CPS-FC209

SHEET INDEX

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SYMBOL

CIRCUIT PACK DRIVER
ELEMENT IDENT

TERM. MOD.	FUNCT	TERM.	LOC
I00	I	203	2A2
I01	I	303	2A3
I02	I	204	2A4
I03	I	304	2A4
I04	I	205	2A5
I05	I	305	2A5
I06	I	206	2A6
I07	I	306	2A6
I08	I	207	2A7
I09	I	307	2A7
I10	I	311	2A8
I11	I	211	2A8
I12	I	212	2A9
I13	I	312	2A9
I14	I	213	2A8
I15	I	313	2A8
I16	I	214	2A7
I17	I	314	2A7
I18	I	215	2A6
I19	I	315	2A6
I20	I	208	2A2
I21	I	308	2A3
I22	I	209	2A4
Ø00	Ø	003	2E3
Ø01	Ø	103	2E3
Ø02	Ø	004	2E4
Ø03	Ø	104	2E4
Ø04	Ø	005	2E5
Ø05	Ø	105	2E5
Ø06	Ø	006	2E6
Ø07	Ø	106	2E6
Ø08	Ø	007	2E7
Ø09	Ø	107	2E7
Ø10	Ø	011	2E8
Ø11	Ø	111	2E8
Ø12	Ø	012	2E9
Ø13	Ø	112	2E9
Ø14	Ø	013	2E8
Ø15	Ø	113	2E8
Ø16	Ø	014	2E7
Ø17	Ø	114	2E7
Ø18	Ø	015	2E6
Ø19	Ø	115	2E6
Ø20	Ø	008	2E2
Ø21	Ø	108	2E3
Ø22	Ø	009	2E3
R6	Ø	216	2E0
R7	Ø	017	2E0
R8	Ø	316	2E0
R9	Ø	116	2E0
R10	Ø	217	2E0
R11	Ø	016	2E0
R12	Ø	317	2E1
R13	Ø	117	2E1
R14	Ø	218	2E1
R15	Ø	018	2E1
R16	Ø	318	2E1
R17	Ø	118	2E1
+3	P	000,119	2E2
GRD	G	200,260	2E2

RECORD OF CHANGES

DWG ISS	PREV FURN	STD	MFR DISC	SEE NOTE

NOTES:

1. ⏚ GROUND RETURN
2. UNLESS OTHERWISE SPECIFIED:
   RESISTANCE VALUES ARE IN OHMS
   CAPACITANCE VALUES ARE IN MICROFARADS
   VALUES PRECEDED BY THE SYMBOL +(PLUS) OR -(MINUS) ARE IN VOLTS
3. BATTERY AND GROUND TERMINALS FOR INTEGRATED CIRCUITS

IC CODE	TERM.	GRD TERM.

4. BATTERY AND GROUND TERMINALS FOR THIS CIRCUIT PACK ARE AS FOLLOWS

FUNCTION	TERMINAL
+3	000,019
GRD	200,260

5. HORIZONTAL MOUNTING CENTERS AT 0.5 INCH.

CURRENT DRAIN: 100 MA

SYSTEM USED ON	DESIGN CONTROL
COMMON SYSTEMS	IH

MANUFACTURING REFERENCES

CATEGORY	NO.
CIRCUIT PACK CODE	FC209
CONNECTOR ON FRAME	947A OR 947C
SERIES NO. IDENT — ~~FOR LATEST CLASS "A" CHANGE~~	
SERIES NO. IDENT — ACCEPTABLE SERIES	2

SHEET INDEX NOTES

1. WHEN CHANGES ARE MADE IN THIS DRAWING ONLY THOSE SHEETS AFFECTED WILL BE REISSUED.
2. THIS SHEET INDEX WILL BE REISSUED AND BROUGHT UP TO DATE EACH TIME ANY SHEET OF THE DRAWING IS REISSUED, OR A NEW SHEET IS ADDED.
3. THE ISSUE NUMBER ASSIGNED TO A CHANGED OR NEW SHEET WILL BE THE SAME ISSUE NUMBER AS THAT OF THE FIRST SHEET.
4. SHEETS THAT ARE NOT CHANGED WILL RETAIN THEIR EXISTING ISSUE NUMBER.
5. THE LAST ISSUE NUMBER OF THE FIRST SHEET INDEX IS RECOGNIZED AS THE LATEST ISSUE NUMBER OF THE DRAWING AS A WHOLE.

DWG ISSUE	IEE OR CD ISSUED	DATE ISSUE	DRAWN	APPD
1	1	1-21-74	MRS INCL	EVS MTS RPB
2D1		2-28-75	ALK LDD APG	JPC LAW

IH

ISSUE 2D1

1N98

FC209 CIRCUIT PACK

LAMP AND RELAY CIRCUIT

AT&TCO STANDARD

(2)

