



GENERAL STANDARDS

SHORT FORMS

(ABBREVIATIONS AND SYMBOLS)

1. PURPOSE. This standard establishes short forms for use at TEKTRONIX.
2. REFERENCES. This standard draws from many sources, including standards published by the Institute of Electrical and Electronics Engineers (IEEE), National Bureau of Standards, United States of America Standards Institute (formerly American Standards Association), and the Federal Government including the Department of Defense. Unit symbols (short forms for units) in this standard agree with IEEE Standard No 260 "Standard Symbols for Units" which reflects current practices of the International Organization for Standardization and the International Electrotechnical Commission.
3. USE AND APPLICATION. This standard applies throughout the company. Should any discrepancy exist between a short form given in this standard and that given in any other TEKTRONIX Standard, use the short form given in this standard.
4. ARRANGEMENT. This standard arranges the list of short forms and corresponding terms in two ways: In Part 1, you will find the entries listed alphabetically according to the term; in Part 2, alphabetically according to the short form.
5. DEFINITIONS.
SHORT FORM: Any abbreviation or symbol that may be used in place of a word or group of words.
6. GUIDE TO USING SHORT FORMS.
 - 6.1 GENERAL RULES FOR USE OF SHORT FORMS.
 - 6.1.1 Inclusion in this standard of a short form does not mean that you ought to use this term in preference to the corresponding spelled-out term; particular circumstances of usage and space limitation govern this choice. (A good rule of thumb for determining whether you should use a short form is this: If you have doubt, spell the term out.)
 - 6.1.2 Wherever possible, avoid using short forms with which the reader may be unfamiliar. If space limitations or other considerations require the use of an unfamiliar short form, you should explain this short form as follows:
In text: The first time you use the short form, follow it in parentheses with the spelled-out term it abbreviates. After that, use only the short form.
In tables: Include explanatory notes or keys.

Short Forms

(Abbreviations and Symbols)



6.2 CAPITALIZING SHORT FORMS.

6.2.1 Capitalizing Short Forms For Terms Identified By An Asterisk.

In front of certain terms you'll note an asterisk (*). When you write the short form for a term so identified, maintain the distinction between upper- and lower-case letters. For example, always write the short form for megahertz as "MHz," never as "MHZ," nor as "mhz."

6.2.2 Capitalizing All Other Short Forms. Generally, you should also write all other short forms (those for terms not marked with an asterisk) as they appear in this standard. On drawings however, capitalize all but asterisked-term short forms. In headings, titles, and front panels, you may write these other short forms to agree with surrounding type. That is, if all other front-panel entries are in upper-case type (capital letters), you may write these non-asterisked-term short forms, too, in upper case.

6.3 SUBSCRIPTS AND SUPERSSCRIPTS. Always observe indicated placement of subscripts and superscripts.

6.4 FORMING PLURALS OF SHORT FORMS. Use the same form to indicate both singular and plural.

6.5 PUNCTUATING SHORT FORMS. Do not include a period as part of any short form.

6.6 COMBINING SHORT FORMS. When you form a combined unit symbol through multiplication of one unit by another, separate the symbols for each of the units by a raised dot (Example: "ft·lbf," the short form for "foot pound-force"). For combined short forms other than unit symbols, unless the combined short form might otherwise confuse the reader use no separating mark or space.

7. OBTAINING SHORT FORMS NOT LISTED IN THIS STANDARD. While reasonably complete, this list doesn't include all short forms that TEKTRONIX communication might call for. If you don't find a term for which you seek the short form, get in touch with Chuck Samuel, Chairman of the Abbreviations Subcommittee of the Technical Terminology Committee. The subcommittee will establish for you an appropriate short form.

