

JIS

JAPANESE INDUSTRIAL STANDARD

Glossary of Passive Components for Electronic Equipment

JIS C 5602—1986

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JAPANESE INDUSTRIAL STANDARD

J I S

Glossary of Passive Components
for Electronic Equipment

C 5602-1986

1. Scope

This Japanese Industrial Standard specifies meaning of technical terms of passive components for electronic equipment, hereinafter referred to as the "terms".

2. Classification

The terms are classified as follows:

(1) General

(2) Resistor

(2.1) Fixed resistor (basic)

(2.2) Fixed resistor (general)

(2.3) Fixed resistor (performance)

(2.4) Variable resistor (basic)

(2.5) Variable resistor (general)

(2.6) Variable resistor (performance)

(2.7) Thermistor (NTC thermistor)

(2.8) Thermistor (PTC thermistor)

(2.9) Varistor

(3) Capacitor

(3.1) Fixed capacitor (basic)

(3.2) Fixed capacitor (use)

(3.3) Fixed capacitor (construction)

(3.4) Fixed capacitor (dielectrics)

(3.5) Fixed capacitor (performance)

(3.6) Variable capacitor

Applicable Standard:

JIS C 5202-Test Methods of Fixed Resistors for Electronic Equipment



Documents

Document Sharing Hub

(4) Coil, transformer (signal) and transformer (power)

(4.1) Coil and transformers (basic)

(4.2) Coil and transformers (general)

(4.3) Coil and transformers (performance)

3. Number, Term and Meaning

The number, terms and meanings are as given below.

Further, the symbol denoting each term and the corresponding English term are given for reference.

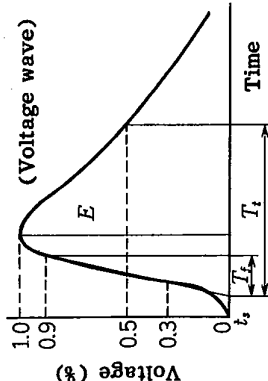
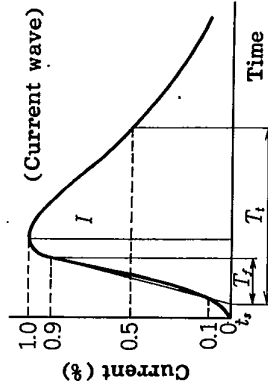
- Remarks 1. If two or more terms are written in a column of term, the precedence in use is in the written order.
2. The term a part of which is bracketed by [] means that two terms i.e. the term including the bracketed word and that not including the said word may be used.
3. Where the term is difficult in reading, likely to cause misreading or to be read as standardized, the reading is shown by thin KATAKANA in parentheses () placed in the next line to the term.
4. When applicable area of a term is limited, the area is shown in the brackets [] following the term.

(1) General

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
1001	ADOMITANSU	The value obtained as the quotient resulting from the current flowing through a circuit divided by the terminal voltage. Reciprocal of impedance.	Y	admittance
1002	FUKUSO ADOMITANSU	A complex quantity which has the absolute value equal to the scalar value of admittance and an amplitude equal to the phase difference between voltage and current. The amplitude is positive when the current precedes the voltage.		complex admittance
1003	KONDAKU- TANSU	(1) The value obtained as the quotient resulting from the current component in the same phase with a terminal voltage of a circuit divided by the terminal voltage. (2) The real number of complex admittance.	G	conductance
1004	SASEPUTANSU	(1) The value obtained as the quotient resulting from the current component with phase difference of 90 degrees from a terminal voltage of a circuit divided by the terminal voltage. (2) The imaginary number of complex admittance.	B	susceptance
1005	INPĪDANSU	The value obtained as the quotient resulting from the terminal voltage of a circuit divided by the current flowing through the circuit.	Z	impedance
1006	FUKUSO INPĪDANSU	(1) A complex quantity which has the absolute value equal to the scalar value of impedance and an amplitude equal to the phase difference between voltage and current. The amplitude is positive when the current precedes the voltage.		complex impedance

