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1	1	11-12-65		
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USED ON		
FRAME SD	PROJECT	DSGN CONT
SD-9011B-03	5ESS	IH

SUPPORTING INFORMATION		Copyright © 1967 AT&T All Rights Reserved	
CATEGORY	NO.		
EQUIPMENT DRAWING	J50003ED	AT13	
		5ESSM SWITCHING EQUIPMENT TRANSMISSION RATE CONVERTER UNIT CIRCUIT	
		DWG SIZE 68	ISSUE 4M
		(TRCU)	
		ATA& BELL LABORATORIES	SD-50086-01
		SHEET A1 OF 28	

# DESIGNATION MNEMONICS INDEX

MNEMONIC	ES/SYM	DEFINITION	MNEMONIC	ES/SYM	DEFINITION
+CPRO(A,B)	1,2/1	+CURRENT PROGRAM RESISTOR 0	DS3IN0(A,B)	1,2/7	DIGITAL SIGNAL LEVEL 3 INPUT SIDE 0B
+CRPR1(A,B)	3,4/1	+CURRENT PROGRAM RESISTOR 1	DS3INB1(A,B)	3,4/7	DIGITAL SIGNAL LEVEL 3 INPUT SIDE 1B
+50(A,B)	1,2/1	+5 VOLT SOURCE 0	DS30TA0(A,B)	1,2/10	DIGITAL SIGNAL LEVEL 3 OUTPUT SIDE 0A
+51(A,B)	3,4/1	+5 VOLT SOURCE 1	DS30TA1(A,B)	3,4/10	DIGITAL SIGNAL LEVEL 3 OUTPUT SIDE 1A
-CPRO(A,B)	1,2/1	-CURRENT PROGRAM RESISTOR 0	DS30TB0(A,B)	1,2/9	DIGITAL SIGNAL LEVEL 3 OUTPUT SIDE 0B
-CRPR1(A,B)	3,4/1	-CURRENT PROGRAM RESISTOR 1	DS30TB1(A,B)	3,4/9	DIGITAL SIGNAL LEVEL 3 OUTPUT SIDE 1B
-48RTN0(A,B)	1,2/1	-48 VOLT RETURN 0	D3A0(A,B)	1,2/3	DIGITAL LEVEL 3 SIDE 0A
-48RTN1(A,B)	3,4/1	-48 VOLT RETURN 1	D3A1(A,B)	3,4/3	DIGITAL LEVEL 3 SIDE 1A
-480(A,B)	1,2/1	-48 VOLTS SOURCE 0	D3B0(A,B)	1,2/4	DIGITAL LEVEL 3 SIDE 0B
-481(A,B)	3,4/1	-48 VOLTS SOURCE 1	D3B1(A,B)	3,4/4	DIGITAL LEVEL 3 SIDE 1B
-50(A,B)	1,2/1	-5 VOLT SOURCE 0	GRD(EOL)	FS1-4	GROUND
-51(A,B)	3,4/1	-5 VOLT SOURCE 1	MSTR0(A,B)	1,2/3	MASTER SIDE 0
AINT0(A,B)	1,2/1	A INTERLOCK SIDE 0	MSTR1(A,B)	3,4/3	MASTER SIDE 1
AINT1(A,B)	3/2,4/1	A INTERLOCK SIDE 1	NCTRA0(A,B)	1,2/3	NETWORK CONTROL & TIMING RECEIVER SIDE 0A
BINT0(A,B)	1/1,2/2	B INTERLOCK SIDE 0	NCTRA1(A,B)	3,4/3	NETWORK CONTROL & TIMING RECEIVER SIDE 1A
BINT1(A,B)	3/2,4/1	B INTERLOCK SIDE 1	NCTRB0(A,B)	1,2/5	NETWORK CONTROL & TIMING RECEIVER SIDE 0B
DLIALM0(A,B)	1/1,2/2	DLI ALARM SIDE 0	NCTRB1(A,B)	3,4/5	NETWORK CONTROL & TIMING RECEIVER SIDE 1B
DLIALM1(A,B)	3/2,4/1	DLI ALARM SIDE 1	NCTTA0(A,B)	1,2/3	NETWORK CONTROL & TIMING TRANSMITTER SIDE 0A
DLIAMP0(A,B)	1/1,2/2	DLI ALARM PANEL SIDE 0	NCTTA1(A,B)	3,4/3	NETWORK CONTROL & TIMING TRANSMITTER SIDE 1A
DLIAMP1(A,B)	3/2,4/1	DLI ALARM PANEL SIDE 1	NCTTB0(A,B)	1,2/5	NETWORK CONTROL & TIMING TRANSMITTER SIDE 0B
DLIS0(A,B)	1,2/2	DLI SELECT 0, SIDE A AND B	NCTTB1(A,B)	3,4/5	NETWORK CONTROL & TIMING TRANSMITTER SIDE 1B
DLIS1(A,B)	3,4/2	DLI SELECT 1, SIDE A AND B	SELREF0(A,B)	1,2/3	SELECT REFERENCE SIDE 0
DLIS10(A,B)	1/1,2/2	DLI SHUT-DOWN 1 SIDE 0	SELREF1(A,B)	3,4/3	SELECT REFERENCE SIDE 1
DLIS11(A,B)	3/2,4/1	DLI SHUT-DOWN 1 SIDE 1	8KREFA0(A,B)	1,2/3	8K REFERENCE SIDE 0A
DLIS20(A,B)	1,2/1	DLI SHUT-DOWN 2 SIDE 0	8KREFA1(A,B)	3,4/3	8K REFERENCE SIDE 1A
DLIS21(A,B)	3,4/1	DLI SHUT-DOWN 2 SIDE 1	8KREFB0(A,B)	1,2/5	8K REFERENCE SIDE 0B
DLIS30(A,B)	1,2/1	DLI SHUT-DOWN 3 SIDE 0	8KREFB1(A,B)	3,4/5	8K REFERENCE SIDE 1B
DLIS31(A,B)	3,4/1	DLI SHUT-DOWN 3 SIDE 1			
DLI00S0(A,B)	1/1,2/2	DLI OUT-OF-SERVICE SIDE 0			
DLI00S1(A,B)	3/2,4/1	DLI OUT-OF-SERVICE SIDE 1			
DOOFA0(A,B)	1,2/3	DS3 OUT-OF-FRAME SIDE 0A			
DOOFA1(A,B)	3,4/3	DS3 OUT-OF-FRAME SIDE 1A			
DOOFB0(A,B)	1,2/5	DS3 OUT-OF-FRAME SIDE 0B			
DOOFB1(A,B)	3,4/5	DS3 OUT-OF-FRAME SIDE 1B			
DOOS480(A,B)	1/1,2/2	DLI OUT-OF-FRAME SIDE 0			
DOOS481(A,B)	3/2,4/1	DLI OUT-OF-FRAME SIDE 1			
DS3A0(A,B)	1,2/3	DIGITAL SIGNAL LEVEL 3 SIDE 0A			
DS3A1(A,B)	3,4/3	DIGITAL SIGNAL LEVEL 3 SIDE 1A			
DS3B0(A,B)	1,2/4	DIGITAL SIGNAL LEVEL 3 SIDE 0B			
DS3B1(A,B)	3,4/4	DIGITAL SIGNAL LEVEL 3 SIDE 1B			
DS3INA0(A,B)	1,2/8	DIGITAL SIGNAL LEVEL 3 INPUT SIDE 0A			
DS3IHA1(A,B)	3,4/8	DIGITAL SIGNAL LEVEL 3 INPUT SIDE 1A			