Short Forms

(Abbreviations and Symbols)



Part 2

SHORT FORM TO TERM

A

A	*ampere
a	*atto
abs	absolute
AC	alternating current
acc	accessory
act	actual
actr	actuator
ADCI	American Diecasting Institute
addl	additional
adh	adhesive
adj	adjust
adpt	adapter
AF	audio frequency
AFC	automatic-frequency control
Ag	*silver (argentum)
AGC	automatic-gain control
Ah	*ampere-hour
Al	*aluminum
align	alignment
allow	allowance
alt	alternate
alt	altitude
aly	alloy
AM	amplitude modulation
amb	ambient
ampl	amplifier
ampl	amplitude
amt	amount
anl	anneal

*See page 2, paragraph 6.2.1

ANL	automatic-noise limiter
anod	anodize
ant	antenna
AOQL	average outgoing quality level
APC	automatic-phase control
appd	approved
appl	application
approx	approximate
AQL	acceptable quality level
As	*arsenic
ASA	American Standards Association
assem	assemble
asst	assistant
assy	assembly
astig	astigmatism
ASTM	American Society for Testing and Materials
At	*ampere-turn
atch	attach, attachment
atm	atmosphere
atten	attenuation, attenuator
attn	attention
Au	*gold (aurum)
auto	automatic
aux	auxiliary
AVC	automatic-volume control
avg	average
AWG	American wire gage



B

b	base
B	*bel
B	susceptance
B&SG	Brown and Sharpe gage
baf	baffle
bal	balance
ban	banana
bat	battery
bb1	barrel
BC	bolt circle
bd	board
bd1	bundle
BDN	bend down
Be'	*Baume'
be	*beryllium
BF	beat frequency
BFO	beat-frequency oscillator
BH	Brinell hardness
bhd	bulkhead
BHN	Brinell-hardness number
bind	binding
bk	book
bkt	bracket
BL	bill of lading
blk	black
blk	block
blo	blower
blu	blue
BM	bill of material
BO	blocking oscillator
bot	bottom
brdg	bridge

brg	bearing
brk	break
brn	brown
bro	broach
brs	brass
brt	bright, brightness
brz	bronze
brzg	brazing
bsc	basic
btl	bottle
Btu	*British thermal unit
BUP	bend up
bush	bushing
bw	bandwidth

*See page 2, paragraph 6.2.1



C

C	*carbon	chgr	charger
c	*centi	chk	check
C	*coulomb	chop	chopping
©	copyright	cir	circle
cab	cabinet	circ	circumference
cal	calibrate, calibration, calibrator	ckt	circuit, circuitry
camr	camera	CL	centerline
cap	capacitor	Cl	*chlorine
carry	carrying	cl	class
cat	catalog	cl	clearance
cbl	cable	clos	closure
cbn	carbon (paper or ribbon only)	clr	clear
cbore	counterbore	cm	*centimeter
C-C	center to center	cm ²	*square centimeter
ccw	counterclockwise	cm ³	*cubic centimeter
Cd	*cadmium	cmil	*circular mil
cd	*candella	c/min	*cycle per minute
cdrill	counterdrill	CMR	common-mode rejection
CEMF	counter electromotive force	CMRR	common-mode rejection ratio
cer	ceramic	cm/s	*centimeter per second
cert	certificate	Co	*cobalt
CF	cathode follower	co	company
CG	center of gravity	co	cutoff
CH	case harden	coax	coaxial
ch	channel	coef	coefficient
cham	chamfer	col	column
chas	chassis	coll	collector
chg	change	com	common
		coml	commercial
		comp	compensate

*See page 2, paragraph 6.2.1



comp	composite	CS	Customer Service
comp	composition	csk	countersink
comp	compound	cstg	casting
compt	compartment	CT	center tap
conc	concentric	ctg	cartridge
cond	conductor	ctn	carton
conn	connector	ctr	center
const	constant	ctr	contour
cont	contact	ctr	counter
cont	continue	Cu	*copper
conv	conversion, converter	cur	current
coord	coordinate	cw	clockwise
cor	corner	CW	continuous wave
corp	corporation	cyl	cylinder
cov	cover		
CP	circular pitch		
cpl	couple		
cplg	coupling		
cpunch	counterpunch		
cpy	copy		
Cr	*chromium		
CR	cold rolled		
CRE	corrosion resistant		
CRES	corrosion-resistant steel		
crit	critical		
CRO	cathode-ray oscilloscope		
CRS	cold-rolled steel		
CRT	cathode-ray tube		
c/s	*cycle per second		