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
1006 (cont'd)		(2) The ratio $Z = \frac{U}{I} = \frac{U_0 \exp(j\phi)}{I_0 \exp(j\phi)} = Z_0 \exp(j\phi)$ where, both of voltage U across terminals of two-terminal network and the current I are sinusoidal function in complex notation given below. $U = U_0 \exp[j(\omega t + \phi)]$ $I = I_0 \exp(j\omega t)$ It is also expressed as $Z = R + jX$. U_0, I_0 and Z_0 are the respective initial values.		
1007	JIKKŌ RIAKUTANSU	The value obtained as the quotient resulting from the voltage component with the phase difference of 90 degrees from a current divided by the current.	Z_{eff}	effective reactance
1008	YŪDŌSEI RIAKUTANSU	The product of inductance and angular frequency.	X_L	inductive reactance
1009	YŌRYŌSEI RIAKUTANSU	The reciprocal of the product of capacitance and angular frequency.	X_C	capacitive reactance
1010	SHIYŌ ONDO-HANI, KATEGORI ONDO-HANI	The range of ambient temperatures in which the component can be used continuously.		category temperature range
1011	SAITEI SHIYŌ [SHŪI] ONDO, KATEGORI KAGEN ONDO	The minimum ambient temperature at which the component can be used continuously.		lower category temperature

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
1012	SAIKŌ SHIYŌ [SHUI] ONDO, KATEGORI JŌGEN ONDO	The maximum ambient temperature at which the component can be used continuously.		upper category temperature
1013	HOZON ONDO-HANI	The range of ambient temperatures under which the component can be stored without loaded.		storage temperature range
1014	TEIKAKU [SHŪI] ONDO	The maximum ambient temperature at which the component can be used continuously under its rated load.		rated temperature
1015	TAIKŌ-SEI KATEGORI	The combination of the temperature for cold test, the temperature for dry heat test and the test days for damp, heat (steady state) test to those the component in question will endure, that is provided to show the conditions for climatic tests of components for electronic equipment in common for each related standard.		climatic category
1016	SAIKŌ HYŌMEN ONDO	The temperature at the hottest point of component's external surface including its terminations.		maximum surface temperature
1017	SAITEI HYŌMEN ONDO	The temperature at the coldest point of component's external surface including its terminations.		minimum surface temperature
1018	ONDO NIYORU TOKUSEI NO HENKA	The variations in substantial characteristics of a component due to change in temperature, and they are classified as follows: (a) ONDO TOKUSEI: temperature characteristic (b) ONDO KEISŪ: temperature coefficient (c) ONDONIYORU TOKUSEI NO ZURE: temperature cyclic drift of characteristic		variation of characteristic with temperature

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
1019	SETCHI TANSHI	The terminal to be earthed for safety.		earth terminal
1020	SĀJI DENATSU	A transient voltage which is not cyclic and rises rapidly in a short time, like the abnormal voltage induced on communication lines and power lines due to lightning stroke, arc earth fault, etc. Remark: The current caused by such surge voltage is called surge current. In the surge due to lightning discharge, the voltage (current) rises rapidly in the first part of lapse of time to the peak value, then converges to zero more slowly than the rise part. The definition of surge is shown in the following figure:  (Voltage wave) E : peak value t_s : virtual origin T_f : virtual front time T_i : virtual time to half value on tail  (Current wave) I : peak value t_s : virtual origin T_f : virtual front time T_i : virtual time to half value on tail Generally, the magnitude of peak value is called the surge voltage (current).	U	surge voltage

(2) Resistors(2.1) Fixed Resistor (Basic)

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
2101	DENKI TEIKŌ	(Attribute) The characteristic inherent in a substance to limit the current flowing through the substance. Electrical energy is transformed into thermal energy due to electrical resistance.	R	electrical resistance
2102	TEIKŌ [CHI]	(Quantity) The value obtained as the quotient resulting from the voltage applied across both ends of a conductor without electromotive force divided by the current through the conductor.	R	resistance [value]
2103	TEIKŌ [RISŌ TEIKŌKI NI OKERU]	The value obtained as the quotient of voltage and current.	R	resistance
2104	RISŌ TEIKŌKI	The ideal two-terminal network element where the instantaneous voltage is proportional to the instantaneous current.		ideal resistor
2105	TEIKŌKI	A substance which has electrical resistance as its attribute. A component which causes current limit and voltage drop when a voltage is applied across both ends of an electronic circuit, and which is used for voltage dividing, current limiting, matching, etc.		resistor
2106	KOTEI TEIKŌKI	A resistor which has a prescribed resistance value and no mechanical adjusting mechanism for the resistance value.		fixed resistor