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TRANSMISSION RATE CONVERTER UNIT

DWG SIZE  
A2

ISSUE  
3M

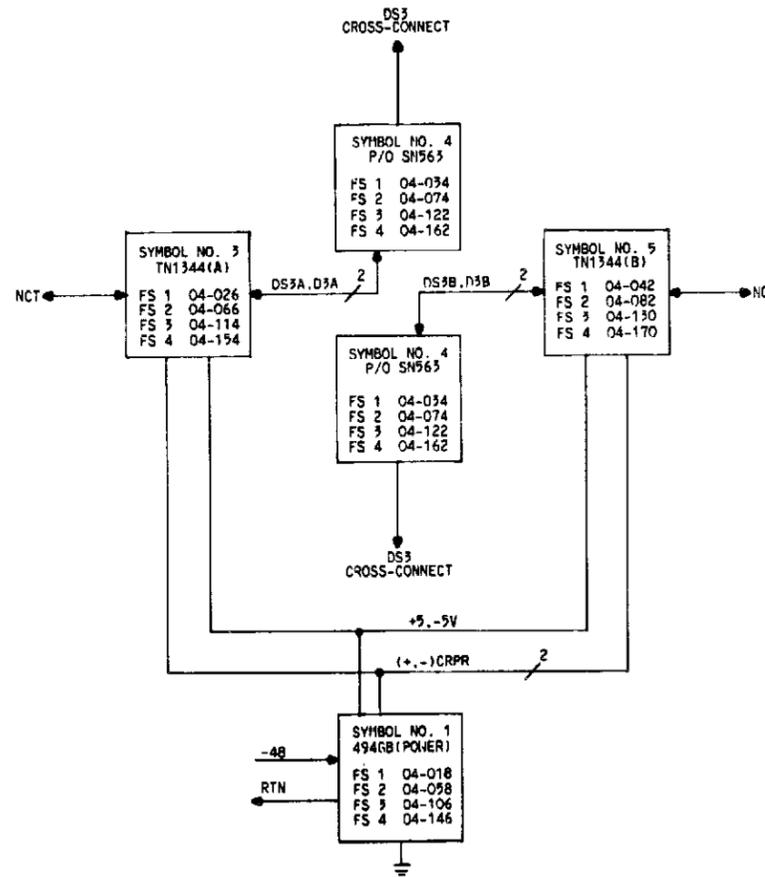
AT&T  
BELL LABORATORIES

SD-50086-01

A2



PART OF FS 1-4  
 COMPOSITE DIAGRAM I  
 FLOW DIAGRAM



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TRANSMISSION RATE CONVERTER UNIT		DWG SIZE	ISSUE
		88	2B
AT&T BELL LABORATORIES	SD-50086-01	SHEET B1AA	

