

JIS

JAPANESE INDUSTRIAL STANDARD

Glossary of Pulse Techniques

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JAPANESE INDUSTRIAL STANDARD

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Glossary of Pulse Techniques

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(Reaffirmed: 1985)1. Scope

This Japanese Industrial Standard specifies the terms for pulse techniques and their meanings, and also shows the corresponding English terms for information.

2. Classification

The glossary of pulse techniques is classified into the following 8 categories.

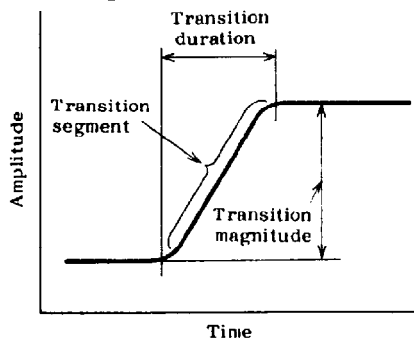
- (1) Introduction
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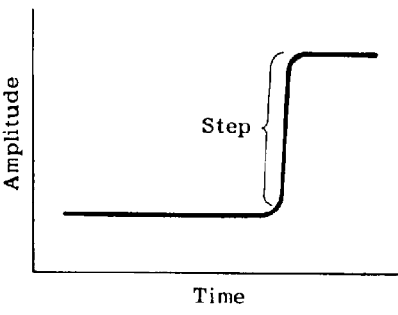
3. Terms of Pulse Techniques

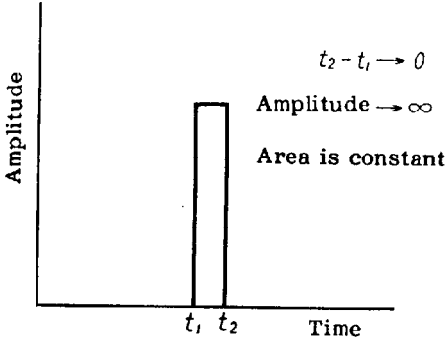
Terms are defined as follows:

Remark: When two or more terms stand side by side, they should be used in the order of precedence.

1. Introduction

No.	Term	Meaning	English equivalent (reference)
1-1	NAMI	The variation of physical quantities as a function of time. Remark: For example, the variation of electromagnetic wave in a wave guide, or of input and output voltage or current in a lumped constant circuit, as a function of time.	wave
1-2	HAKEI	A graphical display of waves. A display of physical quantity as a function of time.	waveform
1-3	KIJUN HAKEI	A relatively simple waveform prescribed in a specification to be used as the reference.	reference waveform
1-4	SEN'I, KATO	Such phenomenon that the amplitude, gradient or higher order derivative changes by a specified value. Unless otherwise specified, this means the amplitude transition.	transition
1-5	SEN'I KUKAN, KATO KUKAN	A segment of waveform where transition of a specified value exists.	transition segment
1-6	SHIMPUKU SEN'I, SHIMPUKU KATO	A change of the instantaneous amplitude from a specified amplitude to another specified amplitude. Unless otherwise specified, the change between the amplitude at a zero derivative point and that at the next zero derivative point.	magnitude transition
1-7	SEN'I SHIMPUKU, KATO SHIMPUKU	Unless otherwise specified, the difference between the amplitude before the transition segment and that after the segment. 	transition amplitude

No.	Term	Meaning	English equivalent (reference)
1-8	SEN'I JIKAN, KATO JIKAN	Unless otherwise specified, the duration of a transition segment.	transition duration
1-9	HASHI	Principal parts of transition.	edge
1-10	STEPPU	A transition fo waveform in which the amplitude changes rapidly from a definite level to another definite level. 	step
1-11	TAN'I STEPPU	An idealized step in which the amplitude changes by a unit value during an infinitesimal time.	unit step
1-12	RAMPU, KEISHA	A waveform which varies (increases or decreases) monotonously. Generally this means a linear ramp.	ramp
1-13	CHOKUSEN RAMPU, CHOKUSEN KEISHA	A ramp with a definite inclination.	linear ramp
1-14	KAIDANHA	A wave in which steps of the same polarity continue at intervals of a definite time.	staircase
1-15	PARUSU	A wave or a waveform in which the amplitude transits from a steady state, stays in a limited duration, and then returns to the original state. Remark: A wave or a waveform in which the principal part of change from a steady level falls within the said limited time, but which requires infinite duration to return to the original state is included, in this category.	pulse