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
2107	NETSU ZATSUON DENATSU	The fluctuation voltage caused by the random motion of thermally agitated charges. Remark: The root of mean square of fluctuating voltages appearing across terminals of a resistor is expressed by Nyquist equation $\bar{V}_n^2 = 4 KTR \Delta f$ where $\bar{V}_n$: thermal noise voltage (V) K: Boltzmann constant ($1.38 \times 10^{-23} \text{ J/K}$) T: absolute temperature (K) R: resistance value (Ω) Δf: frequency band width (Hz)		thermal noise voltage, thermal agitation noise voltage
2108	DENRYŪ ZATSUON DENATSU	The difference between the total noise voltage (r.m.s.) and the thermal noise voltage. Remark: The mean-square value of current-noise voltage caused by flow of d.c. current through a fixed resistor increases over the mean-square value of thermal noise voltage. A resistor which has current noise may be represented as a current-noise voltage source of zero impedance to which a separate (without mutual interference) thermal noise voltage source and a resistor without noise are connected in series. The mean-square value of current-noise voltage per unit pass band varies substantially inversely with frequency. If the mean-square value of voltage is inversely proportional to frequency, then ideal rectangular pass bands having equal ratios of upper to lower band-pass limits transmit equal amounts of noise voltage from a given noise source.		current-noise voltage

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
2109	DENRYŪ ZATSUON SHISŪ	The r.m.s. value of current noise voltages in a band width of one frequency decade divided by the applied voltage. It is expressed by the following formula: $N = 20 \log \frac{V_{rms}}{V_r}$ where N: current-noise index (dB) V_{rms}: r.m.s. value of current-noise voltages at open circuit in a frequency band (μV) V_r: value of d.c. voltage to be applied to the resistor to be tested (V) Remarks 1. The ideal rectangular pass band associated with the current-noise index is one frequency decade, geometrically centered at 1000 Hz. 2. Since the current-noise power spectrum approximates to a $1/f$ frequency characteristic, the index provides an estimate of current noise in any frequency decade.		current-noise index

(2.2) Fixed Resistor (General)

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
2201	MAKISEN TEIKOKI	A resistor in which metallic wire wound on insulating base is employed as the resistance element.		wirewound resistor
2202	HI-MAKISEN TEIKOKI	A resistor other than wirewound resistors.		non-wirewound resistor

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
2203	HIMAKU TEIKŌKI	A resistor in which resistance film formed on surface of insulating base is employed as the resistance element.		film resistor
2204	TAI TEIKŌKI	A resistor in which compound molding of carbon, filler, thermo-setting resin, etc. is employed as the resistance element.		composition (solid) resistor
2205	TANSO HIMAKU TEIKŌKI	A resistor in which carbon film deposited by pyrolysis on surface of an insulating base of ceramic or the like, is employed as the resistance element.		carbon film resistor (deposited cracked)
2206	KINZOKU HIMAKU TEIKŌKI	A resistor in which metallic thin film formed on surface of such insulating base as ceramic and glass is employed as the resistance element.		metal film resistor
2207	SANKA- KINZOKU HIMAKU TEIKŌKI	A resistor in which metal oxide film formed on surface of such insulating base as ceramic and glass is employed as the resistance element.		metal oxide film resistor
2208	SĀMETTO TEIKŌKI	A resistor in which mixture of ceramic, glass, metal, etc. formed on surface of insulating base of ceramic, glass, etc. is employed as the resistance element. Remarks 1. Metal glaze resistors belong to cermet resistors. 2. Cermet is a word made of ceramics + metal.		cermet resistor

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
2209	INSATSU TEIKŌKI	A resistor consisting of the print formed on surface of ceramic, glass, printing board using the resistance ink of cermet, carbon, etc. by the screen method.		printed resistor
2210	NETTOWĀKU TEIKŌKI	A resistor of such structure that resistance elements are formed on surface of an insulating base of ceramic, glass, etc. and the resistance elements are independent each other or integrated by connecting the elements each other as needed.		network resistor
2211	HYŪZU TEIKŌKI	A resistor having such functions that it serves generally as a resistor, it blocks an overcurrent exceeding a specified value, if flows, by melting of the resistance element within a specified time, and its resistance value does not return to the original value.		fusing resistor
2212	CHIPP TEIKŌKI	A rectangular or cylindrical fixed resistor principally intended to meet mounting on a plain, in which the resistance element is formed on surface of insulating base of ceramic glass, etc. and electrodes are provided on both ends. Remark: Generally, resistors of this kind have no lead terminations.		chip resistor

