 mA
Commission	: 214043018	Feeding Bridge	: TBR21
TEUT	: MFP		
Manufacturer	: KYOCERA DS Inc.		
Parameter set	: AN-05,A.3.1 2050 Ohm N		

Remark	: -	Requirement	[s] : 0.0 .. 360.0 s
Verdict	: PASS		

Frequency Hz	Level dBm	td s	ton ms	toff ms	Disconnect after s
425	- 30.0	360.0	200	200	2.5
425	- 30.0	360.0	200	200	
			200	600	2.5
425	- 30.0	360.0	200	200	
			200	200	
			200	600	2.1
0	- 30.0	0.0	0	0	55.4

Protocol for Liberation of loop condition

Liberation of loop condition
EG 201 121/AN-05

Date	: 18.11.13	Feeding Voltage	: 50.0 V
Time	: 14:03.05	Polarity	: Normal
Operator	: Y. Miura	Current limitation	: 100.0 mA
Commission	: 214043018	Feeding Bridge	: TBR21
TEUT	: MFP		
Manufacturer	: KYOCERA DS Inc.		
Parameter set	: AN-05,B.3.1 2050 Ohm N		

Remark	: -	Requirement	[s] : 0.0 .. 180.0 s
Verdict	: PASS		

Frequency Hz	Level dBm	td s	ton ms	toff ms	Disconnect after s
-----------------	--------------	---------	-----------	------------	-----------------------

No tone	-	-	-	-	55.4
---------	---	---	---	---	------

Protocol for Resistance to earth

Resistance to earth

Date : 18.11.13
 Time : 14:09.53
 Operator : Y. Miura
 Test Job : 214043018
 TEUT : MFP
 Parameter set : AN 06

Feeding bridge : germany
 Waiting Period : 10.0 sec

Verdict : PASS

Remark : -

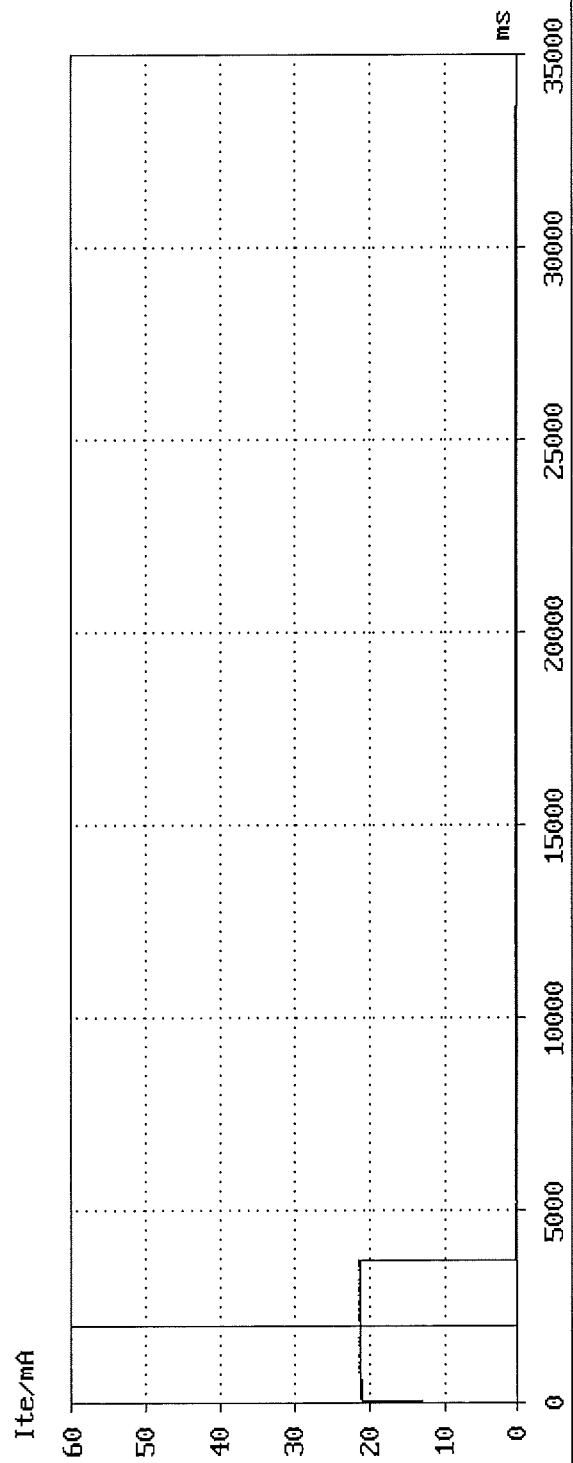
Uf V	Rf Ω	Polarity	Ut V	Rt Ω	Measure	Limit MΩ	Current uA	Resistance MΩ
50.0	1000	Normal	100.0	10000	b - E	10	< 2.0	> 50
50.0	1000	Normal	-100.0	10000	b - E	10	< 2.0	> 50
50.0	1000	Normal	100.0	10000	a - E	10	< 2.0	> 50
50.0	1000	Normal	-100.0	10000	a - E	10	< 2.0	> 50
50.0	1000	Normal	150.0	10000	a - E	0.1	< 3.0	> 50
50.0	1000	Normal	-150.0	10000	a - E	0.1	< 3.0	> 50
50.0	1000	Normal	150.0	10000	b - E	0.1	< 3.0	> 50
50.0	1000	Normal	-150.0	10000	b - E	0.1	< 3.0	> 50

Liberation of loop condition power failure

EG 201 121/AN-07

Test Job : 214043018
 TEUT : MFP
 Manufacturer : KYOCERA DS Inc.
 Operator : Y. Miura
 Date : 18.11.13
 Time : 14:13.52
 Remark : -
 Ite : 0.02 mA
 Ute : 49.95 V
 TEUT Status : Quiescent state
 Verdict : PASS

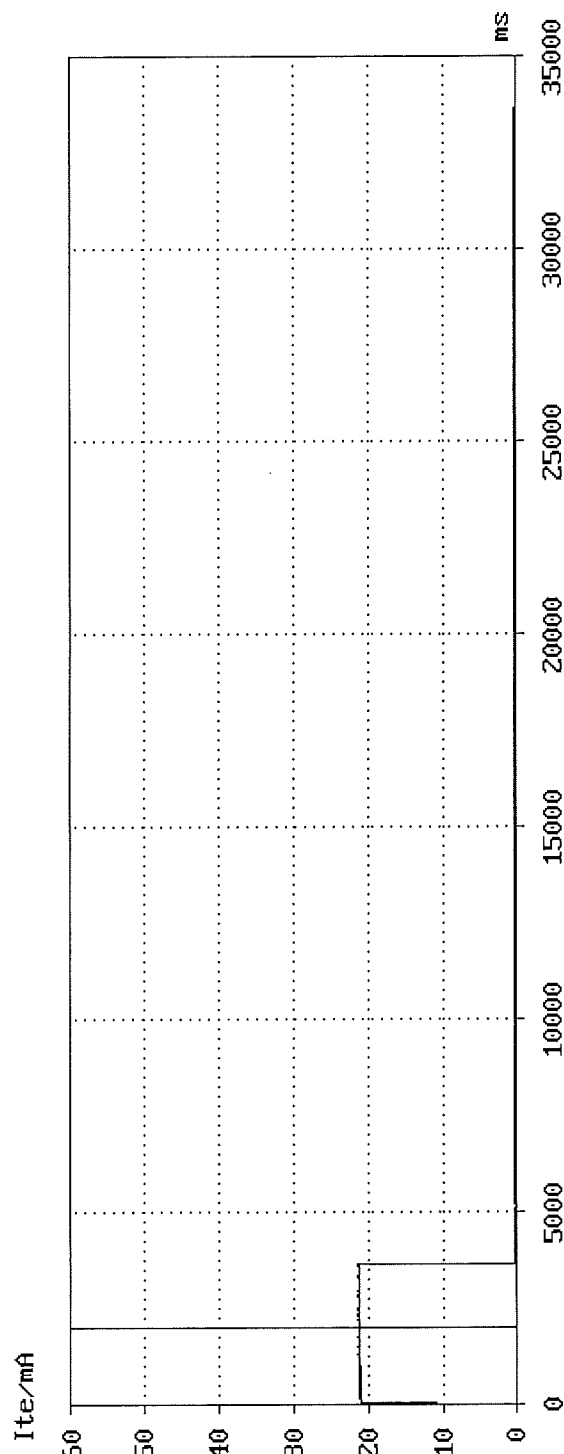
Feeding Bridge : TBR21
 Feeding voltage : 50.0 V
 Feeding resistor : 2050.0 Ohm
 Polarity : Normal
 Limit : ≤ 30.0 s
 Measured value : 1.675 s
 t0 : 1670 ms
 t01 : 1675 ms
 Transient times : 0.0 ms
 Trigger : OK
 I [mA] : 10.0



Liberation of loop condition power failure

EG 201 121/AN-07

Test Job	: 214043018	Feeding Bridge	: TBR21
TEUT	: MFP	Feeding voltage	: 50.0 V
Manufacturer	: KYOCERA DS Inc.	Feeding resistor	: 2050.0 Ohm
Operator	: Y. Miura	Polarity	: Inverted
Date	: 18.11.13	Limit	: ≤ 30.0 s
Time	: 14:16.10	Measured value	: 1.665 s
Remark	: -	t0	: 1660 ms
Ite	: 0.02 mA	t01	: 1660 ms
Ute	: 49.96 V	Transient times	: 0.0 ms
TEUT Status	: Quiescent state	Trigger	: OK
Verdict	: PASS	I [mA]	: 10.0



Protocol for Maximum mean sending level

TBR21-4.7.3.1 Mean sending level / TBR21-4.7.3.2 Instantaneous voltage

=====

Model No.	: M3560idn	Feeding voltage	: 50 V
TEUT	: MFP	Current limitation	: 80 mA
Number of TEUT	: 214043018	Polarity	: Normal
Manufacturer	: KYOCERA DS Inc.	Feeding resistor	: 230 Ω
Date	: 15.11.13	Trigger lev./delay	: -12.0 dBV 10 msec
Time	: 19:21.18	Receiver impedance	: Zr TBR21
		Receiver filter	: BP 200-3800 Hz
		Call setup	: outgoing
		Gain (internal)	: -6.0 dB

Data set : TBR21-4.7.3.1 230 N

Requirement : The mean sending level shall not be greater than -9.7 dBV
The instantaneous voltage shall not exceed 5.0 Vpp.

Comm. Signal : V.34 33600bps

Instantaneous Volt: 1.22 Vpp

Verdict : PASS

Mean level
dBV

- 13.1

Protocol for Maximum mean sending level

TBR21-4.7.3.1 Mean sending level / TBR21-4.7.3.2 Instantaneous voltage

=====

Model No.	: M3560idn	Feeding voltage	: 50 V
TEUT	: MFP	Current limitation:	80 mA
Number of TEUT:	214043018	Polarity	: Inverted
Manufacturer	: KYOCERA DS Inc.	Feeding resistor	: 230 Ω
Date	: 18.11.13	Trigger lev./delay:	-12.0 dBV 10 msec
Time	: 9:20.02	Receiver impedance:	Zr TBR21
		Receiver filter	: BP 200-3800 Hz
		Call setup	: outgoing
		Gain (internal)	: -6.0 dB

Data set : TBR21-4.7.3.1 230 I
 Requirement : The mean sending level shall not be greater than -9.7 dBV
 The instantaneous voltage shall not exceed 5.0 Vpp.

Comm. Signal : V.17 14400bps Instantaneous Volt: 1.17 Vpp

Verdict : PASS

Mean level
dBV

- 13.0

Protocol for Maximum mean sending level

TBR21-4.7.3.1 Mean sending level / TBR21-4.7.3.2 Instantaneous voltage

```
=====
Model No.      : M3560idn      Feeding voltage   : 50 V
TEUT           : MFP           Current limitation: 80 mA
Number of TEUT : 214043018     Polarity          : Normal
Manufacturer   : KYOCERA DS Inc. Feeding resistor  : 3200 Ω
Date           : 18.11.13      Trigger lev./delay: -12.0 dBV 10 msec
Time           : 9:35.10       Receiver impedance: Zr TBR21
                                   Receiver filter   : BP 200-3800 Hz
                                   Call setup        : outgoing
                                   Gain (internal)    : -6.0 dB
```

Data set : TBR21-4.7.3.1 3200 N
Requirement : The mean sending level shall not be greater than -9.7 dBV
The instantaneous voltage shall not exceed 5.0 Vpp.

Comm. Signal : V.29 9600bps Instantaneous Volt: 1.17 Vpp
Verdict : PASS

Mean level
dBV

- 13.0

Protocol for Maximum mean sending level

TBR21-4.7.3.1 Mean sending level / TBR21-4.7.3.2 Instantaneous voltage

```
=====
Model No.      : M3560idn      Feeding voltage   : 50 V
TEUT           : MFP           Current limitation: 80 mA
Number of TEUT : 214043018     Polarity          : Inverted
Manufacturer   : KYOCERA DS Inc. Feeding resistor  : 3200 Ω
Date           : 18.11.13      Trigger lev./delay: -12.0 dBV 10 msec
Time           : 9:49.55       Receiver impedance: Zr TBR21
                                   Receiver filter   : BP 200-3800 Hz
                                   Call setup        : outgoing
                                   Gain (internal)    : -6.0 dB
```

Data set : TBR21-4.7.3.1 3200 I
Requirement : The mean sending level shall not be greater than -9.7 dBV
The instantaneous voltage shall not exceed 5.0 Vpp.

Comm. Signal : V.27ter 4800bps Instantaneous Volt: 0.83 Vpp

Verdict : PASS

Mean level
dBV

- 13.1

Protocol for Maximum mean sending level

TBR21-4.7.3.1 Mean sending level / TBR21-4.7.3.2 Instantaneous voltage

```
=====
Model No.      : M3560idn      Feeding voltage   : 50 V
TEUT           : MFP           Current limitation: 80 mA
Number of TEUT : 214043018     Polarity          : Normal
Manufacturer   : KYOCERA DS Inc. Feeding resistor  : 230 Ω
Date           : 18.11.13      Trigger lev./delay: -12.0 dBV 10 msec
Time           : 10:02.03      Receiver impedance: Zr TBR21
                                   Receiver filter   : BP 200-3800 Hz
                                   Call setup        : outgoing
                                   Gain (internal)    : -6.0 dB
```

Data set : TBR21-4.7.3.1 230 N
Requirement : The mean sending level shall not be greater than -9.7 dBV
The instantaneous voltage shall not exceed 5.0 Vpp.

