

UTE

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CECC 90 101-012

EDITION 1 - Novembre 1987
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Page 0

Nombre total de pages : 16
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COMPOSANTS ELECTRONIQUES SOUS ASSURANCE
DE QUALITE CONFORMEMENT A :
*ELECTRONIC COMPONENTS OF ASSESSED QUALITY
IN ACCORDANCE WITH :*

GS : CECC 90 000 (NF C 86-020)

SS : CECC 90 100 (NF C 86-200)

FS : CECC 90 101 (NF C 86-213)

UTE C 86-213/B 32

Adoptée le 16 novembre 1987

BS9401 F312 to F324

Issue 1

March, 1978

DESSIN ET DIMENSIONS :
OUTLINE AND DIMENSIONS :

CEI 191-2 - Types 050 G 04 - 050 G 03
IEC 191-2 - Types 050 G 04 - 050 G 03

Référence française : F 105 - F 105A
French reference :

IDENTIFICATION DES CONNEXIONS
TERMINAL CONNECTIONS

Voir Tableau II
See Table II

SPECIFICATION PARTICULIERE POUR
MICROSTRUCTURES LOGIQUES SELON FS 90 101
DETAIL SPECIFICATION FOR DIGITAL INTEGRATED CIRCUITS IN ACCORDANCE WITH FS 90 101

54/64/74 17

CIRCUIT ET DE PUISSANCE A SORTIES
COLLECTEUR OUVERT HAUTE TENSION

*HEX BUFFERS/DRIVERS WITH OPEN
COLLECTOR HIGH VOLTAGE OUTPUTS*

TECHNOLOGIE DE FABRICATION :
TYPICAL CONSTRUCTION :

Circuit monolithique bipolaire au silicium, boîtiers
avec ou sans cavité.

*Silicon monolithic bipolar integrated circuit,
cavity/non-cavity packages.*

NIVEAUX D'ASSURANCE DE QUALITE : P, Y, L
ASSESSMENT LEVELS :

AMENDMENTS TO THE FOLLOWING CLAUSES

§ 2 - Add :

Most negative low level input voltage at an input current : $I_{IKB} = -12 \text{ mA}$, $V_{IKB} = -1,5 \text{ V}$

§ 3 To be replaced by CECC 90 000/3 § 2.5

§ 4 To be deleted

§ 5 To be replaced by CECC 90 000/3 § 2.6

§ 6 To be replaced by CECC 90 000/3 § 4.10.1

§ 7 All inspection level and AQL are those specified in 90 100/3.

Replace A3b by A4a, A3c by A4b, A4 by A5.

Add A8 of 90 100/3 (Assessment level P only).

Apply to A2 extreme temperature testing with A7a/A7b 90 000 inspection requirements.

For groups B, C, D, apply 90 100/3.

Sub-groups A6, A7 : not applicable.

Se reporter à la Liste des Produits Homologués CECC 00 200 en vigueur pour connaître les fabricants dont les composants conformes à cette spécification particulière sont homologués.

Information about manufacturers who have components qualified to this detail specification is available in the current CECC 00 200 : Qualified Products List.

**Documents**

Document Sharing Hub

BRITISH STANDARDS INSTITUTION

2, PARK STREET, LONDON, W1A 2BS

BS 9401 F312 to F324

ISSUE 1

MARCH, 1978

Specification available from: As shown in PD 9002

and

TEXAS INSTRUMENTS LIMITED
MANTON LANE,
BEDFORD.

Page 1 of 15 pages

ELECTRONIC COMPONENTS OF ASSESSED QUALITY
DETAIL SPECIFICATION IN ACCORDANCE WITH

BS 9400 Issue 2

MANUFACTURER'S TYPE NUMBER

5417

6417

7417

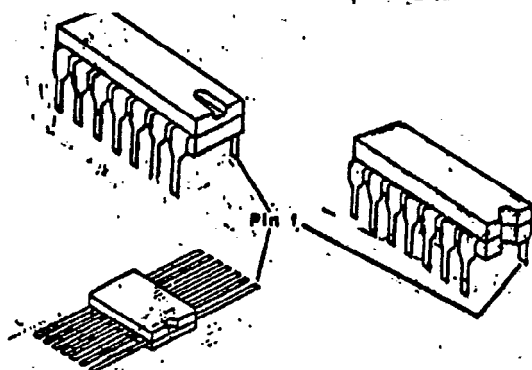
See PD 9002

For ordering information

see Clause 3

SILICON MONOLITHIC TTL-NEX
BUFFERS/DRIVERS WITH OPEN-
COLLECTOR HIGH-VOLTAGE
OUTPUTSCERAMIC/GLASS HERMETICALLY
SEALED ENCAPSULATION OR
DUAL-IN-LINE PLASTIC
ENCAPSULATION

Outlines not to scale. Isometric projection.