*See page 2, paragraph 6.2.1

Abbreviations and Symbols



D

d	*deci
d	depth
D factor	dissipation factor
da	*deka
DAVC	delayed automatic volume control
dB	*decibel
dbl	double
dbl r	doubler
dBm	*decibel referred to 1 milliwatt
dBrn	*decibel above reference noise
dBV	*decibel referred to 1 volt
dBW	*decibel referred to 1 watt
DC	Design Completion
DC	direct current
dcpl	decouple
DCVB	direct-current voltage bridge
DCVW	direct-current working volts
DD	deep drawn
dec	decimal
decr	decrease
defl	deflect
deg	*degree (temperature interval or difference)
dept	department
descr	description
det	detail
det	detector

dev	deviation
DF	deflection factor
dia	diameter
diag	diagonal
diag	diagram
diel	dielectric
diff	differential
dim	dimension
dis	display
disc	disconnect
disch	discharge
discr	discriminator
distr	distribute, distribution
div	division
DL	delay line
dly	delay
dn	down
dp	deep
DP	deflection plate
DP	diametral pitch
DP	double pole
dr	door
dr	drawn
dr	drill
DSB	double sideband
dsgn	design
DT	double throw
dup	duplicate
dwg	drawing
dyn	dynamic

*See page 2, paragraph 6.2.1



E

E	potential difference		
<i>E</i>	electromotive force	equip	equipment
ea	each	equiv	equivalent
ecc	eccentric	ER	Engineering Release
ECO	electron-coupled oscillator	est	estimate
ECO	Engineering Change Order	eV	*electron volt
EDM	Engineering Design Manual	ex	example
EF	emitter follower	exp	expansion
eff	effective	ext	extension
eff	efficiency	ext	external
EHF	extremely high frequency	extr	extrusion
EIA	Electronic Industries Association		
EIS	Engineering Instrument Specification		
elec	electric		
elect	electrolytic		
elev	elevate		
elim	eliminate		
elong	elongation		
EMC	electromagnetic compatibility		
EMF	electromotive force		
EMI	electromagnetic interference		
emis	emission		
emit	emitter		
encl	enclose		
engr	engineer		
env	envelope		
E0	Engineering Order		
eq	equal, equalizer		
eq	equation		

*See page 2, paragraph 6.2.1



F

F	*farad		
f	*femto	FOB	free on board
F	*fluorine	fr	frame
F	force	fr	front
F&I	focus and intensity	freq	frequency
fab	fabricate	FS	full scale
FAO	finish all over	FSN	Federal Stock Number
fc	*foot candle	ft	*foot
FC	free cutting	ft ²	*square foot
FCP	Factory Calibration Procedure	ft ³	*cubic foot
fe	female	ft ³ /min	*cubic foot per minute
FE	field effect	ft ³ /s	*cubic foot per second
FE	*iron (ferrum)	ftg	fitting
FED	field-effect diode	FTL	Factory Test Limit
Fed Spec	Federal Specification	ft·lbf	*foot pound-force
FET	field-effect transistor	funct	function
FH	flat head (screw)	fwd	forward
fig	figure	fxd	fixed
fil	filament		
fil	fillet		
fil	filter		
FilH	fillister head (screw)		
fin	finish		
FIR	full indicator reading		
fix	fixture		
fL	*foot lambert		
fld	field		
flex	flexible		
flg	flange		
fltg	floating		
FM	frequency modulation		
fmly	family		