Comm. Signal : V.21 300bps Instantaneous Volt: 0.68 Vpp

Verdict : PASS

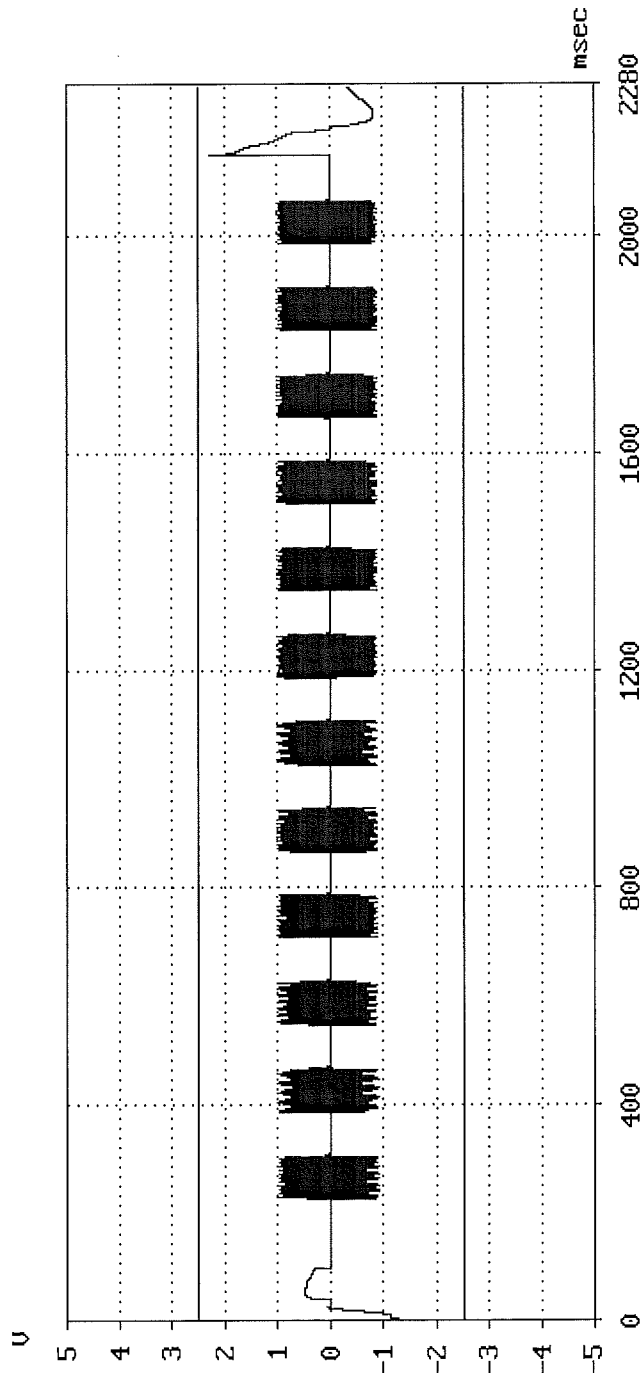
Mean level
dBV

- 13.0

DTMF instantaneous voltage

EG 201 121/AN-09

Test Job	: 214043018	Mask violations	: 0
TEUT	: MFP	Measured voltage	: OK
Manufacturer	: KYOCERA DS Inc.	Temporary Voltage	: 5.0 Vpp for 0.0 msec
Operator	: Y. Miura	Feeding Voltage	: 50.0 V
Date	: 18.11.13	Polarity	: Normal
Time	: 14:25.59	Feeding Resistor	: 230.0 Ohm
Remark	: -	Filter	: BP 5-4300 Hz
Verdict	: PASS	Trigger	: OK
		User Operation	: DTMF



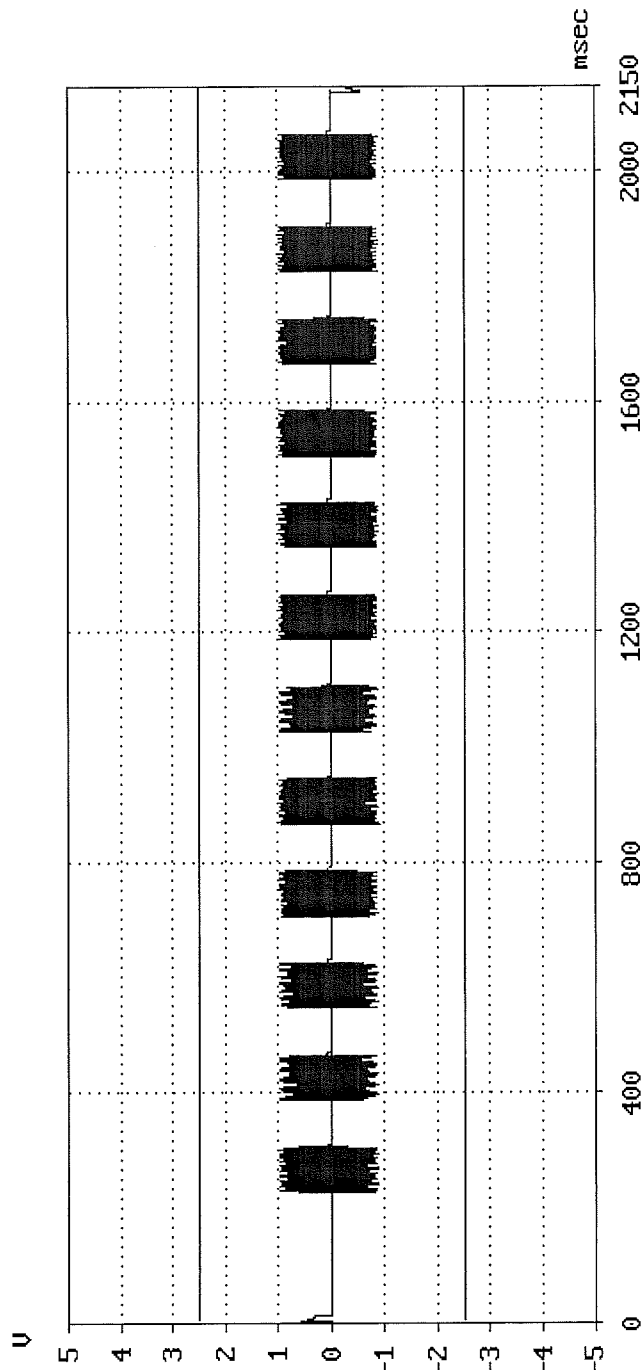
DTMF instantaneous voltage

EG 201 121/AN-09

Test Job : 214043018
 TEUT : MFP
 Manufacturer : KYOCERA DS Inc.
 Operator : Y. Miura
 Date : 18.11.13
 Time : 14:34.52
 Mask violations : 0
 Measured voltage : OK
 Temporary Voltage : 5.0 Vpp for 0.0 msec
 Feeding Voltage : 50.0 V
 Polarity : Inverted
 Feeding Resistor : 3200.0 Ohm
 Filter : BP 5-4300 Hz

Remark : -

Verdict : PASS
 Trigger : OK
 User Operation : DTMF



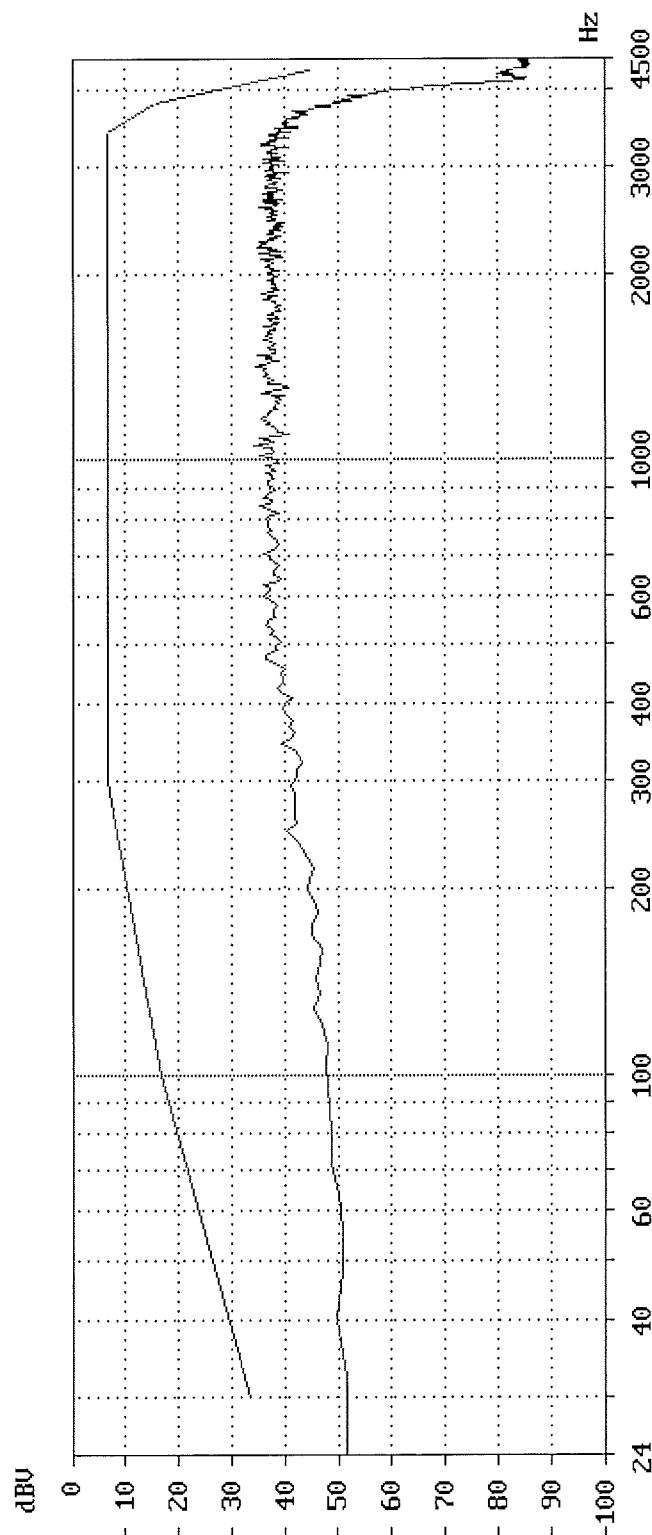
AN 10 Sending level in 10Hz bandwidth regarding TBR 15

Model No. : M3560idm	Feeding voltage : 50.0 V	Feeding bridge: TBR21
TEUT : MFP	Current limitation: 80.0 mA	Max. Level : - 34.5 dBV
Number of TEUT: 214043018	Polarity : Normal	Frequency : 1050 Hz
Manufacturer : KYOCERA DS Inc.	Feeding resistor : 230.0 Ohm	Rx impedance : 2r TBR21
Date : 15.11.13	Requirement: The voltage	Call setup : outgoing
Time : 19:32.45	shall not exceed the limits	
	Data set : AN10 230 Ohm N	

Remark : U.34 33600bps

Mask violation: 0

Verdict : PASS



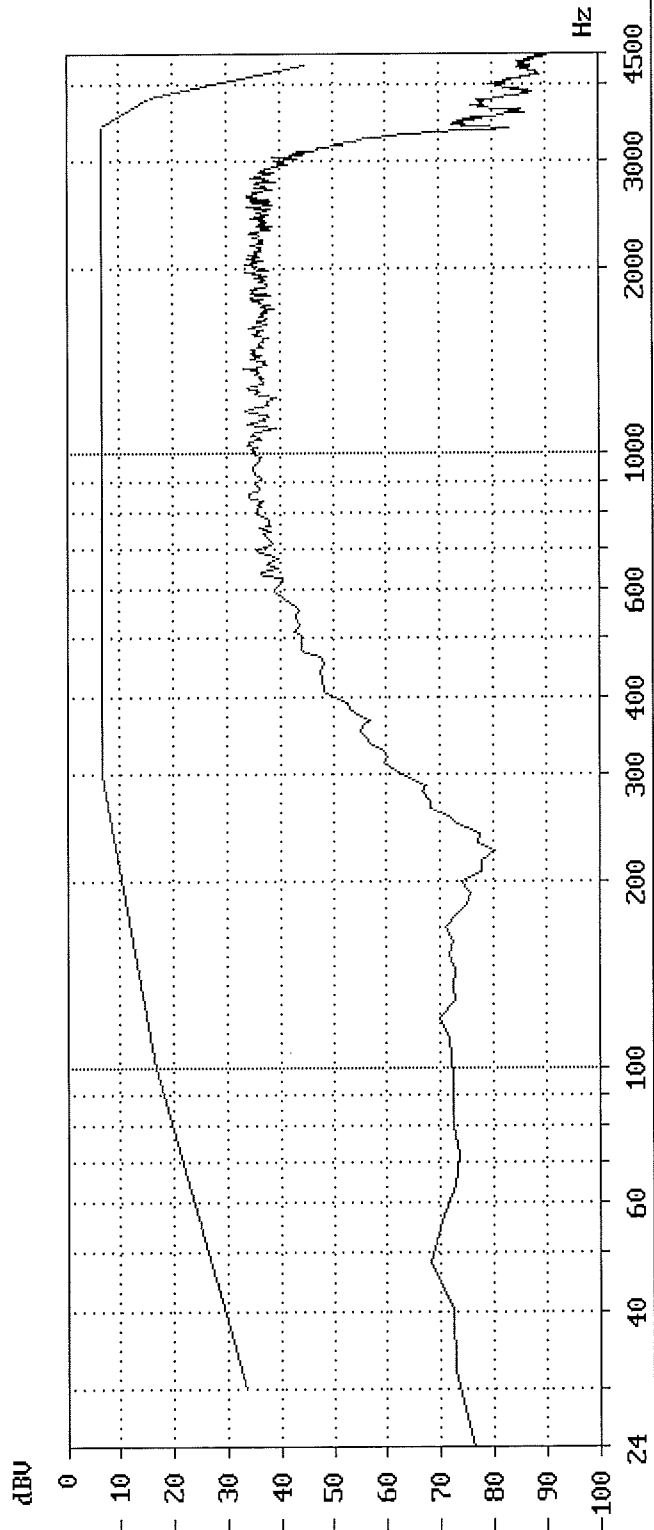
AN 10 Sending level in 10Hz bandwidth regarding TBR 15

