Specifications

Displayed parameters

Main-parameters (A display)	AUTO Auto selection of main, sub parameters and equivalent circuit L Self-inductance (H) C Electrostatic capacity (F) R Resistance (ohm) |Z| Magnitude of impedance (ohm) There are series and parallel measuring modes for each of L, C and D
Sub-parameters (B display)	Q Quality factor D Dissipation factor (=tanδ =1/Q) ESR Equivalent series resistance (ohm) G Parallel conductance (S) X Series reactance (ohm) θ Phase angle of impedance (degree) V rms Voltage across device (Vrms) I rms current through device (Arms)
Equivalent circuit	AUTO : Automatic selection SER : Series PRL : Parallel
Display of deviation	Δ Displayed deviation data of main parameter (range : +/-100%) Δ% Displayed % deviation of main parameters (range : +/-199.99%)
Automatic parameter selection	Automatic selection by the phase angle of impedance θ =+90 +/-30˚: L, Q θ = 0 +/-30˚ : R, Q θ =-90 +/-30˚ : C, D θ = others : |Z|,θ

Equivalent circuit auto select	Main parameters	Sub parameters	Conditions	Equivalent circuit
	L, C, R, |Z|	ESR,X	—	Series
		G	—	Parallel
	L,C	Q, D, θ, V, I	|Z|<=1kohm	Series
			|Z|>1kohm	Parallel
	R	Q, D, θ, V, I	θ >=0	Series
			θ <0	Parallel
	|Z|	Q, D, θ, V, I		Series

Resolution of indication	4-1/2 digits (max.19999), but V and I are 3-1/2 digits (max.1999) D,Q : 0.0001 θ : 0.01˚
Measurement (indication) range	R, |Z|, ESR, X : 0.0mohm to 19.999Mohm C : 0.000pF to 199.99mF L : 0.0nH to 19.999kH Q, D : 0.0000 to 19999 G : 0.0nS to 199.99S θ : -180.00˚ to +179.99˚ V : 0.0mV to 19.99Vms (Actual measurement range is around 5.00Vrms) I : 0.00μA to 199.9mArms (Actual measurement range is around 50.0Arms)

Accuracy (excerpt)

The accuracy of |Z| and θ (Level=1Vrms, SPEED=MED2 or SLOW)

	Impedance 10ohm to 1.3kohm		Impedance 13kohm to 130kohm	
	Accuracy of |Z|	Accuracy of θ	Accuracy of |Z|	Accuracy of θ
Frequency 1kHz	+/-0.1%	+/-0.03˚	+/-0.1%	+/-0.04˚
Frequency 101k to 200kHz	+/-1.0%	+/-0.7˚	+/-2.0%	+/-1.5˚

[Accuracy guaranteed conditions]

Pre-heat run time : More than 30 min.
Ambient temperature and humidity : 23+/-5℃, 90%RH or less
Gain Correction : to be calibrated before measurement
Zero Correction : Perform under above conditions
Period : Within 12 months after the shipment

Measuring signal

Frequency	Range : 40Hz to 200kHz Resolution : 2digits (40Hz to 99kHz), and 3digits (100kHz to 200kHz)
Signal level	(Voltage at opening drive terminal Hcur) Range : 10mVrms to 5Vrms Resolution : 1mV (10mVrms to 999mVrms) 10mV (1Vrms to 5Vrms)
DC bias	Internal : 0mV to 2.5V External : 0 to +/-35V

Others

Measurement range	No. of ranges : 6 Selection : Auto and manual
Measuring time (reference value)	FAST : 25ms typ. MED 1 : 64ms typ. MED 2 : 150ms typ. SLOW : 480ms typ. (at 1kHz, 1kohm, fixed range and auto trigger mode)
Trigger	Mode : Auto (repeat) and manual Delay time : 0 to 199.99s
Measurement terminal	4 terminal (BNC-R) + guard terminal
Residual electric charge protection (reference value)	Max. protective voltage V=$\sqrt{(16/C)}$ V<= 250V, C is capacity (F) of samples (max. protective voltage is just reference value, not guaranteed)
Comparator functions	No. of classifications : Max. 21 bins Main parameter judgment : 1 to 20 bins of upper and lower limits can be set. Sub parameter judgment : GO/NG is judged on the upper and the lower limit of one bin.
Handler interface	Connector : 50-pin multi-connector (DDK 57-40500) Output signal : bin judgement signal, judgement signal, Defective, Defective, judgement complete pulse, measurement complete pulse, under measurement flag Input signal : start measurement trigger, disable panel operation, select memory Signal level : TTL level negative logic Output can be reversed to positive logic Isolation : Signal ground of the handler interface is isolated from chassis (Voltage across the ground is within +/-42VDC) Beeper : available at the measurement completion Strobe signal width : 1ms to 19.999s *ZM2354 only
Setting memory	No. of memories : 10 (one of ten memories stores the last data at power off)
Interface	GPIB
Power requirement	AC100, 115 or 230V +/-10% 50/60Hz +/-2Hz less than 50VA
Operating temperature and humidity	+5 to +40℃ 5 to 85%RH (no dew condition)
Dimension (mm)	216(W)*132.5(H)*330(D) excluding protrusions
Weight	approx. 4.7kg
Accessories	one copy of instruction manual, a power cord (3-pin, 2m), an adaptor for converting from 3-pin to 2-pin type, a fuse

http://www.nfcorp.co.jp/english/index.html

Specifications are subject to change without notice.

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WARRANTY: All NF products are warranted against defects in materials and workmanship for one year from the date of delivery to the original purchaser.

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