CPS-FC209
3 SHEETS

BELL TELEPHONE LABORATORIES INCORPORATED

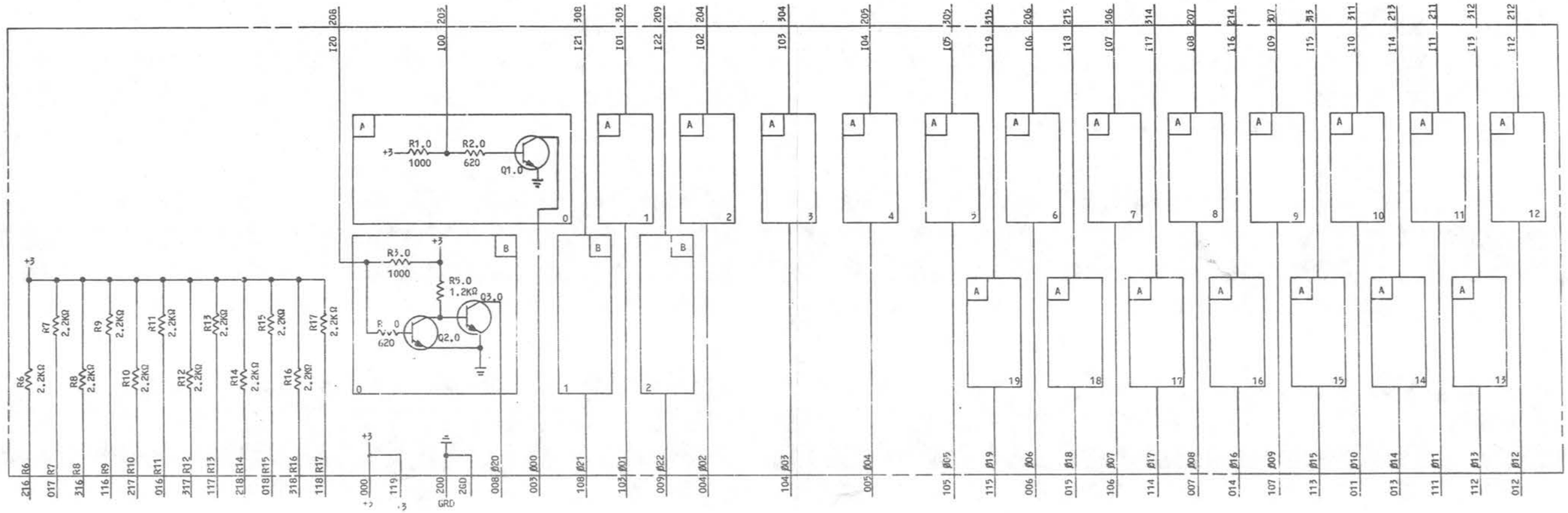
SIZE 6S

PRINTED IN U.S.A.

CPS-FC209

PART OF CPS FC209

LAMP & RELAY DRIVER



COMPONENT LIST

RESISTOR

DESIG	CODE
[20] R1.0-R1.19	KS-20200,L1, 1000
[20] R2.0-R2.19	KS-20200,L1, 620
[3] R3.0-R3.2	KS-20200,L1, 1000
[3] R4.0-R4.2	KS-20200,L1, 620
[3] R5.0-R5.2	KS-20200,L1, 1.2KΩ
[12] R6-R17	KS-20200,L1, 2.2KΩ

TRANSISTOR

DESIG	CODE
[20] Q1.0-Q1.19	66S
[3] Q2.0-Q2.2	66S
[3] Q3.0-Q3.2	66S

ISSUE 2D1

FC209 CIRCUIT PACK (2)

BELL TELEPHONE LABORATORIES INCORPORATED

6S

CPS-FC209 SHEET 2

CPS-FC209

PART OF CPS FC209

LAMP AND RELAY DRIVER

CIRCUIT DESCRIPTION

A. FUNCTION

CIRCUIT PACK FC209 PROVIDES RELAY (LAMP) DRIVER CIRCUITS AND PULLUP RESISTORS FOR USE WITH THE NO. 2B ESS AND NO. 3 ESS SYSTEM STATUS PANEL CONTROLLER (SSPC) CIRCUIT.

B. DETAILED DESCRIPTION

THIS CIRCUIT PACK PROVIDES 20 GENERAL PURPOSE LAMP/RELAY DRIVER INVERTER CIRCUITS AND 3 DOUBLE-INVERTER LAMP/RELAY DRIVER CIRCUITS. THE SIGNAL SOURCE THAT CONTROLS THESE CIRCUITS MUST BE CAPABLE OF SINKING 3.5 MA CURRENT AT V MAX IN LESS THAN 0.4 VDC (EG, A 1A LOGIC OPEN COLLECTOR GATE). EACH DRIVER OUTPUT WILL SINK 50 MA FROM A VOLTAGE SOURCE LESS THAN 26 VDC. SINCE THIS CP IS USED IN CONJUNCTION WITH LOW-LEVEL LOGIC CIRCUITS, THE CURRENT SWITCHING SHOULD BE MINIMIZED TO AVOID NOISE COUPLING PROBLEMS.

THIS CP ALSO PROVIDES 12 GENERAL PURPOSE PULLUP RESISTORS FOR USE WITH OPEN COLLECTOR 1A LOGIC GATES.

C. SYMBOL/LEAD MNEMONICS

MNEMONIC	DEFINITION
I01-I19	INPUTS TO SINGLE-INVERTER LAMP/RELAY DRIVER CIRCUITS (A)
I20-I22	INPUTS TO DOUBLE-INVERTER LAMP/RELAY DRIVER CIRCUITS (B)
Ø01-Ø19	OUTPUTS OF SINGLE-INVERTER LAMP/RELAY DRIVER CIRCUITS (A)
Ø20-Ø22	OUTPUTS OF DOUBLE-INVERTER LAMP/RELAY DRIVER CIRCUITS (B)
R6-R17	GENERAL PURPOSE PULLUP RESISTOR OUTPUTS CAPABLE OF SOURCING 1 MA AT 0.7 VOLTS

CPS-FC209

ISSUE 201

FC209 CIRCUIT PACK (2)

BELL TELEPHONE LABORATORIES INCORPORATED 6S

CPS-FC209 SHEET 3