Model No. : M3560idn	Feeding voltage : 50.0 V	Feeding bridge: TBR21
TEUT : MFP	Current limitation: 80.0 mA	Max. Level : - 33.2 dBV
Number of TEUT: 214043018	Polarity : Inverted	Frequency : 1370 Hz
Manufacturer : KYOCERA DS Inc.	Feeding resistor : 230.0 Ohm	Rx impedance : 2r TBR21
Date : 18.11.13	Requirement: The voltage	Call setup : outgoing
Time : 9:23.36	shall not exceed the limits	
	Data set : AN10 230 Ohm I	

Remark : U.17 14400bps

Mask violation: 0

Verdict : PASS

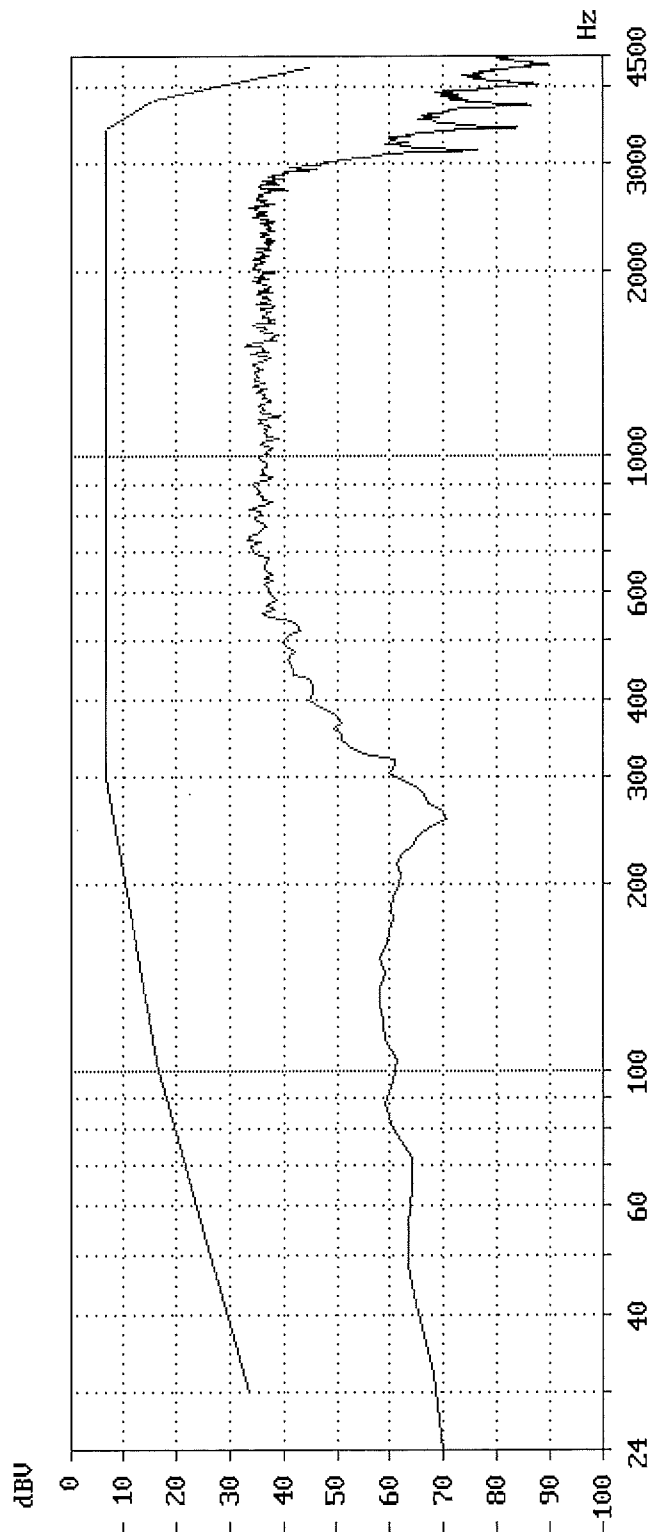


AN 10 Sending level in 10Hz bandwidth regarding TBR 15

Model No. : M3560idn	Feeding voltage : 50.0 V	Feeding bridge: TBR21
TEUT : MFP	Current limitation: 80.0 mA	Max. Level : - 32.9 dBV
Number of TEUT: 214043018	Polarity : Normal	Frequency : 1514 Hz
Manufacturer : KYOCERA DS Inc.	Feeding resistor : 3200.0 Ohm	Rx impedance : Zr TBR21
Date : 18.11.13	Requirement: The voltage	Call setup : outgoing
Time : 9:37.47	shall not exceed the limits	
Remark : 0.29 9600bps	Data set : AN10 3200 Ohm N	

Mask violation: 0

Verdict : PASS



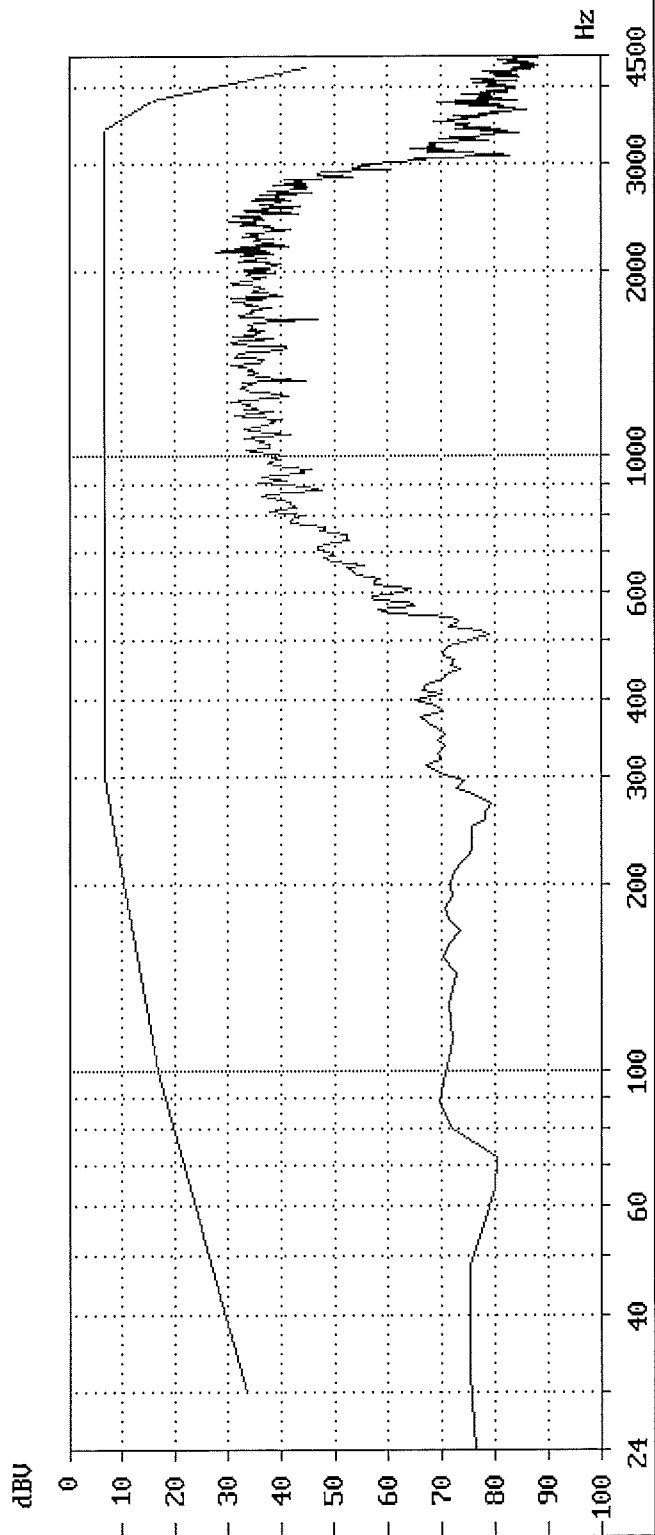
AN 10 Sending level in 10Hz bandwidth regarding TBR 15

Model No. : M3560idn	Feeding voltage : 50.0 V	Feeding bridge: TBR21
TEUT : MFP	Current limitation: 80.0 mA	Max. Level : - 27.8 dBV
Number of TEUT: 214043018	Polarity : Inverted	Frequency : 2155 Hz
Manufacturer : KYOCERA DS Inc.	Feeding resistor : 3200.0 Ohm	Rx impedance : 2r TBR21
Date : 18.11.13	Requirement: The voltage	Call setup : outgoing
Time : 9:52.30	shall not exceed the limits	
	Data set : AN10 3200 Ohm I	

Remark : U.27ter 4800bps

Mask violation: 0

Verdict : PASS



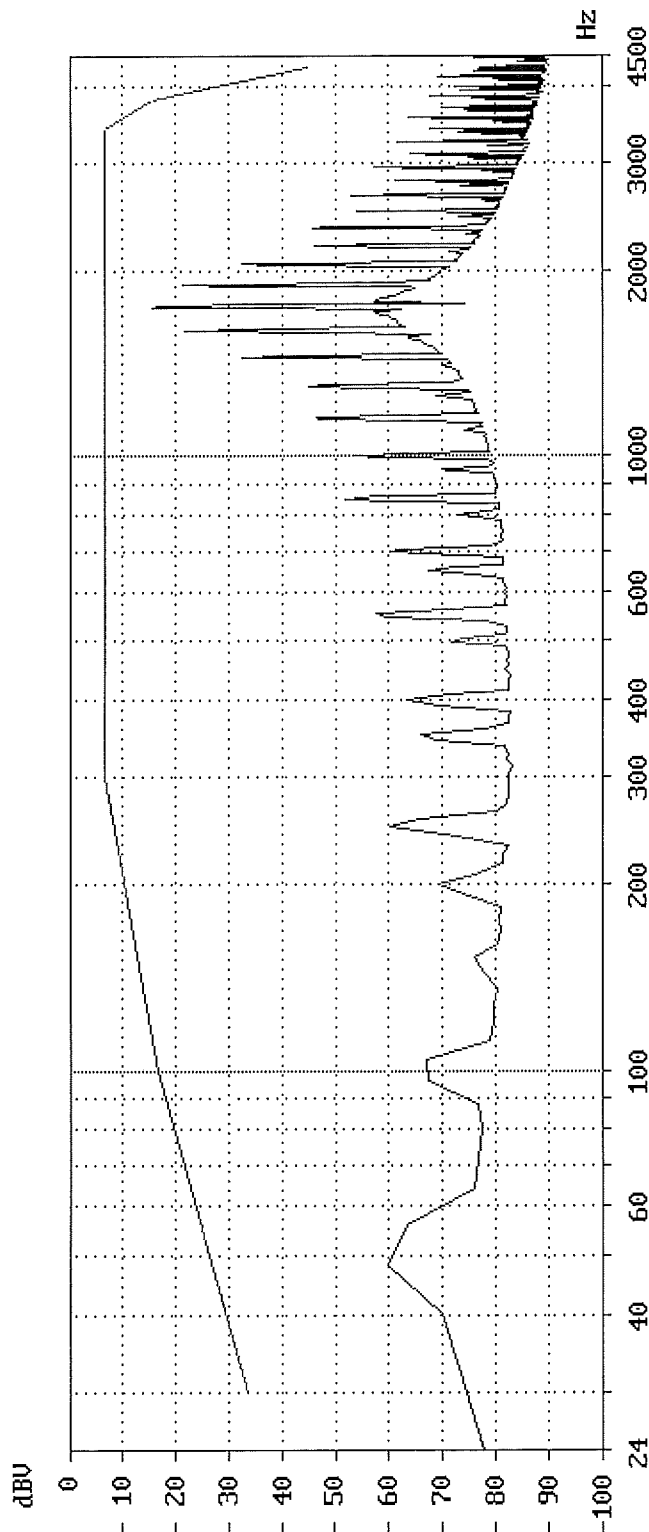
AN 10 Sending level in 10Hz bandwidth regarding TBR 15

Model No. : M3560idn	Feeding voltage : 50.0 V	Feeding bridge: TBR21
TEUT : MFP	Current limitation: 80.0 mA	Max. Level : - 15.6 dBV
Number of TEUT: 214043018	Polarity : Normal	Frequency : 1747 Hz
Manufacturer : KYOCERA DS Inc.	Feeding resistor : 230.0 Ohm	Rx impedance : 2r TBR21
Date : 18.11.13	Requirement: The voltage	Call setup : outgoing
Time : 10:07.48	shall not exceed the limits	
	Data set : AN10 230 Ohm N	

Remark : U.21 300bps

Mask violation: 0

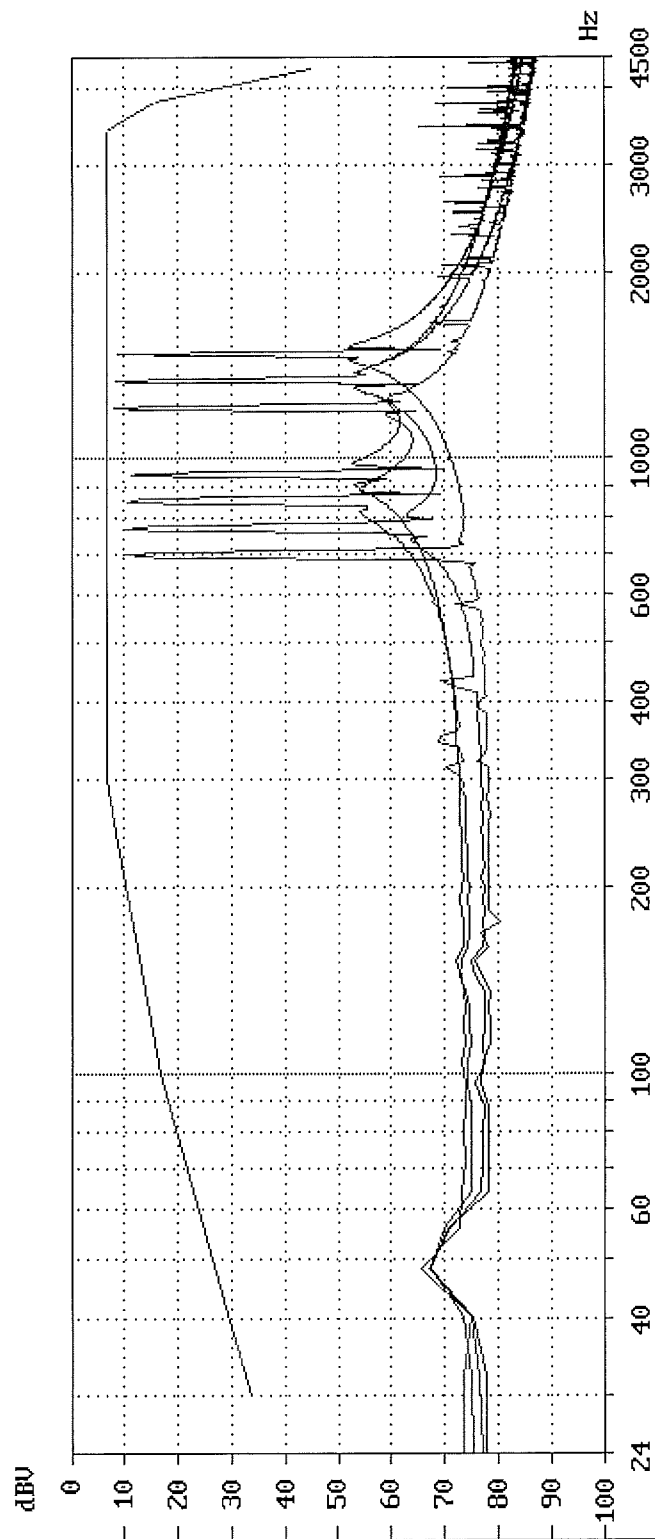
Verdict : PASS



AN 10 Sending level in 10Hz bandwidth regarding TBR 15

Comission : 214043018
 Printing time : 18.11.13 16:06.03
 Graph 1
 Graph 2
 Graph 3
 Graph 4