(2.3) Fixed Resistor (Performance)

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
2301	KŌSHO TEIKŌCHI	This means the representative resistance values given in relevant standard, and is the resistance value marked on a resistor in general.	R	rated resistance, nominal resistance

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
2302	TEIKAKU DENRYOKU	The maximum value of electric power which may be loaded continuously by a resistor under the rated ambient temperature.	P	rated dissipation
2303	SAIDAI DENRYOKU	The maximum value of electric power which may be loaded continuously by a resistor under a given ambient temperature.	P	maximum dissipation
2304	KATEGORI DENRYOKU	The maximum value of electric power which may be loaded continuously by a resistor under the upper category temperature. Remark: This is generally specified by the derating curve, and expressed as percentage of the rated dissipation.	P	category dissipation
2305	KEIGEN KYOKUSEN	The curve which shows the relation between ambient temperature and maximum dissipation. Remark: Generally, this is shown as percentage of the rated dissipation.		derating curve
2306	TEIKAKU DENATSU [TEIKOKI NO]	The maximum of d.c. voltage or a.c. voltage (r.m.s) which may be applied to a resistor under the rated ambient temperature. Remark: This is calculated from rated dissipation and nominal resistance and must not exceed the upper category temperature.	U_R	rated voltage
2307	SAIKO SHIYO DENATSU, SOSHI SAIKO DENATSU	The maximum d.c. voltage or a.c. voltage (r.m.s) which may be applied continuously to a resistor or resistance element.	U	limiting element voltage
2308	RINKAI TEIKOCHI	The maximum nominal resistance value at which the rated dissipation may be loaded by a resistor without exceeding the limiting element voltage. Remark: The critical resistance means the resistance value at which the rated voltage is equal to the limiting element voltage.	R	critical resistance

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
2309	AISORĒSHON DENATSU, BUNRI DENATSU	The maximum peak voltage which may be applied between the resistor terminations and any conducting mounting fixture.	"	isolation voltage
2310	TEIKŌKI NO ONDO TOKUSEI	The relation between the variation in resistor characteristics and the ambient temperature when the temperature is varied over a given temperature range. Remark: In general, the temperature characteristic of resistor means the behavior of resistance value due to temperature, and expressed by temperature coefficient of resistance or temperature characteristic of resistance.		generic temperature characteristic of resistor
2311	TEIKŌ ONDO KEISŪ	The relative variation of resistance between two given temperatures within the category temperature range of a resistor per 1°C difference. Remarks 1. This is applicable for a resistor having linear temperature characteristic, and expressed by a representative value between specified temperatures (range). 2. Generally ppm/°C is used as the unit for temperature coefficient. 3. This is expressed by the following formula: Temperature coefficient of resistor (ppm/°C) = $\frac{R-R_0}{R_0} \times \frac{1}{t-t_0} \times 10^6$ where R : actually measured value of resistance at t °C (Ω) R_0 : actually measured value of resistance at t_0 °C (Ω) t : actually measured value of testing temperature (°C) t_0 : actually measured value of reference temperature (°C)		temperature coefficient of resistance

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
2312	TEIKŌ ONDO TOKUSEI	The relative variation of resistance between two specified temperatures (range) expressed in the rate when the ambient temperature is varied. Remarks 1. This is applicable for a resistor having non-linear temperature characteristic. 2. This is expressed by the following formula: Temperature characteristic of resistance (%) (¹) $= \frac{R - R_0}{R_0} \times 100$ where R: actually measured value of resistance at testing temperature (Ω) R_0: actually measured value of resistance at reference temperature (Ω) Note (¹) This is called "rate of variation of resistance" in JIS C 5202.		temperature characteristic of resistance
2313	SAIKŌ HYŌMEN ONDO (TEIKŌKI NO)	The maximum temperature permitted on the surface of a resistor when the resistor is operated continuously at rated dissipation under rated ambient temperature.	T	maximum surface temperature