*See page 2, paragraph 6.2.1

Abbreviations and Symbols



H

G

G	conductance
G	*gauss
G	*giga
g	*gram
g	*gravity unit
g	grid
GΩ	*gigohm
ga	gage
Ga	*gallium
gal	*gallon
galv	galvanometer
gator	alligator
Gb	*gilbert
Gc/s	gigacycle per second
Ge	*germanium
gen	general
gen	generator
GHz	*gigahertz
gl	glaze
g _m	transconductance
GMV	guaranteed minimum value
gnd	ground
govt	government
gr	grade
gr	grain
grad	graduation
grat	graticule
grn	green
grom	grommet
grv	groove
gy	gray

h	*hecto
h	height
H	*henry
h	high
h	*hour
H	*hydrogen
har	harmonic
hbk	handbook
HCL	horizontal centerline
HD	hard drawn
hd	head
hd	hood
hdl	handle
hdw	hardware
hex	hexagon
HF	high frequency
HFO	high-frequency oscillator
Hg	*mercury (hydrargyrum)
HH	hexagon head (screw)
hi pot	high potential
hist	history
hldr	holder
horiz	horizontal
HP	high pass
hp	*horsepower
HR	hot rolled
hrn	harness
HRS	hot-rolled steel
hsg	housing
htr	heater
ht tr	heat treat
HV	high voltage
Hz	*hertz

*See page 2, paragraph 6.2.1



I *current (in amperes)
 IC integrated circuit
 ID inside diameter
 ident identification
 IEEE Institute of Electrical and Electronics Engineers
 IF intermediate frequency
 IGFET insulated-gate field-effect transistor
 illum illuminate
 illus illustration
 IML inside moldline
 in *inch
 in input
 in² *square inch
 in³ *cubic inch
 inc include
 inc incorporated
 inc incandescent
 incr increase
 incr increment
 ind indicate, indicator
 ind industrial
 inf infinite
 info information
 in-ozf *inch ounce-force
 ins insulated
 insp inspect
 inst instantaneous
 inst instructions
 instr instrument
 int interior

int internal
 intchg interchangeable
 intconn interconnecting
 inten intensity
 intfr interference
 intl international
 intmed intermediate
 intmt intermittent
 inv inverse, invert, inverter
 IR inside radius
 IR insulation resistance
 Ir *iridium
 irreg irregular
 Ixfmr current transformer

J

J *joule
 jct junction
 JIMS Joint Industry-Military Standard
 jkt jacket

*See page 2, paragraph 6.2.1



K

k	*kilo
K	*potassium (kalium)
kΩ	*kilohm
kc/s	*kilocycle per second
keV	*kiloelectronvolt
kg	*kilogram
kHz	*kilohertz
kV	*kilovolt
kVA	*kilovoltampere
kW	*kilowatt

L

L	inductance
L	*lambert
l	left
l	length
l	*liter
lab	laboratory
lam	laminate, lamination
lag	lacquer
lat	lateral
lb	pound

lbf·ft	*pound-force foot
lbf/in ²	*pound-force per square inch
LC	inductance-capacitance
LCR	inductance-capacitance-resistance
lev	lever
LF	left front
LF	low frequency
lg	large
lg	long
LH	left hand
lim	limit
lin	linear
lm	*lumen
lm/cm ²	*lumen per square centimeter
lm/ft ²	*lumen per square foot
lm/m ²	*lumen per square meter
ln	line
ln	logarithm, natural
LO	local oscillator
LOA	length overall
loc	locate
log	logarithm
lokwash	lockwasher
LP	low pass
LR	left rear
LS	limit switch
lt	light
LTPD	lot tolerance percent defective
ltr	letter
lub	lubricate
LV	low voltage

*See page 2, paragraph 6.2.1



lwr

lower

lx

*lux

M

M

*mega

m

*meter (unit of length)

m

*milli

m³

*cubic meter

mμ

milli micro (use Ω)