Requirement: The voltage
 shall not exceed the limits



Maximum voltage in 10Hz bandwidth
Comission : 214043018

Printing time : 18.11.13 16:06.03

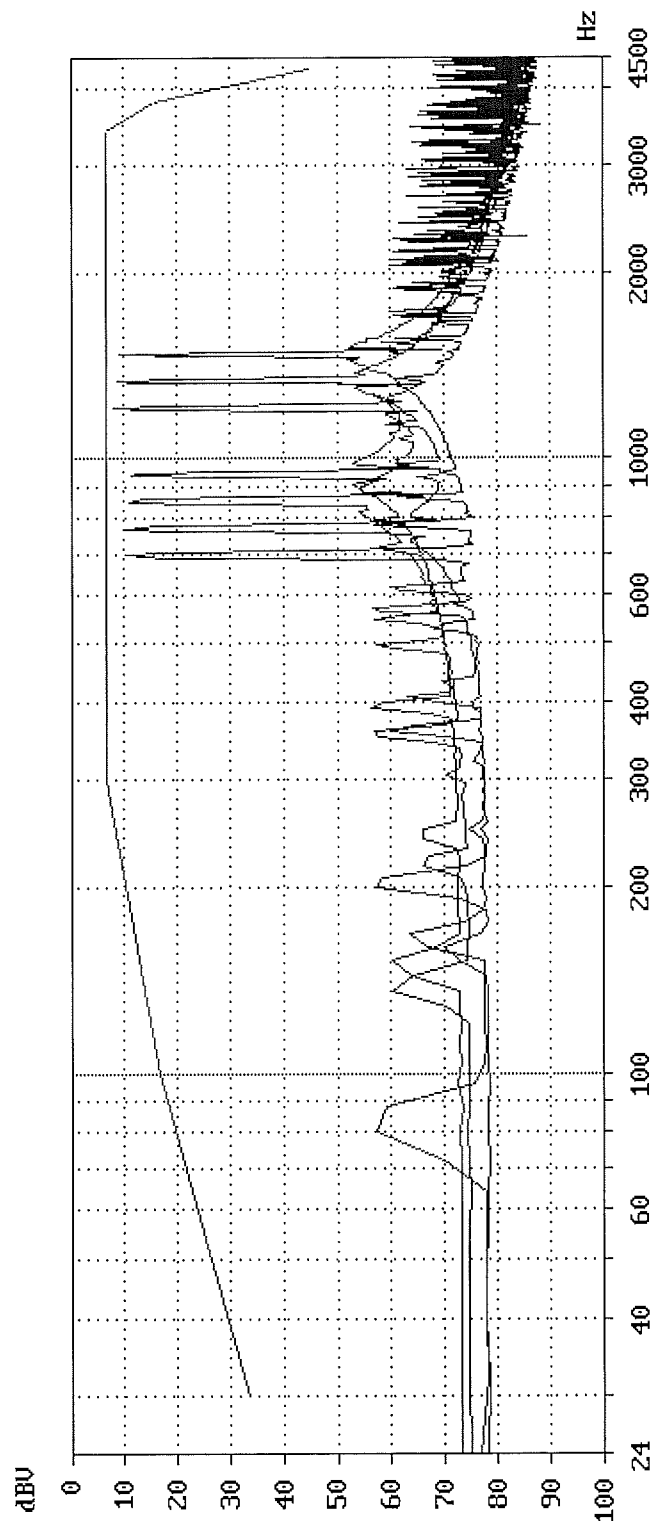
Graph 1		Graph 2		Graph 3	
Model No.	M3560idn	M3560idn	M3560idn	M3560idn	M3560idn
TEUT	MFP	MFP	MFP	MFP	MFP
Number of TEUT	214043018	214043018	214043018	214043018	214043018
Manufacturer	KYOCERA DS Inc.	KYOCERA DS Inc.	KYOCERA DS Inc.	KYOCERA DS Inc.	KYOCERA DS Inc.
Date	18.11.13	18.11.13	18.11.13	18.11.13	18.11.13
Time	16:04.11	16:04.29	16:04.29	16:04.53	16:04.53
Mask violation	0	0	0	0	0
Feeding voltage	50.0 V	50.0 V	50.0 V	50.0 V	50.0 V
Current limitation	80.0 mA	80.0 mA	80.0 mA	80.0 mA	80.0 mA
Polarity	Normal	Normal	Normal	Normal	Normal
Feeding resistor	230.0 Ohm	230.0 Ohm	230.0 Ohm	230.0 Ohm	230.0 Ohm
Data set	AN10 230 Ohm N	AN10 230 Ohm N	AN10 230 Ohm N	AN10 230 Ohm N	AN10 230 Ohm N
Feeding bridge	TBR21	TBR21	TBR21	TBR21	TBR21
Max. Level	- 8.9 dBV	- 8.5 dBV	- 8.5 dBV	- 8.1 dBV	- 8.1 dBV
Frequency	1474 Hz	1338 Hz	1338 Hz	1210 Hz	1210 Hz
Rx impedance	Zr TBR21	Zr TBR21	Zr TBR21	Zr TBR21	Zr TBR21
Call setup	outgoing	outgoing	outgoing	outgoing	outgoing
Verdict	PASS	PASS	PASS	PASS	PASS
Remark	DTMF 3	DTMF 5	DTMF 5	DTMF 7	DTMF 7

Graph 4	
Model No.	M3560idn
TEUT	MFP
Number of TEUT	214043018
Manufacturer	KYOCERA DS Inc.
Date	18.11.13
Time	16:05.11
Mask violation	0
Feeding voltage	50.0 V
Current limitation	80.0 mA
Polarity	Normal
Feeding resistor	230.0 Ohm
Data set	AN10 230 Ohm N
Feeding bridge	TBR21
Max. Level	- 8.5 dBV
Frequency	1338 Hz
Rx impedance	Zr TBR21
Call setup	outgoing
Verdict	PASS
Remark	DTMF 0

AN 10 Sending level in 10Hz bandwidth regarding TBR 15

Comission : 214043018
 Printing time : 18.11.13 16:08.13
 Graph 1 _____
 Graph 2 _____
 Graph 3 _____
 Graph 4 _____

Requirement: The voltage
 shall not exceed the limits



Maximum voltage in 10Hz bandwidth Comission : 214043018		Printing time : 18.11.13 16:08.13	
Graph 1		Graph 2	Graph 3
Model No.	M3560idn	M3560idn	M3560idn
TEUT	MFP	MFP	MFP
Number of TEUT	214043018	214043018	214043018
Manufacturer	KYOCERA DS Inc.	KYOCERA DS Inc.	KYOCERA DS Inc.
Date	18.11.13	18.11.13	18.11.13
Time	16:06.43	16:06.58	16:07.12
Mask violation	0	0	0
Feeding voltage	50.0 V	50.0 V	50.0 V
Current limitation	80.0 mA	80.0 mA	80.0 mA
Polarity	Inverted	Inverted	Inverted
Feeding resistor	3200.0 Ohm	3200.0 Ohm	3200.0 Ohm
Data set	AN10 3200 Ohm I	AN10 3200 Ohm I	AN10 3200 Ohm I
Feeding bridge	TBR21	TBR21	TBR21
Max. Level	- 9.0 dBV	- 8.7 dBV	- 8.3 dBV
Frequency	1474 Hz	1338 Hz	1210 Hz
Rx impedance	Zr TBR21	Zr TBR21	Zr TBR21
Call setup	outgoing	outgoing	outgoing
Verdict	PASS	PASS	PASS
Remark	DTMF 3	DTMF 5	DTMF 7
Graph 4			
Model No.	M3560idn		
TEUT	MFP		
Number of TEUT	214043018		
Manufacturer	KYOCERA DS Inc.		
Date	18.11.13		
Time	16:07.25		
Mask violation	0		
Feeding voltage	50.0 V		
Current limitation	80.0 mA		
Polarity	Inverted		
Feeding resistor	3200.0 Ohm		
Data set	AN10 3200 Ohm I		
Feeding bridge	TBR21		
Max. Level	- 8.7 dBV		
Frequency	1338 Hz		
Rx impedance	Zr TBR21		
Call setup	outgoing		
Verdict	PASS		
Remark	DTMF 0		

Protocol for Automatic answering function Auto

Automatic answering function Auto
EG 201 121/AN-11

Date	: 18.11.13	Feeding Voltage	: 50.0 V
Time	: 14:37.41	Dropping Resis. Rv	: 850.0 Ohm
Operator	: Y. Miura	Polarity	: Normal
Commission	: 214043018	Trigger threshold	: 10.0 mA
TEUT	: MFP		
Manufacturer	: KYOCERA DS Inc.		
Parameter set	: AN-11 N		

Remark	: -	Requirement	[s] : ≤ 120.0
Verdict	: PASS		

Cycles	Frequency Hz	Ute V	1.Pulse ms	Pulse ms	Pause ms	Answering s
21	25.0	30.0	1000	1000	5000	7.09
21	50.0	30.0	1000	1000	5000	7.10

Protocol for Automatic answering function Auto

Automatic answering function Auto
EG 201 121/AN-11

Date	: 18.11.13	Feeding Voltage	: 50.0 V
Time	: 14:39.45	Dropping Resis. Rv	: 850.0 Ohm
Operator	: Y. Miura	Polarity	: Inverted
Commission	: 214043018	Trigger threshold	: 10.0 mA
TEUT	: MFP		
Manufacturer	: KYOCERA DS Inc.		
Parameter set	: AN-11 I		

Remark	: -	Requirement	[s] : ≤ 120.0
Verdict	: PASS		

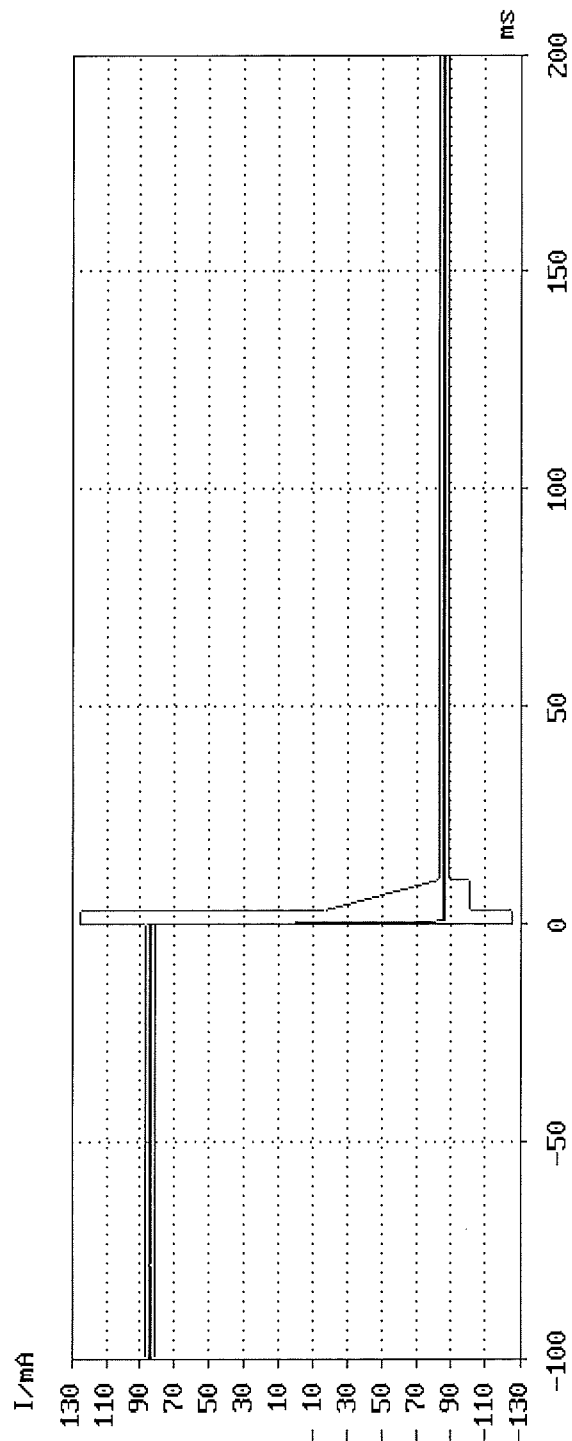
Cycles	Frequency Hz	Ute V	1.Pulse ms	Pulse ms	Pause ms	Answering s
21	25.0	30.0	1000	1000	5000	7.11
21	50.0	30.0	1000	1000	5000	7.11

AN 12 Immunity to polarity reversals

Model No.	: M3560idn	Current limitation:	100.0 mA	I1 :	84.76 mA
TEUT	: MFP	Feeding voltage :	50.0 V	I4 :	- 85.41 mA
Manufacturer	: KYOCERA DS Inc.	Drop resistor	: 460.0 Ohm		
Number of TEUT	: 214043018	Polarity	: Normal		
Date	: 18.11.13	Measurement Time :	0.1 sec		
Time	: 14:46.39	Data set	: AN12 460 N		
Remark	: -	Requirement	: The current shall be within the limits.		