(2.4) Variable Resistor (Basic)

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
2401	KAHEN TEIKOKI	A resistor the resistance value of which is variable by mechanical means. Remark: In the document of IEC/TC 40 "variable resistor" is used for a resistor with two terminations only, but in this country the name is used for variable resistors including potentiometer with three terminations and variable resistors with two terminations.		variable resistor
2402	POTENSHO- MĒTA	A resistor mainly used as a potential divider having such structure, that three terminations are provided two of which are connected to both ends of the resistance element and other one is connected to the moving contact which mechanically moves along the resistance element.		potentiometer
2403	SHŪDŌ SETTEN, SHŪDŌ SHI, SHŪDŌ HEN	The contact of a variable resistor that moves along the resistance element.		moving contact, slider
2404	TEIKŌ RO	The path of contact which slides on the resistance element.		track
2405	KAITEN NO HOKO	The direction of rotation of actuating mechanism viewed from the side of a variable resistor where the actuating mechanism is provided. The direction is defined as clockwise or anti-clockwise.		direction of rotation
2406	RENZOKU SEI	The continuity of electrical contact between a moving contact and resistance element when the moving contact mechanically moves.		continuity

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
2407	SESSHOKU TEIKŌ	The electrical resistance existing on the contact surface of two substances. Remarks 1. On a contact surface, there are contact potential difference and a discontinuous potential difference corresponding to the current flowing through the contact surface, and the ratio of total of said voltages to the current is equal to the value of contact resistance. 2. The contact resistance is determined by the roughness, dirt, absorbed gas, contact area, etc. of the contact part.		contact resistance
2408	RIRON BUNKAINŌ	The reciprocal of the number of turns of resistance wire in the effective electrical travel of a wirewound variable resistor.		theoretical resolution
2409	ZEN INKA DENATSU	The voltage applied between input terminations. Remark: Generally, the input terminations means those connected to both ends of the resistance element.		total applied voltage
2410	SHUTSURYOKU DENATSU	The voltage between the moving contact termination and a specified termination. Remark: Unless otherwise specified, the said specified termination is that lying at anti-clockwise end.		output voltage
2411	SHUTSURYOKU DENATSU-HI	The quotient of output voltage and total input voltage.		output ratio
2412	GENSUIRYŌ I POTENSHO- MĒTA NOI	The reciprocal of output ratio. It is generally expressed in dB.		attenuation

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
2413	TEIKŌ HENKA TOKUSEI	The relation existing between the resistance value or output ratio measured between the moving contact termination and a specified termination, and the mechanical position of actuating mechanism.		resistance law
2414	SHŪDŌSHI KYOYŌ DENRYŪ	The maximum current that may be passed between the resistance element and the moving contact.		limiting moving contact current
2415	SESSHOKU TEIKŌ HANDŌ	The variable in contact resistance between the resistance element and the moving contact when the moving contact is moved at a specified speed.		contact resistance variation (CRV)

(2.5) Variable Resistor (General)

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
2501	KURATCHI KAJŌ KIKŌ	A mechanism which is provided to allow further rotation of actuating mechanism when the moving contact reaches to both ends of resistance element.		declutching device
2502	TAPPU [POTENSHO MĒTA NO]	The electrical connecting termination fixed to the middle part of a resistance element.		tap
2503	TAPPU ICHI	The location of tap measured from a specified termination. It is generally expressed by the resistance value, output ratio, or mechanical position of actuating mechanism. When it is specified by the mechanical position of actuating mechanism, the position means the center of effective tap width.		tap location
2504	YŪKŌ TAPPU HABA	The range of sliding distance where the voltage at a moving contact and that at a tap joint is substantially equal when the moving contact passes over the tap joint in one direction.		effective tap width