MΩ

*megohm

ma

male

mA

*milliampere

mach

machine

mag

magnet, magnetic

mag

magnifier

mag reg

magnifier registration

maint

maintenance

man

manual

mas

master

mat

material

max

maximum

MC

multiple contact

Mc/s

megacycle per second

MCW

modulated continuous wave

mdl

model

meas

measurement

mech

mechanical

med

median

med

medium

mem

memory

memo

memorandum

MeV

*megaelectronvolt

MF

medium frequency

mfg

manufacturing

mfr

manufacturer

Mg

*magnesium

mg

*milligram

mH

*millihenry

MHF

medium-high frequency

MHz

*megahertz

mid

middle

midr

midrange

mil

military

Mil Spec

Military Specification

Mil Std

Military Standard

min

minimum

min

*minute (time)

misc

miscellaneous

mk

mark, marker

ML

molde

mldg

molding

mm

*millimeter

mm³

*cubic millimeter

*See page 2, paragraph 6.2.1



N

MMC maximum material condition
 mn main
 Mn *manganese
 MO master oscillator
 Mo *molybdenum
 mo month
 mod modification, modify
 ms *millisecond
 mS *millisiemens
 mt mount, mounting
 MTBF mean time between failures
 mtr motor
 MTTF mean time to failure
 mult multiple
 multi multivibrator
 MV *megavolt
 mV *millivolt
 MW *megawatt
 mW *milliwatt
 Mx *maxwell

n *nano
 N *newton
 N *nitrogen
 nA *nanoampere
 NA not applicable
 Na *sodium (natrium)
 nat natural
 natl national
 NB narrow band
 NBS National Bureau of Standards
 NC National Coarse (thread) |
 NC no connection
 NC normally closed
 Ne *neon
 NEF National Extra Fine (thread) |
 neg negative
 NEMA National Electrical Manu-
 facturers Association
 neut neutral, neutralization
 NF National Fine (thread) |
 Ni *nickel
 NO normally open
 no number
 nom nominal
 nonprod not in production |
 norm normal
 Np *neper
 ns *nanosecond
 NS National Special (thread) |
 nV *nanovolt
 nW *nanowatt

*See page 2, paragraph 6.2.1



O

0	*oxygen
oa	overall
obs	obsolete
OC	on center
OD	outside diameter
Oe	*oersted
OH	opposite hand
OH	oval head (screw)
OML	outside moldline
op	operate, operating
op amp	operational amplifier
open	open circuit
opp	opposite
OR	outside radius
orient	orientation
orig	origin
orn	orange
osc	oscillator
otr	outer
out	output
oz	*ounce
ozf·in	*ounce-force inch

P

p	page
P	permeance
P	*phosphorus
p	*pico
p	pitch
p	plate (electron tube)
p	pressure
P	power (in watts)
pA	*picoampere
PAM	pulse-amplitude modulation
para	paragraph
par	parallel
pat	patent
Pb	*lead (plumbum)
pc	piece
pd	pad
Pd	*palladium
PD	pitch diameter
PDR	Production Drawing Release
perf	perforate
perm	permanent
perp	perpendicular
pF	*picofarad
PF	power factor
PH	pan head (screw)
phen	phenolic
photo	photograph
PI	plug-in
PIV	peak inverse voltage
pkg	package

*See page 2, paragraph 6.2.1

Abbreviations and Symbols



PL	parting line
PL	parts list
pl	plate, plating
PLO	phase-locked oscillator
plstc	plastic
plt	pilot
P/M	*parts per million
PM	phase modulation
PN	part number
pnl	panel
po	pickoff
PO	purchase order
porc	porcelain
pos	position
pos	positive
pot	potentiometer
P-P	peak to peak
pr	pair
PR	Prototype Release
PRB	Product Reference Book
preamp	preamplifier
prec	precision
prefab	prefabricated
prelim	preliminary
prem	premium
prep	prepare
prev	previous
PRF	pulse-repetition frequency
pri	primary
prin	principle
prod	product
proj	projected
PRR	pulse-repetition rate

ps	*picosecond
PS	power supply
p/s	pulse per second
psve	passive
Pt	*platinum
pt	point
PTM	pulse-time modulation
pub	publication
purch	purchase
PVR	Product Verification Release
pW	*picowatt
PW	pulse width
pwr	power