Mask violations : 0

Verdict : PASS



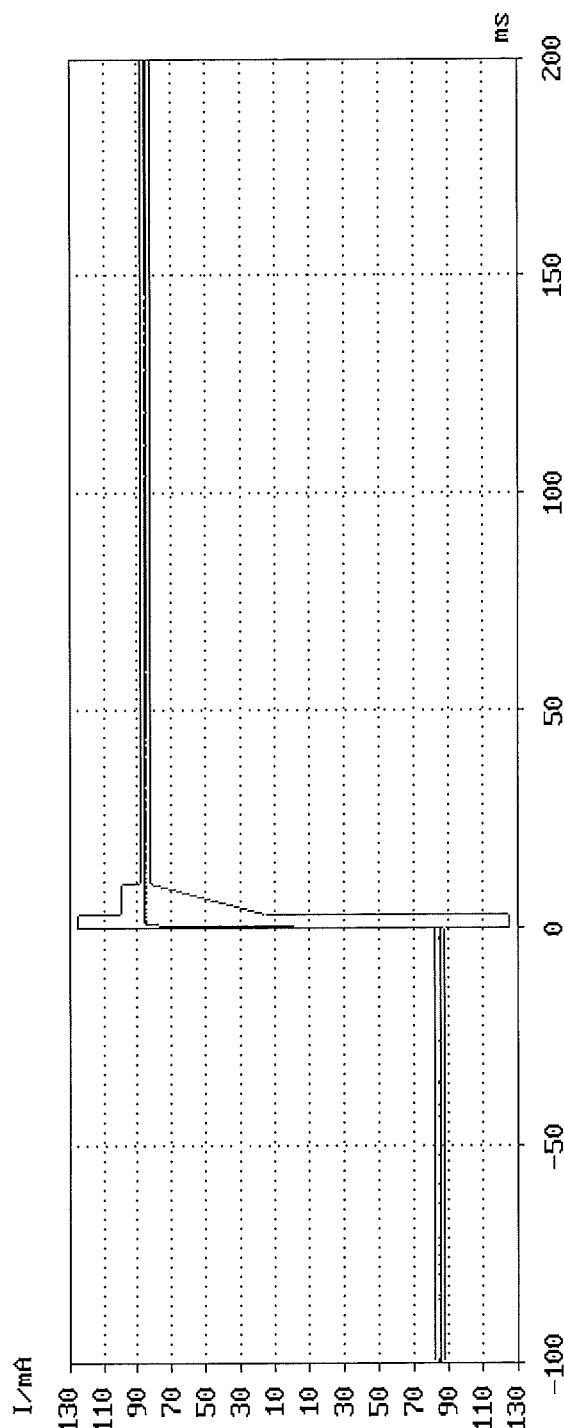
AN 12 Immunity to polarity reversals

Model No.	: M3560idn	Current limitation:	100.0 mA	I1 : - 84.75 mA
TEUT	: MFP	Feeding voltage	: 50.0 V	I4 : 85.49 mA
Manufacturer	: KYOCERA DS Inc.	Drop resistor	: 460.0 Ohm	
Number of TEUT	: 214043018	Polarity	: Inverted	
Date	: 18.11.13	Measurement Time	: 0.1 sec	
Time	: 14:48.13	Data set	: AN12 460 I	
		Requirement	: The current shall be within the limits.	

Remark : -

Mask violations : 0

Verdict : PASS



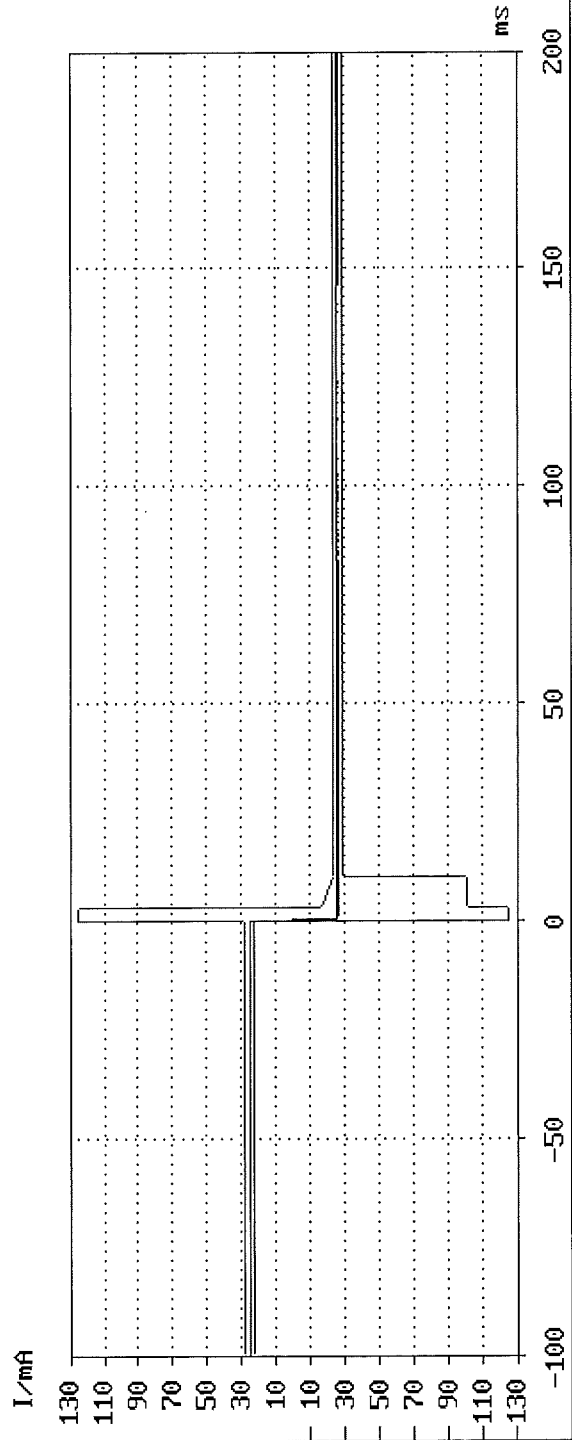
AN 12 Immunity to polarity reversals

Model No. :	M3560idn	Current limitation:	100.0 mA	I1 :	25.36 mA
TEUT :	MFP	Feeding voltage :	50.0 V	I4 :	- 25.45 mA
Manufacturer :	KYOCERA DS Inc.	Drop resistor :	1700.0 Ohm		
Number of TEUT :	214043018	Polarity :	Normal		
Date :	18.11.13	Measurement Time :	0.1 sec		
Time :	14:49.57	Data set :	AN12 1700 N		
		Requirement :	The current shall be within the limits.		

Remark : -

Mask violations : 0

Verdict : PASS

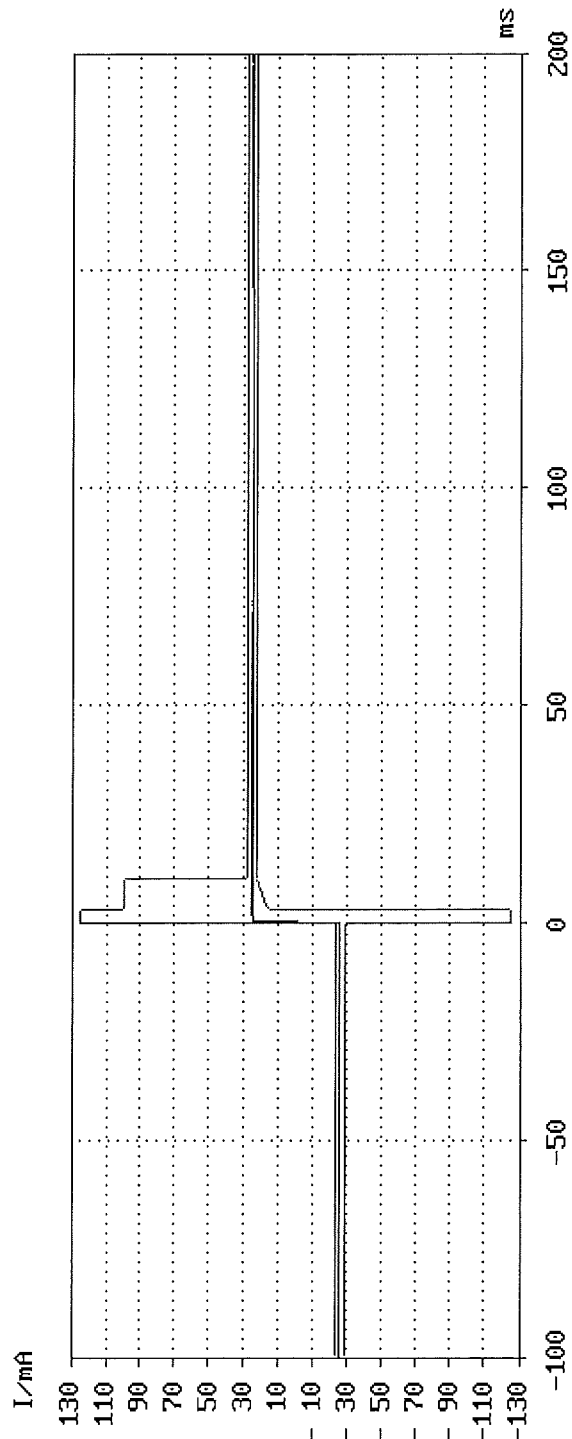


AN 12 Immunity to polarity reversals

Model No.	: M3560idn	Current limitation:	100.0 mA	I1 : - 25.35 mA
TEUT	: MFP	Feeding voltage	: 50.0 V	I4 : 25.44 mA
Manufacturer	: KYOCERA DS Inc.	Drop resistor	: 1700.0 Ohm	
Number of TEUT	: 214043018	Polarity	: Inverted	
Date	: 18.11.13	Measurement Time	: 0.1 sec	
Time	: 14:51.33	Data set	: AN12 1700 I	
Remark	: -	Requirement	: The current shall be within the limits.	

Mask violations : 0

Verdict : PASS



Protocol for Maximum mean sending level

DE03 GR03 NO01 Mean sending level in quiescent state

```
=====
Model No.      : M3560idn      Feeding voltage   : 50 V
TEUT           : MFP           Current limitation: 80 mA
Number of TEUT : 214043018     Polarity          : Inverted
Manufacturer   : KYOCERA DS Inc. Feeding resistor  : 230 Ω
Date           : 18.11.13      Trigger lev./delay: -50.0 dBV 10 msec
Time           : 14:55.55      Receiver impedance: Zr TBR21
                                   Receiver filter   : BP 200-3800 Hz
                                   Call setup        : outgoing
                                   Gain (internal)    : -6.0 dB
=====
```

Data set : DE03 GR03 NO01

Requirement : The mean sending level shall not be greater than -9.7 dBV

Remark : 0.033Vpp

Verdict : PASS

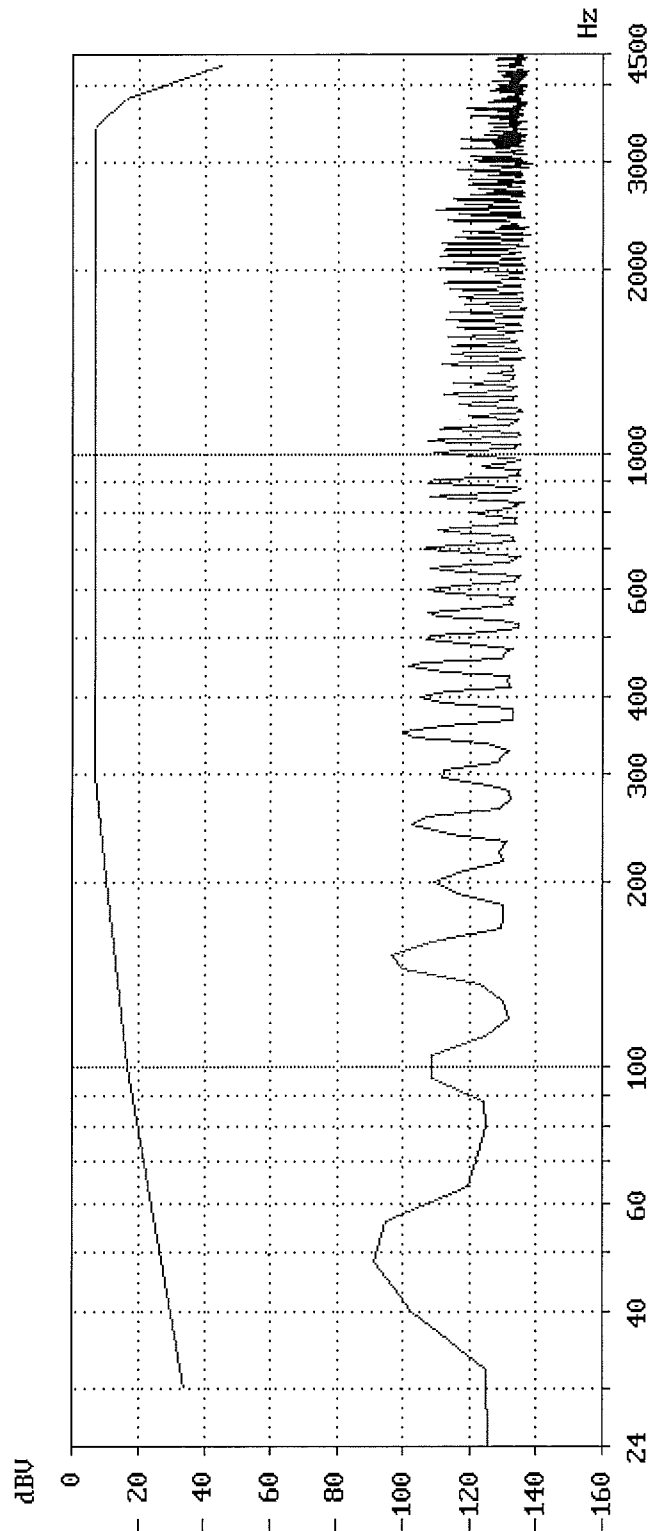
Mean level
dBV

- 25.4

DE03 GR03 N001 Sending level in 10 Hz bandwidth in quiescent state

Model No. : M3560idn	Feeding voltage : 50.0 V	Feeding bridge: TBR21
TEUT : MFP	Current limitation: 80.0 mA	Max. Level : - 91.2 dBV
Number of TEUT: 214043018	Polarity : Inverted	Frequency : 48 Hz
Manufacturer : KYOCERA DS Inc.	Feeding resistor : 230.0 Ohm	Rx impedance : 2r TBR21
Date : 18.11.13	Requirement: The voltage	Call setup : outgoing
Time : 14:59.10	shall not exceed the limits	
Remark : -	Data set : DE03 GR03 N001	