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
2505	TANRAKU RYŌIKI	The segment of a resistance element where the output ratio remains constant within a specified tolerance during the moving contact moves over the said part.		shorted segment
2506	HANKOTEI GATA KAHEN TEIKŌKI	A variable resistor intended for use in fine adjustment or the like, the amount and frequency of sliding the moving contact is remarkably small as compared with general variable resistor. Remark: Pre-set variable resistors with three terminations are also called "trimmer potentiometer".		pre-set variable resistor
2507	NEJI CHŌSEI GATA POTEN- SHOMĒTA	A potentiometer having a lead-screw as the multiturn actuating mechanism.		lead-screw actuated potentiometer
2508	RENDŌ GATA POTENSHO- MĒTA	A potentiometer assembly having a mechanism which operates more than one potentiometer simultaneously by means of a common spindle.		ganged potentiometer
2509	NIJŪ-JIKU POTENSHO- MĒTA	A potentiometer assembly having a mechanism which operates more than one potentiometer separately by means of concentric spindles.		dual potentiometer
2510	SHAFUTO BŌSUI GATA POTENSHO- MĒTA	A potentiometer which has waterproof structure between the spindle and bearing.		spindle sealed potentiometer
2511	KIMITSU GATA POTENSHO- MĒTA	A potentiometer in which the spindle bearing and the container housing of the potentiometer itself are air-tight.		container sealed potentiometer

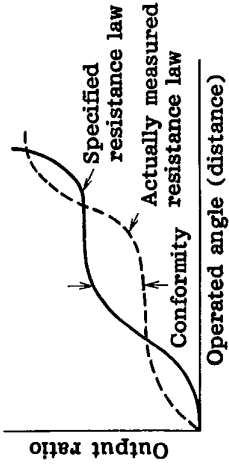
Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
2512	YŪKŌ SŌSA KAITENSŪ [TAKAITEIEN GATA POTEN- SHOMĒTA NO]	The number of turns of actuating mechanism in a multiturn potentiometer necessary to change the output voltage from the minimum value to the maximum value.		effective operating turns
2513	ZEN KIKAI TEKI SŌSA HANI	The amount of operation necessary to slide the moving contact between both end stops. Remarks 1. This amount of operation is expressed in angle for rotary type one, number of turns for multi-turn type and mm for linear operation type. 2. This travel means that two points where declutching device actuates. In a potentiometer of one rotation type without end stops and declutching device, the total mechanical travel is 360 degrees. 3. When expressed in angle, this is also called "total mechanical rotation".		total mechanical travel
2514	ZEN DENKITEKI SŌSA HANI	The operating range in the total mechanical travel, where there is no non-contacting between the resistance element and moving contact. That is the sum of effective electrical travel and ineffective electrical travel. Remarks 1. In a capacitor of such structure that the both ends of this range coincide with positions of end straps or positions at which the declutching device actuates, the total electrical travel is equal to the total mechanical travel. 2. When expressed in angle, this is also called "total electrical rotation".		total electrical travel

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
2515	YŪKŌ DENKITEKI SŌSA HANI	The range of operation in the total electrical travel, where the moving contact slides so that the resistance value or output ratio changes in accordance with the prescribed resistance law. Remarks 1. In some cases, the effective electrical travel is equal to the total electrical travel according to the structure of potentiometer. 2. When expressed in angle, this is also called "angle of effective electrical rotation".		effective electrical travel
2516	MUKŌ KIKATEKI SŌSA HANI	The range of operation as a part of the total mechanical travel, where the continuity between the moving contact and resistance element is not ensured. This is equal to the difference between the total mechanical travel and the total electrical travel. Remark: When expressed in angle, this is also called "angle of ineffective rotation".		ineffective mechanical travel
2517	ZEN TEIKŌ [CHI]	The resistance between terminations connected to both ends of resistance element.		total resistance
2518	YŪKŌ TEIKO[CHI]	The portion of the total resistance over which the resistance changes in the manner prescribed by the declared resistance law.		effective resistance
2519	TANSHI TEIKO[CHI]	The minimum resistance which can be measured between the termination connected to moving contact and other termination.		terminal resistance
2520	ZANRYŪ TEIKO[CHI]	The resistance which can be measured between the termination connected to moving contact and a end termination when the moving contact is positioned to touch the end stop of the said end.		residual resistance

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
2521	SAISHŌ YŪKŌ TEIKŌ[CHI]	The resistance at each end of the effective electrical travel between the termination connected to moving contact and the nearest end termination. Remark: If there is no remarkable difference between the resistances obtained at the position of end strap and at the position where the minimum effective resistance is measured, the residual resistance, terminal resistance and minimum effective resistance become equal.		minimum effective resistance