Q

Q	charge (in coulombs)	I
Q	figure of merit	
Q	quality factor	
QA	quality assurance	
QC	quality control	
qty	quantity	
quad	quadrant	

*See page 2, paragraph 6.2.1



R

R	rackmount	req	require
r	radius	req	requisition
R	resistance	res	resistor
r	right	resp	response
R	reluctance (in ampere/ weber)	ret	retainer, retaining
®	registered (trademark)	ret	return
Ra	*radium	retr	retrace
rad	radian	rev	reverse
RC	resistance-capacitance	rev	revise, revision
RD	root diameter	RF	radio frequency
rd	round	RF	right front
rec	receipt	RFE	request for expenditure
rec	recorder	RFI	radio-frequency interference
recal	recalibration	RFS	regardless of feature size
recd	received	RH	relative humidity
recp	receptacle	Rh	*rhodium
rect	rectangle	RH	right hand
red	reduce	RH	round head (screw)
redsgn	redesign	RHN	Rockwell-hardness number
redr	redrawn	RHS	Rockwell-hardness scale
ref	refer, reference	riv	rivet
reg	regular	RL	resistance-inductance
reg	regulate, regulator	rly	relay
reinf	reinforce	r/min	*revolution per minute
rej	reject	rm	ream
rel	release	RMS	root mean square
rel	reliability	rot	rotator
rem	remove	rot	rotor
rep	repair	RR	right rear
rep	representative	R&D	Research and Development
repl	replace	r/s	revolution per second
repro	reproduce		

*See page 2, paragraph 6.2.1



S

s	*second (time)	Si	*silicon
S	*siemens	sig	signal
S	*sulfur	sil	silver (color)
SA	spectrum analyzer	sim	similar
SAC	standard amplitude calibrator	sk	sink
SCD	semiconductor device	sked	schedule
schem	schematic	sl	slope
scope	oscilloscope	slv	sleeve
scr	screw	sm	small
SCR	silicon-controlled rectifier	SM	Standards Manual
sd bl	sandblast	smls	seamless
Se	*selenium	sml	sample
sec	secondary	SN	serial number
sect	section	S/N	signal-to-noise ratio
seg	segment	Sn	*tin (stannum)
sel	select, selector	S0	shop order
sens	sensitivity	soc	socket
sep	separate	sol	solenoid
seq	sequence	SP	single pole
ser	serial	sp	specific
ser	series	spec	specification
set	setting	spg	spring
SF	spot face	sp gr	specific gravity
sh	sheet	spher	spherical
SH	socket head (screw)	spl	special
SHF	super-high frequency	spr	spacer
shld	shield	spt	support
shld	shoulder	sq	square
short	short circuit	sr	*steradian (solid angle)
shpg	shipping	SS	set screw
shtr	shutter		

*See page 2, paragraph 6.2.1



T

SSB single sideband
 SST stainless steel
 ST single throw
 stab stability, stabilize
 STALO stabilized local oscillator
 std standard, standardization
 stl steel
 stor storage
 str straight
 sub substitute
 subj subject
 sum summary
 sup supply
 suppl supplement
 sw switch
 swp sweep
 SWR standing-wave ratio
 sym symbol
 sym symmetry, symmetrical
 sync synchronize
 sys system

T temperature
 T *tera
 T *tesla
 t time
 Ta *tantalum
 tab tabulate
 tap tapping
 TB time base
 TC temperature characteristic
 T_c temperature coefficient
 TC time constant
 TD tunnel diode
 TDR time-domain reflectometry
 TDR tooling drawing release
 TE transverse electric
 tech technical
 telcon telephone conversation
 TEM transverse electromagnetic
 temp temper
 temp template
 temp temporary
 tent tentative
 term terminal
 term termination
 term bd terminal board
 test tester
 t_f fall time
 tgl toggle
 tgt target
 thd thread
 therm thermal
 thk thick