Mask violation: 0 Verdict : PASS



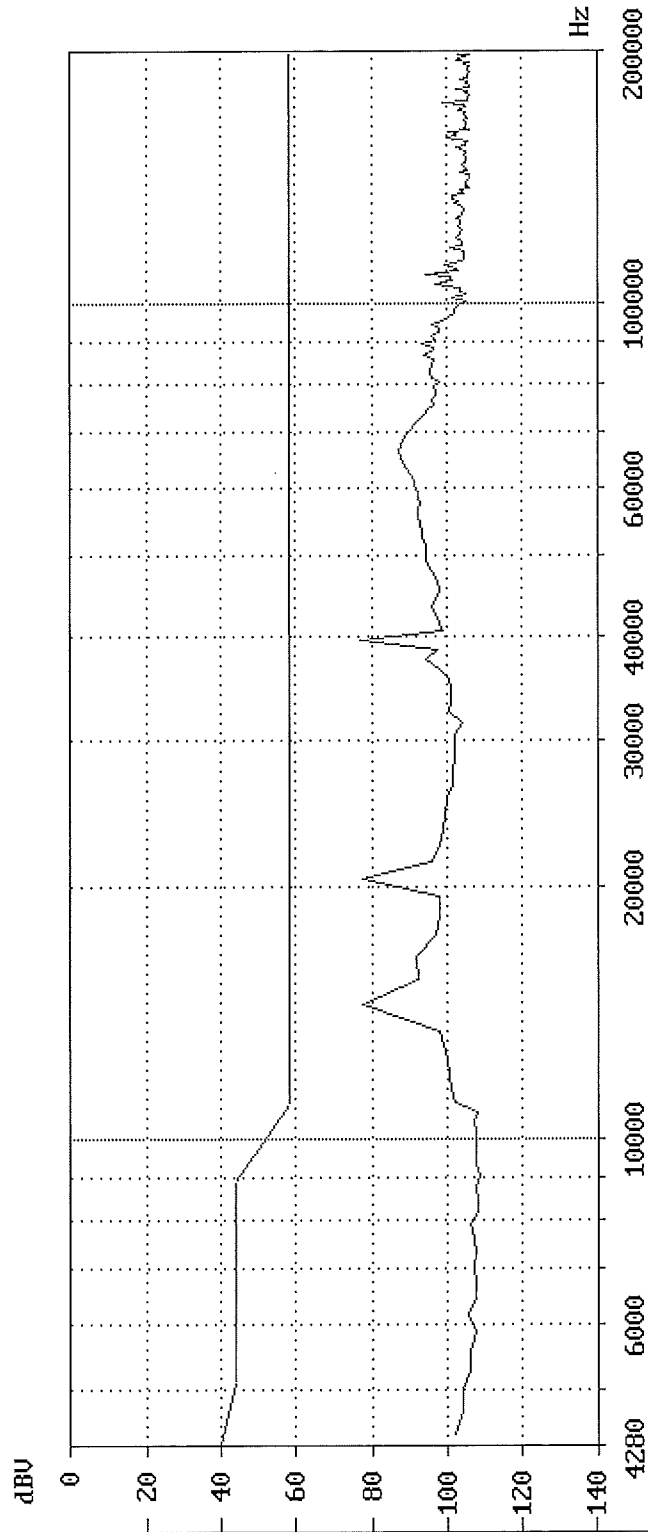
DE03 GR03 N001 Sending level above 4.3 kHz in quiescent state

Model No. : M3560idm	Feeding voltage : 50.0 V	Max. Level : - 76.6 dBV
TEUT : MFP	Polarity : Normal	at Frequency: 40000 Hz
Number of TEUT: 214043018	Feeding Resistor: 230.0 Ohm	Max. Level : - 77.2 dBV
Manufacturer : KYOCERA DS Inc.	Feeding Bridge : TBR21	Frequency : 39519 Hz
Date : 18.11.13	Requirement : The voltage level	Rx impedance: Zr TBR21
Time : 15:04.52	shall not exceed the limits	
	Data set : DE03 GR03 N001	

Remark : -

Mask violations: 0

Verdict : PASS



Protocol for AC/DC Suszeptibility test quiescent condition

DE 04 GR 04 AC/DC Suszeptibility in quiescent state

Model No. : M3560idn
 TEUT : MFP
 Number of TEUT: 214043018
 Manufacturer : KYOCERA DS Inc.
 Date : 18.11.13
 Time : 15:06.35

Data Set : DE04 GR04

Requirement : After this test the TE shall still fulfill all remaining requirements.

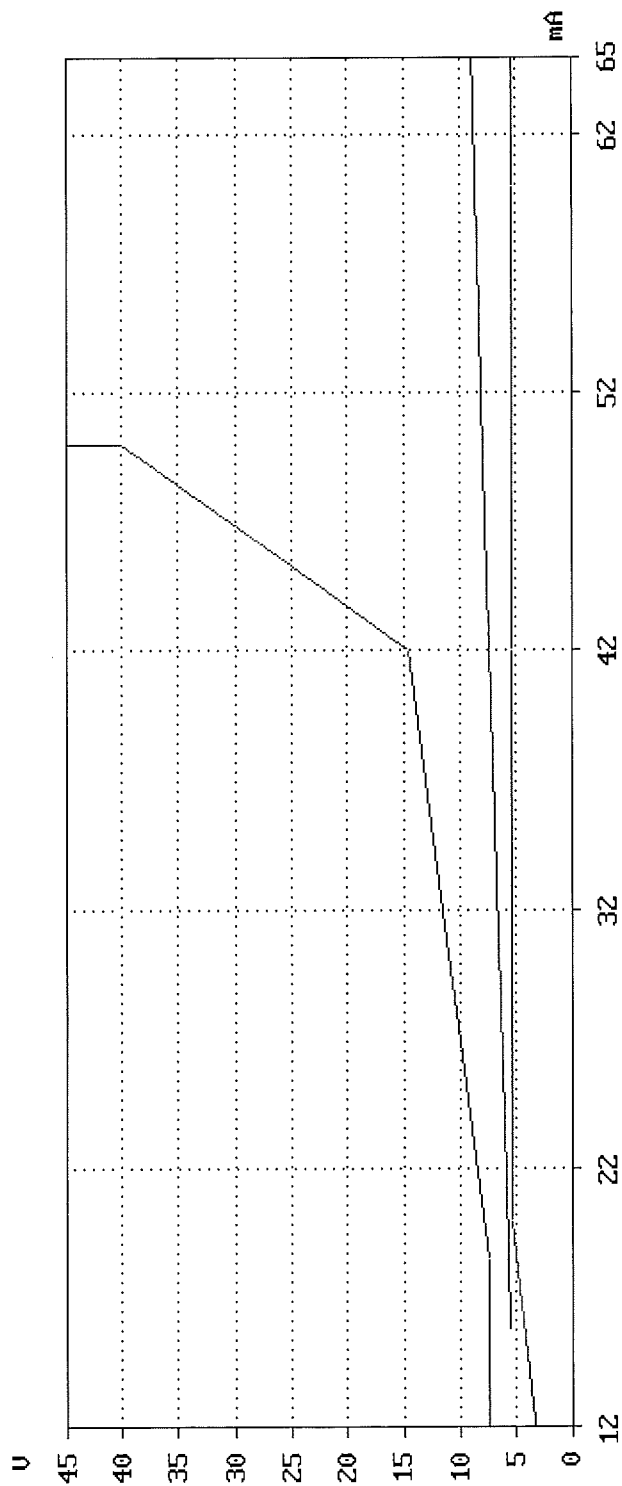
Remark : PASS

Udc [V]	Uac [V]	f [Hz]	R [Ohm]	Polarity	Duration [ms]	Pause [s]
63	75	25	140	Normal	6500	2
85	75	25	1340	Inverted	6500	2
63	75	25	140	Normal	6500	2
85	75	25	1340	Inverted	6500	2

DE08 N002 ES01 Lower limit of voltage in DC characteristics

Model No.	: M3560idm	Feeding voltage	: 50.0 V
TEUT	: MFP	Feeding	: 230/850/2050/3200 Ohm
Number of TEUT	: 214043018	Polarity	: normal
Manufacturer	: KYOCERA DS Inc.	Requirement	: The DC characteristic shall not exceed the limits
Date	: 18.11.13	Data set	: DE08 ES01 N002 60mA 2800N
Time	: 15:13.00		
Remark	: -		

Mask violations: 0 Verdict : PASS

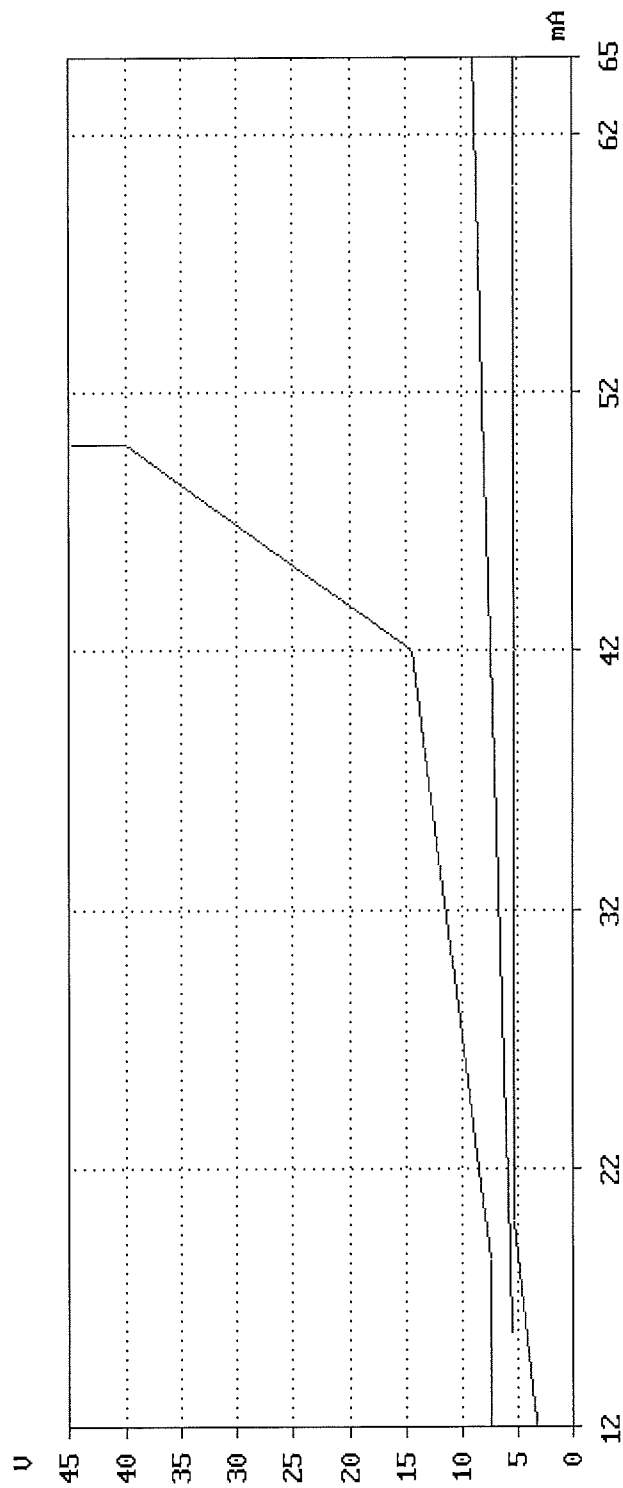


DE08 N002 ES01 Lower limit of voltage in DC characteristics

Model No.	: M3560idn	Feeding voltage	: 50.0 V
TEUT	: MFP	Feeding	: 230/850/2050/3200 Ohm
Number of TEUT	: 214043018	Polarity	: inverted
Manufacturer	: KYOCERA DS Inc.	Requirement	: The DC characteristic shall not exceed the limits
Date	: 18.11.13	Data set	: DE08 ES01 N002 60mA 2800I
Time	: 15:19.01		
Remark	: -		

Mask violations: 0

Verdict : PASS



Protocol for DTMF Impedance

DTMF Impedance

EG 201 121, DE-09

Date : 18.11.13
Time : 15:20.52
Operator : Y. Miura
Test Job : 214043018
TEUT : MFP
Manufacturer: KYOCERA DS Inc.

Feeding bridge : TBR21
Feeding Voltage : 50.0 V
Feeding resistor : 230.0 Ohm
Polarity : Normal
Triggerlevel/delay : -20.0 dBV 10 msec
Bridge Impedance Zn: Zr TBR21
Audible tone : DialTone

Remark : -
Verdict : PASS

Digit	Frequency [Hz]	Loss [dB]
3	504	52.9
3	889	42.6
3	1201	37.3
3	1706	35.9
5	576	42.9
5	1009	39.4
5	1105	44.5
5	1538	40.6
5	1706	35.7
7	600	32.7
7	1418	45.1
7	1706	35.1

Protocol for DTMF Impedance

DTMF Impedance
EG 201 121, DE-09

Date : 18.11.13
Time : 15:24.47
Operator : Y. Miura
Test Job : 214043018
TEUT : MFP
Manufacturer: KYOCERA DS Inc.

Feeding bridge : TBR21
Feeding Voltage : 50.0 V
Feeding resistor : 850.0 Ohm
Polarity : Inverted
Triggerlevel/delay : -20.0 dBV 10 msec
Bridge Impedance Zn: Zr TBR21
Audible tone : DialTone

Remark : -
Verdict : PASS

Digit	Frequency [Hz]	Loss [dB]
-------	-------------------	--------------

3	504	42.9
3	889	38.4
3	1201	29.8
3	1706	24.9
5	576	44.8
5	1009	43.3
5	1105	56.2
5	1538	41.4
5	1706	39.1
7	600	36.8
7	1418	45.7
7	1706	40.1

Protocol for DTMF Impedance

DTMF Impedance

EG 201 121, DE-09

Date : 18.11.13
 Time : 15:27.27
 Operator : Y. Miura
 Test Job : 214043018
 TEUT : MFP
 Manufacturer: KYOCERA DS Inc.