(2.6) Variable Resistor (Performance)

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
2601	KŌSHŌ ZEN TEIKŌCHI	This means the representative resistance value between both ends of a resistance element given in relevant standard, and is the resistance value marked on a resistor, in general.		rated total resistance, nominal total resistance
2602	SHŪDŌ ZATSUON	The variation in the electrical output that is not included in the input, and resulted from the variation of contact resistance and/or irregularity of resistance on the track when the moving contact is moved.		rotational noise
2603	SESSHOKU ZATSUON	The electrical noise generated due to imperfect contact.		contact noise

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
2604	SHUTSURYOKU HEIKATSU-SEI	The smoothness of output voltage expressed as a percentage of the total applied voltage obtained in such a manner that the variation caused in the electrical output but not present in the input is measured for specified travel increments over the effective electrical travel and converted in percent. Remark: Output smoothness includes effects of contact resistance variation, resolution and other micro-non-linearities in the output.		output smoothness
2605	BUNKAINŌ, SETTEINŌ	The precision when adjusting the resistance value or output ratio of a potentiometer to a given value. Remark: This is also called "adjustability".		resolution, setting ability
2606	DIZĀ	The repeated rotation of control spindle to reproduce the state which frequently appears in a servo system.		dither
2607	ITCHI-SEI	The maximum deviation of the actually measured resistance law from the specified resistance law expressed as a percentage of the total resistance value or total applied voltage. 		conformity
2608	ZETTAI ITCHI-SEI	The conformity between the resistance law actually measured over the theoretical angular range covering the effective electrical travel and the theoretical resistance law.		absolute conformity

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
2609	CHOKUSEN-SEI	The conformity where the resistance law is shown as a straight line.		linearity
2610	ZETTAI CHOKUSEN-SEI	The conformity obtained in such a manner, that the maximum vertical deviation of the actual resistance law from the straight reference line passing the minimum and maximum output ratios at both ends of theoretical angular range covering the effective electrical travel, is measured and expressed in percentage of the total applied voltage. Remark: Unless otherwise specified, the said minimum and maximum output ratios are 0 % and 100 % of total applied voltage, respectively. If the absolute linearity is denoted as C, the resistance law (output ratio law) of the potentiometer is expressed by the following equation: $\frac{V_{ab}}{V_{ac}} = A \left(-\frac{\theta}{\theta_r} \right) + B \pm C$ where V_{ac} : total applied voltage V_{ab} : output voltage θ_r : theoretical value of effective electrical travel A : specified inclination B : specified value at $\theta = 0$ Unless otherwise specified $A = 1$, $B = 0$		absolute linearity
2611	TANSHI-KAN CHOKUSEN-SEI	The conformity obtained in such a manner, that the maximum vertical deviation of the actual resistance law from the straight reference line passing the minimum and maximum output ratios at both ends of effective electrical travel, is measured and expressed in percentage of the total applied voltage.		terminal based linearity

Number	Term	Meaning	Reference	
			Symbol	Corresponding English term
2611 (cont'd)		Remark: If the terminal based linearity is denoted as C, the resistance law (output ratio law) of the potentiometer is expressed by the following equation: $\frac{V_{ab}}{V_{ac}} = A\left(\frac{\theta}{\theta_i}\right) + B \pm C$ where V_{ac}: total applied voltage V_{ab}: output voltage θ_i: measured value of effective electrical travel A: specified inclination B: specified value at $\theta = 0$ Unless otherwise specified $A = 1$ and $B = 0$		
2612	ZERO KITEN CHOKUSEN-SEI	The conformity obtained in such a manner, that the maximum vertical deviation of the actual resistance law from the straight reference line passing the point of the minimum specified output ratio, is measured and expressed in percentage of the total applied voltage. The slope of this straight reference line shall be selected to minimize the said maximum vertical deviation. Remark: Unless otherwise specified, the said minimum specified output ratio is zero. If the zero based linearity is denoted as C, the resistance law (output ratio law) is expressed by the following equation: $\frac{V_{ab}}{V_{ac}} = P\left(\frac{\theta}{\theta_i}\right) + B \pm C$ where V_{ac}: total applied voltage V_{ab}: output voltage θ_i: measured value of effective electrical travel		zero based linearity