No.	Term	Meaning	Englsh equivalent (reference)
1-16	KORITSU PARUSU	A pulse in which the principal part of change from a steady state is isolated.	isolated pulse
1-17	Imparusu	A pulse in which the variation is steep and the duration is sufficiently short. Remark: An idealized pulse, in which the area is finite and the duration is infinitesimal, is included in this category. 	impulse
1-18	TAN'I IMPARUSU	An idealized impulse with an unit area. Remark: This is named also as δ (delta) or impulse function.	unit impulse
1-19	PARUSU BĒSU, PARUSU KITEI	The front and behind of an isolated pulse, or the steady parts between the pulses of a pulse train.	pulse base
1-20	PARUSU TOPPU, PARUSU CHŌBU	The part of a pulse where the amplitude after transition from a steady state remains.	pulse top
1-21	TACHIAGARI KUKAN, ZEN'EN	A principal transition segment from the pulse base to the pulse top	leading edge, first transition
1-22	TACHISAGARI KUKAN, KŌEN	A principal transition segment from the pulse top to the pulse base.	trailing edge, last transition

No.	Term	Meaning	English equivalent (reference)
1-23	KADO, KONA	A representation of the feature of waveform. A discontinuous point of the inclination or a region of the maximum radius of curvature on the waveform. The corner region is specified by means of a specific time or amplitude, or both as the end point.	corner
1-24	SHIBUN KUKAN, KADORANDO	One segment of one cycle of a pulse waveform, according to a specific time or amplitude or both. The segments are as follows: (a) The 1st quadrant. From the beginning of pulse (or the pulse base center point) to the leading edge mesial point. (b) The 2nd quadrant. From the leading edge mesial point to the pulse top center point. (b) The 3rd quadrant. From the pulse top center point to the trailing edge mesial point. (d) The 4th quadrant. From the trailing edge mesial point to the end of pulse (or the pulse base center point).	quadrant
1-25	PARUSU HABA	The duration of a pulse. Unless otherwise specified, the time from the leading edge mesial point to the trailing edge mesial point.	pulse duration, pulse width, pulse length
1-26	PARUSU KANKAKU	The interval, defined by specified method, between two specified pulses.	pulse separation
1-27	PARUSU KURIKAESHI RITSU	The repetition rate in a pulse train.	pulse repetition rate
1-28	PARUSU KURIKAESHI SHŪHASŪ	The repetition frequency in a pulse train	pulse repetition frequency

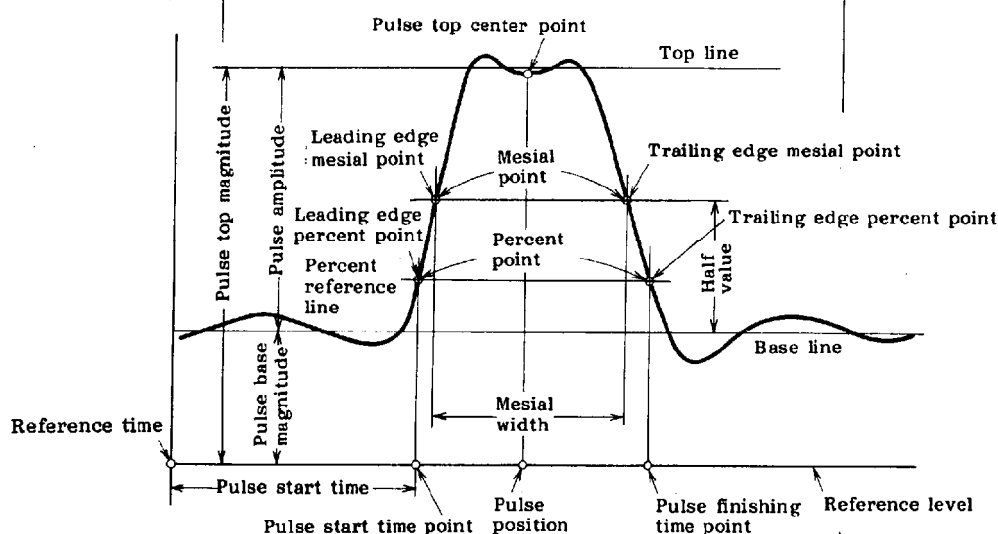
No.	Term	Meaning	English equivalent (reference)
1-29	SAIKURU	The part from the specified beginning to the specified end in a phenomenon (waveform).	cycle
1-30	PARUSU KURI-KAESHI SHŪKI, PARUSU KURI-KAESHI JIKAN	The repetition period in a pulse train.	pulse repetition period
1-31	ISŌ	The relative position of a repeated waveform to the reference one cycle, seen from a position previously specified.	phase
1-32	PARUSU ICHI	A point on the time axis representing the pulse position determined by a specified method. Unless otherwise specified, the pulse position is defined as the instant corresponding to the pulse top center point.	pulse position
1-33	SHIMPUKU	The instantaneous value of physical quantities, and the level and the level difference defined from the instantaneous value. Unless otherwise specified, the level which employs the reference level coinciding with the base line. Remark: This term is used as "instantaneous amplitude", "peak amplitude", "peak to peak amplitude", "mean amplitude", "mean square amplitude", "mean absolute amplitude" with an appropriate quantitative modifier prefixed.	amplitude, magnitude
1-34	KIJUN REBERU	A level as the reference for defining amplitude and various quantities relating to amplitude. Unless otherwise specified, this coincides with the base line.	reference level
1-35	BĒSU RAIN, KITEI SEN	A level equal to the pulse base magnitude. Remark: Also called "Teibusen".	base line
1-36	TOPPU RAIN, CHŌBU SEN	A level equal to the pulse top magnitude.	top line