Feeding bridge : TBR21
 Feeding Voltage : 50.0 V
 Feeding resistor : 2050.0 Ohm
 Polarity : Normal
 Triggerlevel/delay : -20.0 dBV 10 msec
 Bridge Impedance Zn: Zr TBR21
 Audible tone : DialTone

Remark : -
 Verdict : PASS

Digit	Frequency [Hz]	Loss [dB]
3	504	42.0
3	889	38.6
3	1201	30.1
3	1706	25.0
5	576	42.2
5	1009	26.4
5	1105	23.3
5	1538	29.6
5	1706	38.4
7	600	35.4
7	1418	28.9
7	1706	35.7

Protocol for DTMF Impedance

DTMF Impedance

EG 201 121, DE-09

Date	: 18.11.13	Feeding bridge	: TBR21
Time	: 15:30.21	Feeding Voltage	: 50.0 V
Operator	: Y. Miura	Feeding resistor	: 3200.0 Ohm
Test Job	: 214043018	Polarity	: Inverted
TEUT	: MFP	Triggerlevel/delay	: -20.0 dBV 10 msec
Manufacturer:	KYOCERA DS Inc.	Bridge Impedance Zn:	Zr TBR21
		Audible tone	: DialTone

Remark : -
Verdict : PASS

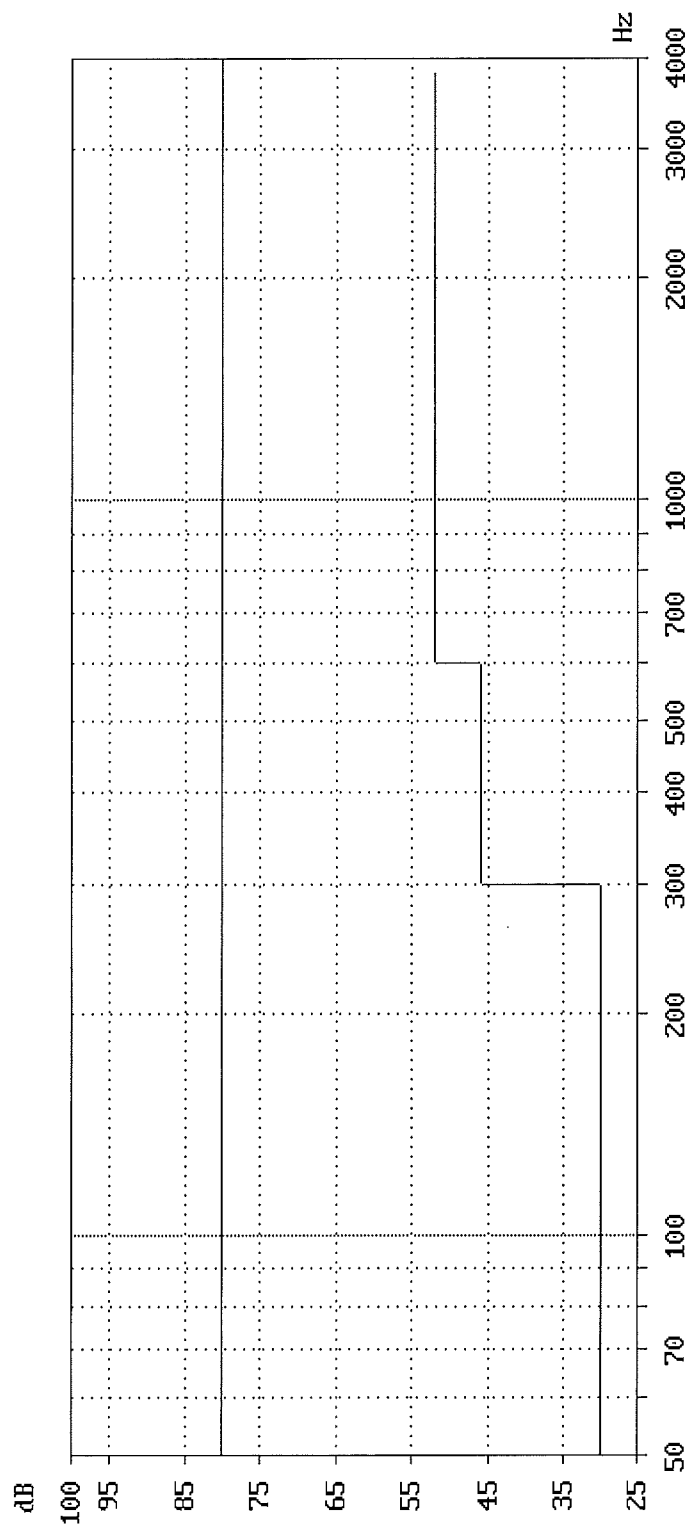
Digit	Frequency [Hz]	Loss [dB]
3	504	45.5
3	889	45.0
3	1201	30.1
3	1706	25.5
5	576	41.2
5	1009	27.3
5	1105	24.0
5	1538	30.6
5	1706	39.0
7	600	34.9
7	1418	27.2
7	1706	33.0

DE12 Output signal balance for better DTMF signalling

Model No.	: M3560idn	Feeding voltage	: 50.0 V	Feeding Bridge:	TBR21
TEUT	: MFP	Current limitation:	: 80.0 mA	Mask violation:	: 0
Number of TEUT:	: 214043018	Polarity	: Normal	Min. level U ₀	: -70.0 dBV
Manufacturer	: KYOCERA DS Inc.	Feeding resistor	: 230.0 Ohm	Call setup	: outgoing
Date	: 18.11.13	Requirement	: The curve of results shall be greater than the limits		
Time	: 15:33.30	Data set	: DE12 230 N		

Remark : DTMF 3

Verdict : PASS

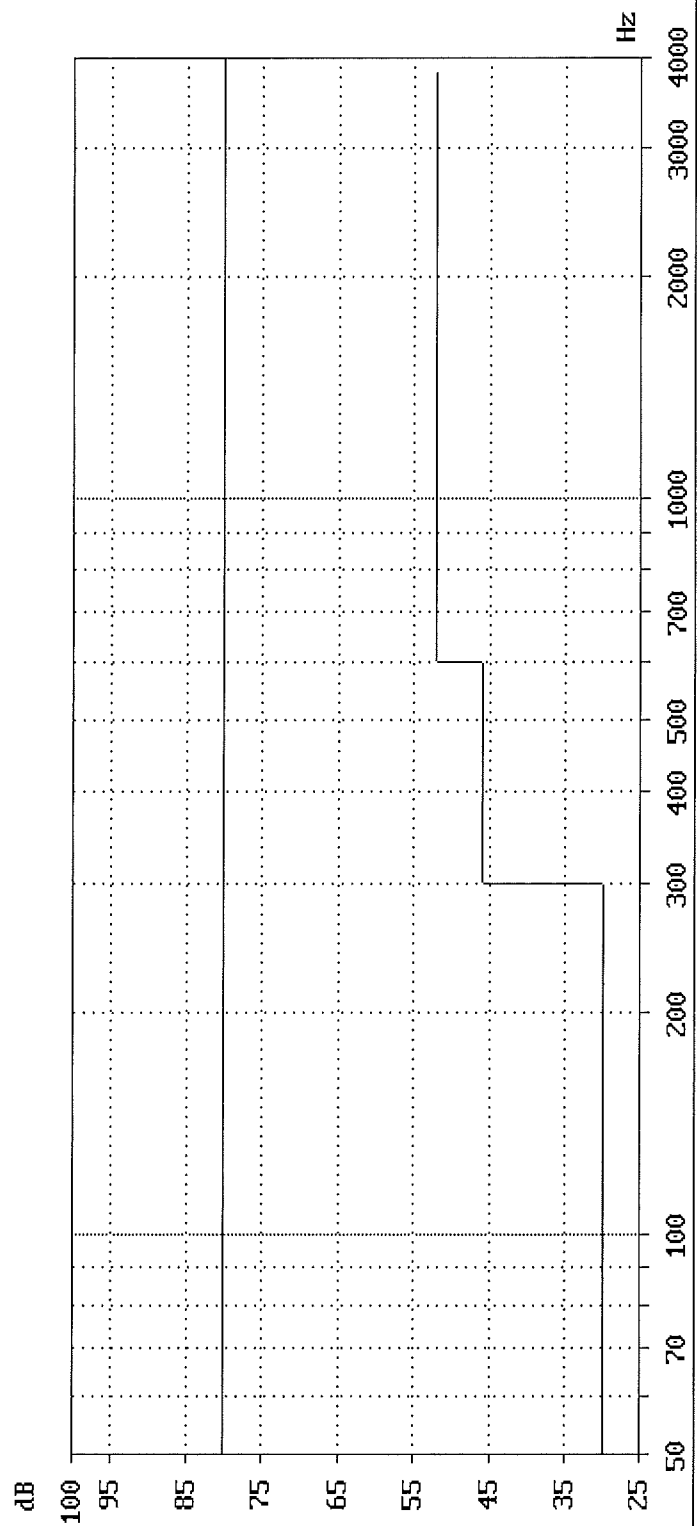


DE12 Output signal balance for better DTMF signalling

Model No. : M3560idn	Feeding voltage : 50.0 V	Feeding Bridge: TBR21
TEUT : MFP	Current limitation: 80.0 mA	Mask violation: 0
Number of TEUT: 214043018	Polarity : Inverted	Min. level Uo : -70.0 dBV
Manufacturer : KYOCERA DS Inc.	Feeding resistor : 850.0 Ohm	Call setup : outgoing
Date : 18.11.13	Requirement : The curve of results shall be greater than the limits	
Time : 15:34.58	Data set : DE12 850 I	

Remark : DTMF 3

Verdict : PASS

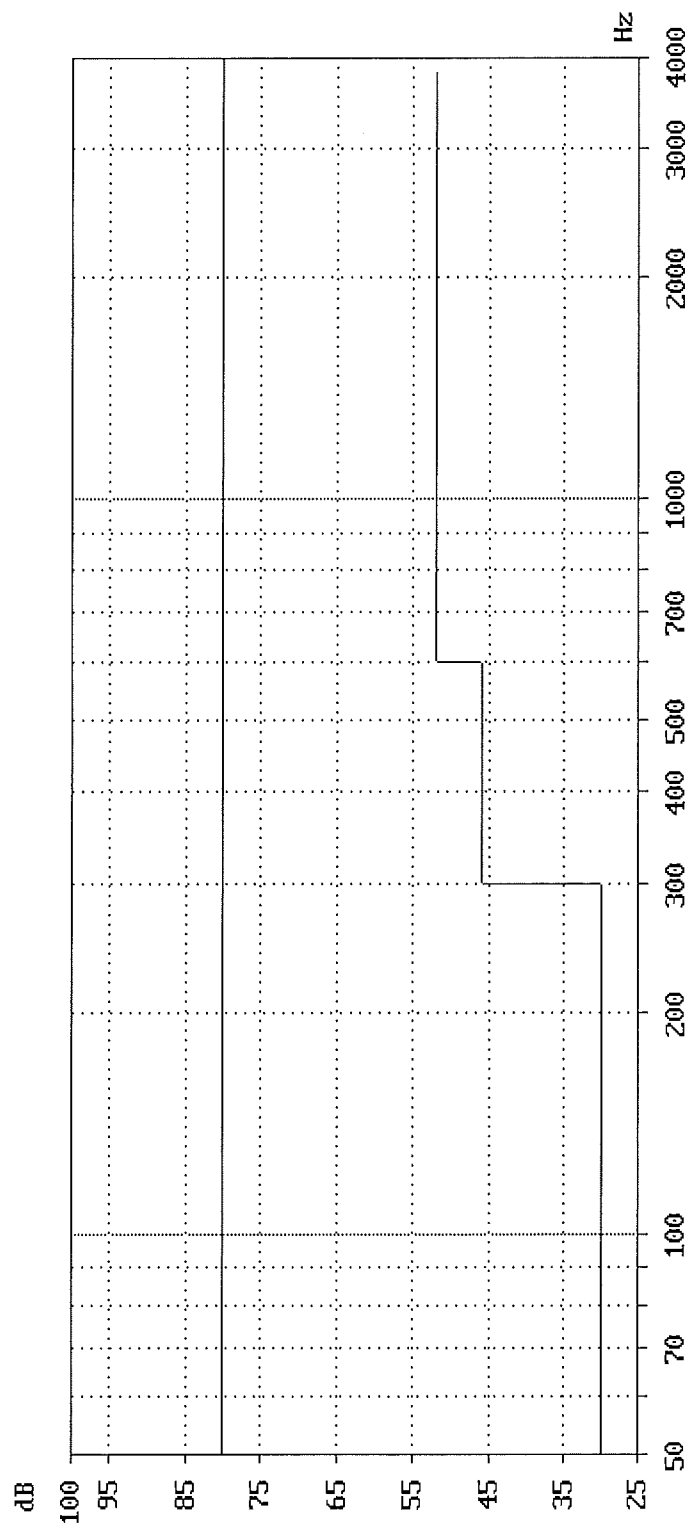


DE12 Output signal balance for better DTMF signalling

Model No. : M3560idn	Feeding voltage : 50.0 V	Feeding Bridge: TBR21
TEUT : MFP	Current limitation: 80.0 mA	Mask violation: 0
Number of TEUT: 214043018	Polarity : Normal	Min. level U ₀ : -70.0 dBV
Manufacturer : KYOCERA DS Inc.	Feeding resistor : 2050.0 Ohm	Call setup : outgoing
Date : 18.11.13	Requirement : The curve of results shall be greater than the limits	
Time : 15:36.35	Data set : DE12 2050 N	