*See page 2, paragraph 6.2.1



U

Ti	*titanium
t/in	teeth per inch
t/in	threads per inch
TIR	total indicator reading
tmg	timing
tmr	timer
tol	tolerance
t _p	pulse duration
TPTG	tuned-plate tuned-grid
t _r	risetime
transv	transverse
TRF	tuned radio frequency
triax	triaxial
trig	trigger
t _s	storage time
TU	test unit
tunl	tunnel
TV	television
TWT	traveling-wave tube
typ	typical

UHF	ultra-high frequency
U-joint	universal joint
ult	ultimate
unav	unavailable
unblk	unblanking
UNC	Unified coarse (thread)
UNEF	Unified Extra Fine (thread)
UNF	Unified Fine (thread)
unfin	unfinished
unmk	unmarked
unreg	unregulated
UNS	Unified special (thread)
UOS	unless otherwise specified
up	upper
updt	update
USASI	*United States of America Standards Institute

*See page 2, paragraph 6.2.1



V

V	*volt, voltage
VA	vertical amplifier
VA	*voltampere
VAC	alternating current volts
vac	vacuum
var	*var (volt-ampere, reactive)
var	variable
V _C	comparison voltage
V _C	voltage coefficient
VCL	vertical centerline
VDC	direct current volts
VDF	video frequency
V/div	volts per division
ver	vernier
vert	vertical
VFO	variable-frequency oscillator
VH	Vickers hardness
VHF	very-high frequency
vid	video
view	viewing
vio	violet
VIT	vertical-interval testing
VLF	very-low frequency
vol	volume
VOM	volt-ohm-milliammeter
VR	voltage regulator
VSWR	voltage standing-wave ratio
VTVM	vacuum-tube voltmeter

W

W	*tungsten (wolframium)
W	*watt
w	wide, width
w	with
WB	wide band
wb	*weber
wg	waveguide
Wh	*watthour
wht	white
wk	week
wo	without
wrd	wired
wrnkl	wrinkle
wt	weight
wv	wave
ww	wirewound

*See page 2, paragraph 6.2.1



X

x
 X_C
 xfmr
 X_L
 xsect
 xstr
 xtal
 xtal osc

by (used between dimensions)
 capacitive reactance
 transformer
 inductive reactance
 cross section
 transistor
 crystal
 crystal oscillator

Z

Z
 Z_n
 Z_0

impedance
 *zinc
 characteristic impedance |

Y

Y
 yd
 yd^3
 yel
 yr

admittance (in mhos)
 *yard
 *cubic yard
 yellow
 year

*See page 2, paragraph 6.2.1



1/4H	quarter hard		
1/2H	half hard	μ	permeability (absolute)
3P	triple pole	μ_r	permeability (relative)
3T	triple throw	ϕ	phase
4P	four pole	+ & -	plus and minus
ϵ	and		(see page 16)
\AA	*angstrom	\pm	plus or minus
ω	angular velocity		(see page 16)
$^{\circ}\text{C}$	*degree Celsius (centigrade)	ρ	reflection coefficient
$^{\circ}\text{F}$	*degree Fahrenheit	ρ	resistivity
$^{\circ}\text{K}$	*degree Kelvin (absolute)	$>$	greater than
ϵ	permittivity (absolute)	\geq	equal to or greater than
ϵ_r	permittivity (relative)	$<$	less than
\approx or \cong	approximately equal to	\leq	equal to or less than
$=$	equal to		
∞	infinity		
μ	*micro		
$\mu\mu$	micro micro (use ρ)		
μA	*microampere		
μF	*microfarad		
μH	*microhenry		
μin	*microinch		
μmho	*micromho		
μs	*microsecond		
μS	*microsiemens		
μV	*microvolt		
μW	*microwatt		
Ω	*ohm		
/	per		
%	percent		
\dots°	*degree (plane angle)		
\dots'	*minute (plane angle)		
\dots''	*second (plane angle)		

*See page 2, paragraph 6.2.1

Abbreviations and Symbols