No.	Term	Meaning	English equivalent (reference)
1-37	PARUSU SHIMPUKU	(In a wide sense) A pulse amplitude defined by the specified method. (In a narrow sense) The difference in magnitude caused by subtracting the pulse base magnitude from the pulse top magnitude, both defined by the common method.	pulse amplitude, pulse magnitude
1-38	PARUSU BĒSU SHIMPUKU, PARUSU KITEI SHIMPUKU	A magnitude of pulse base defined by the specified method. Unless otherwise specified, the pulse base magnitude is determined as zero.	pulse base magnitude
1-39	PARUSU TOPPU SHIMPUKU, PARUSU CHŌBU SHIMPUKU	A magnitude of pulse top defined by the specified method. Unless otherwise specified, this is determined as the mean value of magnitude from the reference level.	pulse top magnitude
1-40	HANCHI, HANCHI SHIMPUKU	The mean value of specific two magnitudes. Unless otherwise specified, these two magnitudes are determined as the pulse top magnitude and the pulse base magnitude.	mesial magnitude
1-41	PĪKU HANCHI, PĪKU HANCHI SHIMPUKU	The mean value of the peak magnitude and the pulse base magnitude. If especially necessary, the positive or negative peak mesial value is specified corresponding to the positive or negative peak magnitude.	peak mesial magnitude
1-42	PĪKU PĪKU HANCHI, PĪKU PĪKU HANCHI SHIMPUKU	The mean value of the positive peak magnitude and the negative peak magnitude.	peak to peak mesial magnitude
1-43	KYOKUSEI	A sign on magnitude.	polarity
1-44	DENRYOKU	The quantity of electrical energy per unit time. Remark: This term is used as "instantaneous power", or "peak power" or "mean power" with an appropriate quantitative modifier prefixed.	power

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2. Reference Terms

No.	Term	Meaning	English equivalent (reference)
2-1	JIKAN CHŪTEN	The center time point of specified two time points or of a time interval.	center time point
2-2	CHŪŌTEN	A point on the waveform at the specified center time point.	center point
2-3	PARUSU CHŪŌTEN	A pulse top center point or a pulse base center point. Both are generally (simply) designated as the pulse center point if no misunderstanding arises.	pulse center point
2-4	PARUSU BĒSU CHŪŌTEN	A point on the pulse base at the center time point of pulse interval defined by the specified method. Unless otherwise specified, this center time point is the center time point of the leading edge mesial point and the trailing edge mesial point.	pulse base center point
2-5	PARUSU TOPPU CHŪŌTEN	A point on the pulse top at the center time point of pulse width defined by the specified method. Unless otherwise specified, this center time point is the center time point of the leading edge mesial point and the trailing edge medial point.	pulse top center point



No.	Term	Meaning	English equivalent (reference)
2-6	PĀSENTO KIJUN SEN	A reference line having the magnitude determined as follows: The magnitude of x percent reference line $\text{PBA} + \frac{x}{100}(\text{PTA} - \text{PBA})$ where PBA: pulse base magnitude PTA: pulse top magnitude	percent reference line
2-7	PĀSENTO TEN	A point on the waveform having the magnitude of x percent reference line.	percent point
2-8	TACHIAGARI PĀSENTO TEN	The percent point in the leading edge.	leading edge percent point, first transition percent point
2-9	TACHISAGARI PĀSENTO TEN	The percent point in the trailing edge.	trailing edge percent point, last transition percent point
2-10	HANCHITEN	A point on the waveform having mesial magnitude.	mesial point
2-11	TACHIAGARI HANCHITEN, TACHIAGARI KUKAN HANCHITEN	The mesial point in the leading edge of a waveform.	leading edge mesial point, first transition mesial point
2-12	TACHI SAGARI HANCHITEN, TACHISAGARI KUKAN HANCHITEN	The mesial point in the trailing edge of a waveform.	trailing edge mesial point, last transition mesial point
2-13	PĪKU HANCHI- TEN	A point on the waveform having the peak mesial magnitude. If especially necessary, the positive mesial point or negative mesial point is specified corresponding to the positive mesial magnitude and the negative mesial magnitude.	peak mesial point