Remark : DTMF 3

Verdict : PASS

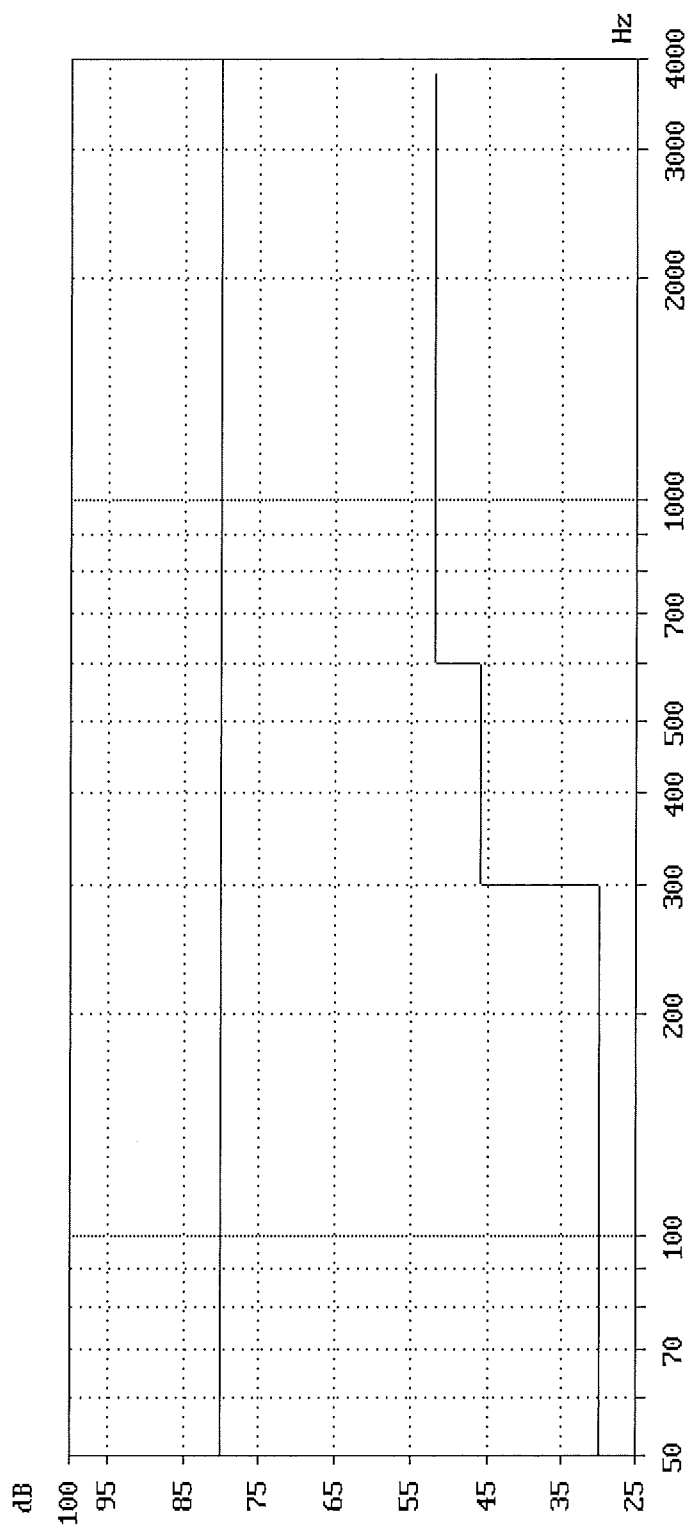


DE12 Output signal balance for better DTMF signalling

Model No. : M3560idn	Feeding voltage : 50.0 V	Feeding Bridge: TBR21
TEUT : MFP	Current limitation: 80.0 mA	Mask violation: 0
Number of TEUT: 214043018	Polarity : Inverted	Min. level Uo : -70.0 dBV
Manufacturer : KYOCERA DS Inc.	Feeding resistor : 3200.0 Ohm	Call setup : outgoing
Date : 18.11.13	Requirement : The curve of results shall be greater than the limits	
Time : 15:37.50	Data set : DE12 3200 I	

Remark : DTMF 3

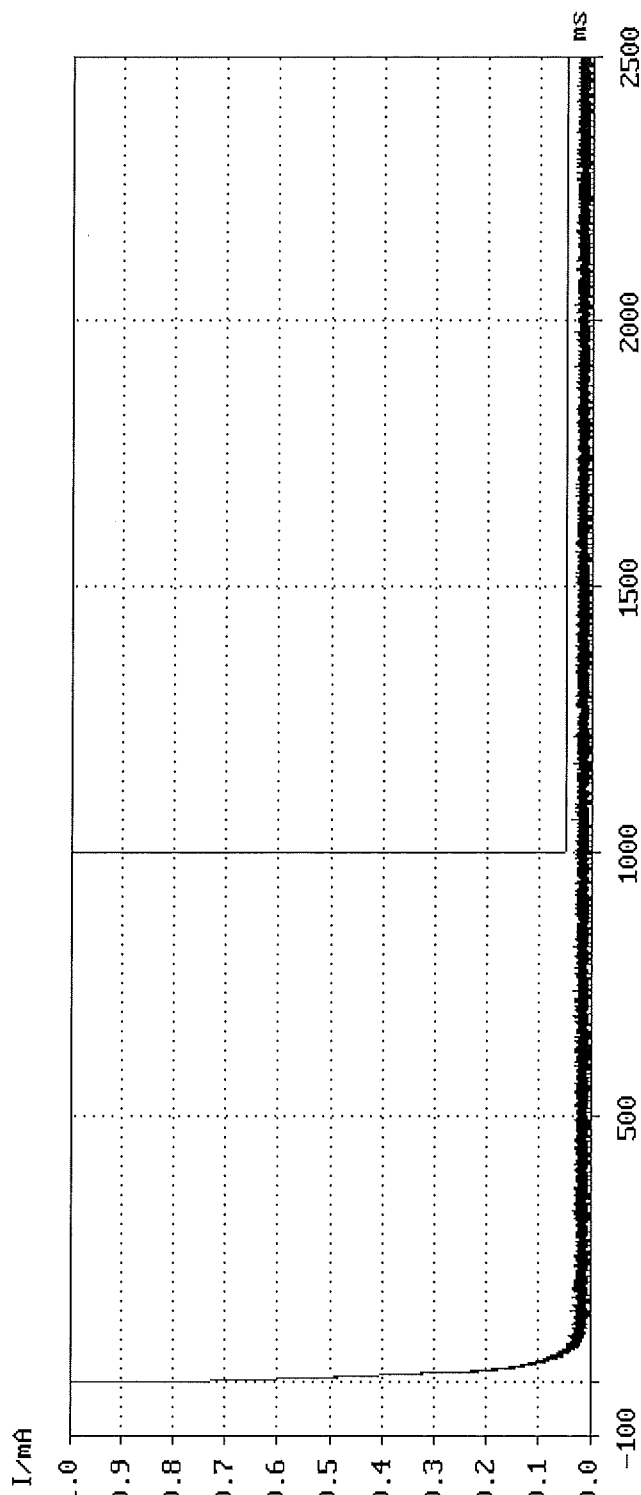
Verdict : PASS



DE14 Improvement for transition from loop to quiescent

Model No. : M3560idn	Feeding voltage : 50.0 V	Trigger : OK
TEUT : MFP	Polarity : Normal	I [mA]: 10.0
Number of TEUT: 214043018	Drop resistor : 2050.0 Ohm	Event : 1. neg. Edge
Manufacturer : KYOCERA DS Inc.		Delay [ms]: - 100
Date : 18.11.13	Requirement : The current shall	Sample [ms]: 0.2
Time : 15:40.11	drop not later than 1s	
Remark : -	Data set : DE14	

Transient times : 0.0 ms Verdict : PASS



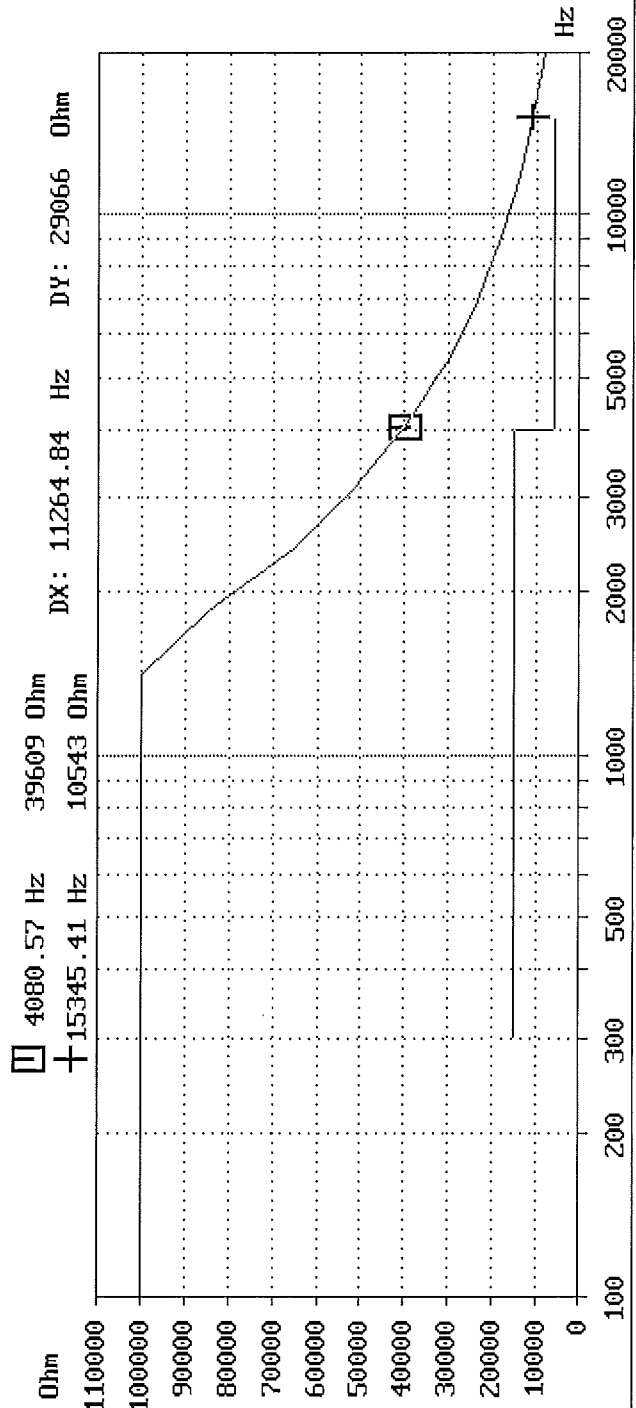
Modulus of impedance Z(f)

EG 201 121/P-03

Test Job : 214043018
 TEUT : MFP
 Manufacturer : KYOCERA DS Inc.
 Operator : Y. Miura
 Date : 18.11.13
 Time : 15:43.31

Current Limitation : 100.0 mA
 Feeding Voltage : 50.0 V
 Dropping Resistor : 2050.0 Ohm
 Polarity : Normal
 Level : +3.5 dBV

Remark : -
 Mask violations : 0
 Verdict : PASS



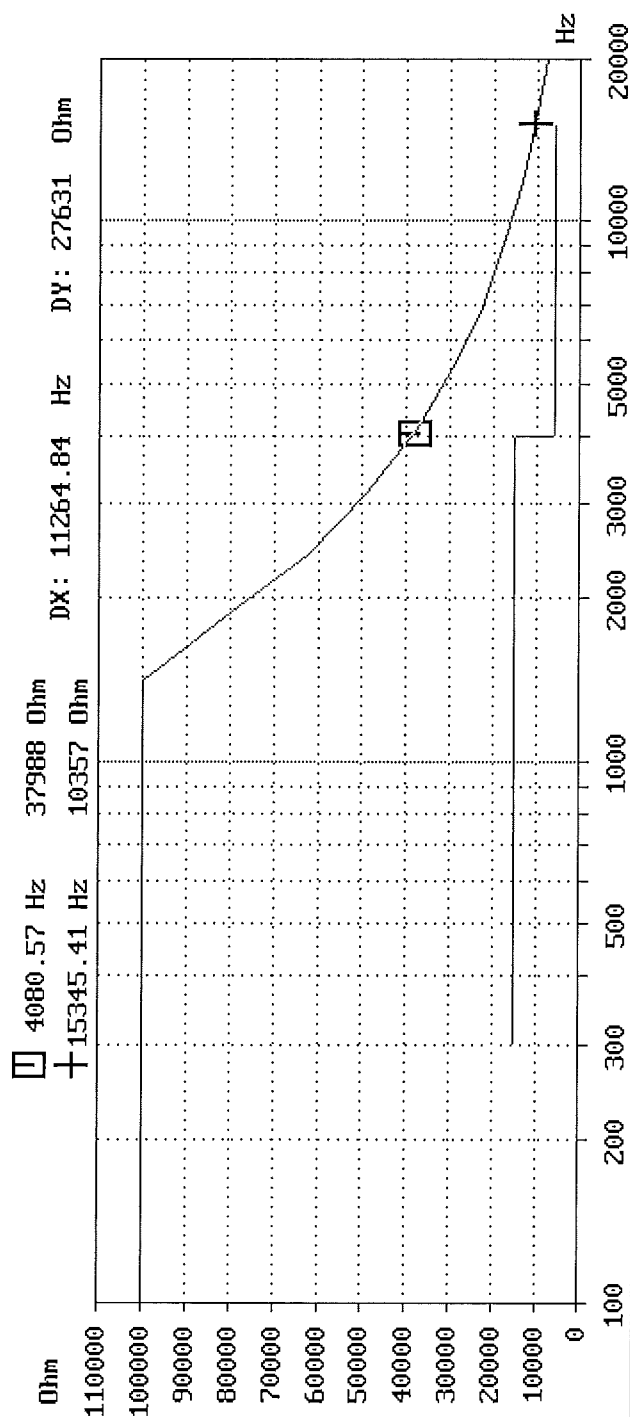
Modulus of impedance Z(f)

EG 201 121/P-03

Test Job : 214043018
 TEUT : MFP
 Manufacturer : KYOCERA DS Inc.
 Operator : Y. Miura
 Date : 18.11.13
 Time : 15:47.45

Current Limitation : 100.0 mA
 Feeding Voltage : 50.0 V
 Dropping Resistor : 2050.0 Ohm
 Polarity : Inverted
 Level : +3.5 dBV

Remark : -
 Mask violations : 0
 Verdict : PASS



Prüfbericht - Nr.:
Test Report No.:

50001072 002

Anlage B
Appendix B

Produktbeschreibung
Description of Equipment

Refer to test report 50001072 001

Prüfbericht - Nr.:
Test Report No.:

50001072 002

Anlage C
Appendix C

Schaltpläne
Circuit diagrams

Refer to test report 50001072 001

Prüfbericht - Nr.:
Test Report No.:

50001072 002

Anlage D
Appendix D

Fotos
Photographs

Refer to test report 50001072 001