For details of dimensions:

14 Lead Flat Pack - see Appendix 1

14 Lead Dual in-line - BS 3934 SO-87B

Marking Information:

see Clause 3

FULL ASSESSMENT LEVEL AND
APPLICATION CATEGORIES
S1, S2, S3 and S4

1. Limiting Conditions of Use (not for inspection purposes)

Absolute values (non-simultaneous)

V_{CC}	Maximum continuous positive supply voltage	7.0	V
	Maximum continuous negative supply voltage	0.5	V
	Maximum continuous positive input voltage	5.5	V
	Maximum continuous positive output voltage	15.0	V
	Maximum continuous negative input voltage	0.5	V
$-I_{IL}$	Maximum input current	1.6	mA
	Maximum reverse input current	1.0	mA
T_{amb}	Ambient operating temperature range	5417	-55 to +125 °C
		6417	-40 to + 85 °C
		7417	0 to + 70 °C
T_{stg}	Storage temperature range		-65 to +150 °C
	Shock (0.5 ms duration)		14 700 m/s ²
	Vibration		196 m/s ²

Refer to Qualified Products List PD 9002 for details of manufacturers
approved to this specification.

BS 9401 F312 to F324
ISSUE I
MARCH, 1978

2. Recommended Conditions of Use and Associated Characteristics (not for inspection purposes)

These characteristics apply over the ambient operating temperature range unless otherwise stated.

		Min.	Max.	Unit.
V_{CC}	Positive supply voltage 5417	4.5	5.5	V
	6417 & 7417	4.75	5.25	V
V_{IH}	HIGH state input voltage 5417	2.0	5.5	V
	6417 & 7417	2.0	5.25	V
I_{CCH}	Total supply current per package at V_{CC} max. value with HIGH state outputs.	-	41.0	mA
I_{CCL}	Total supply current per package at V_{CC} max. value with LOW state outputs	-	30.0	mA
V_{OH}	HIGH state output voltage	2.4	15.0	V
V_{IL}	LOW state input voltage	0	0.8	V
V_{OL}	LOW state output voltage	-	0.7	V
$I_{IH(1)}$	HIGH state input current at $V_{IN} = V_{IH}$ maximum value	-	1.0	mA
$I_{IH(2)}$	HIGH state input current at $V_{IN} = V_{OH}$ minimum value	-	40.0	μ A
$-I_{IL}$	LOW state input current at $V_{IN} = V_{OL}$ maximum value	-	1.6	mA
I_{OL}	LOW state output current 5417	-	30.0	mA
	6417 & 7417	-	40.0	mA
$-I_{OHX}$	HIGH state output current	-	250.0	μ A

Switching Characteristics

$V_{CC} = 5.0$ V, $T_{amb} = 25$ °C, $C_L = 15$ pF, $R_L = 110$ Ω

t_{PHL}	HIGH to LOW state propagation time	-	30.0	ns
t_{PLH}	LOW to HIGH state propagation time	-	10.0	ns

BS 9401 F312 to F324
ISSUE I
MARCH, 1978

Table I

Function Table (each gate)

INPUT	OUTPUT
A	Y
L	L
H	H

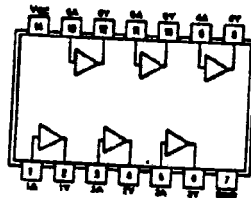
H = HIGH state

L = LOW state

Boolean Equation - $Y = A$

Table II

Logic Connections



BS 9001 F312 to F324

ISSUE 1

MARCH, 1978

3. MARKING.**3.1** Each integrated circuit shall bear the following markings:

- (a) Terminal identification.
- (b) The manufacturer's type number.
- (c) The factory identification code, or manufacturer's trade mark.
- (d) The date code.

3.2 Each package containing one or more of these circuits shall bear the markings (b), (c) and (d) above and in addition:

- (e) The B.S. detail specification number.

4. RELATED DOCUMENTS.

BS 2011 Basic environmental testing procedures.

BS 3934 Dimensions of semiconductor devices.

BS 6001 Sampling procedures and tables for inspection by attributes.

BS 9000 General requirements for electronic components of assessed quality.

BS 9400 Integrated electronic circuits of assessed quality: Generic data and methods of test.

PD 9002 Qualified Products List for electronic components of assessed quality.

5. ORDERING INFORMATION.

Orders for these integrated circuits shall contain the following minimum information:

Manufacturer's integrated circuit type and package identification
as detailed in PD 9002 to BS 9401 F..... as defined below -

TYPE		APPLICATION CATEGORY				FULL ASSESSMENT LEVEL
		S1	S2	S3	S4	
CERAMIC Dual-in-line and Flatpack	5417	F312	F313	F314	F315	F316
	6417	*	F317	F318	F319	F320
	7417	*	F321	F322	F323	F324
PLASTIC Dual-in-line	5417	*	*	*	*	F316
	6417	*	*	*	*	F320
	7417	*	*	*	*	F324

Note: * Not available at present.