PART OF FS 1  
TRANSMISSION RATE CONVERTER UNIT, SIDE OA

SYMBOL NO. 1  
SIDE OA

SYMBOL NO. 1 (CONT)  
SIDE OA

SYMBOL NO. 3  
SIDE OA(A)

SYMBOL NO. 3 (CONT)  
SIDE OA(A)

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT	DESIG	EQPT LOC	CODE	ELEM IDENT	OPT	DESIG	EQPT LOC	CODE	ELEM IDENT	OPT	DESIG	EQPT LOC	CODE	ELEM IDENT	OPT			
SOA	04-018	494GB	A		SOA	04-018	494GB	A		NCT0AA	04-026	TN1344	A		NCT0AA	04-026	TN1344	A				
LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE	LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE	LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE		
+CRPROA +50A	PWR PWR PWR		017 045 046		1/3, 1/5 1/1 1/1	310		GRD GRD GRD		038 039 040				+CRPROA +50A	PWR PWR PWR		102 000 001			1/1 1/1 1/1		
	PWR PWR PWR		047 048 049		1/1 1/1 1/1			GRD GRD GRD		041 042 043			310		PWR PWR PWR		006 010 014			1/1 1/1 1/1		
	PWR PWR PWR		050 051 052		1/1 1/1 1/1			GRD GRD GRD		119 123 124					PWR PWR PWR		018 023 024			1/1 1/1 1/1		
	PWR PWR PWR		053 054 055		1/1 1/1 1/1			GRD GRD GRD		132 133 134					PWR PWR PWR		051 055 056			1/1 1/1 1/1		
	PWR PWR PWR		056 145 146		1/1 1/1 1/1			GRD GRD GRD		135 136 137					PWR PWR PWR		100 101 106			1/1 1/1 1/1		
	PWR PWR PWR		147 148 149		1/1 1/1 1/1			GRD GRD GRD		138 139 140					PWR PWR PWR		110 112 114			1/1 1/1 1/1		
	PWR PWR PWR		150 151 152		1/1 1/1 1/1			GRD GRD GRD		141 142 143					PWR PWR PWR		118 123 124			1/1 1/1 1/1		
	PWR PWR PWR		153 154 155		1/1 1/1 1/1										PWR		134			1/1		
	PWR PWR PWR		156 018 117		1/1 1/3, 1/5 1/3, 1/5	310									PWR PWR PWR		155 156			1/1 1/1	TO CAD 1 - BW	
	GRD GRD GRD		003 004 005		1/1 1/1 1/1										-CRPROA -480A -50A		002 049 012			1/1 1/1 1/1		
	GRD GRD GRD		103 104 105		1/1 1/1 1/6										PWR PWR PWR		032 033 044			1/1 1/1 1/1		
	PWR PWR PWR		007 008 106		1/1 1/1 1/1										PWR PWR PWR		132 133 144			1/1 1/1 1/1		
	PWR PWR PWR		107 108 006		1/1 1/1 1/3, 1/5 1/6										PWR PWR PWR		237 050 335			1/1 1/1 1/4	TO CAD 1 - BX	
	PWR PWR PWR		022 023 122		1/1 1/1 1/3, 1/5										D3A0A GRD04026		10 10 10			337 004 008	1/4	
	IO IO IO		112 012 014		1/2 1/2 1/2										IO GRD GRD		011 015 016					
	IO IO IO		113 109 110	(Y) (Y)	1/2 (Y)1/1 (Y)1/1										GRD GRD GRD		020 021 034					
	IO IO IO		011 110 109		1/2 (Z)1/2 (Z)1/2										GRD GRD GRD		040 052 104				TO CAD 1 - BW TO CAD 1 - BX	
	IO IO GRD		015 115 024		1/2 1/2										GRD GRD GRD		108 113 116					
	GRD GRD GRD		032 033 034			310									GRD GRD GRD		120 121 139				TO CAD 1 - BW	
	GRD GRD GRD		035 036 037												GRD GRD GRD		148 152 200				TO CAD 1 - BX TO CAD 1 - BX	

SYMBOL NO. 2  
SIDE OA

DESIG EQPT LOC CODE ELEM IDENT OPT  
SOA 04-021 TERMINAL FIELD A

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
A1NTOA	IO		000		1/1	
B1NTOA	IO		001		1/1	
DL1ALMOA	IO		006		1/1	
DL1AMP0A	IO		009		1/1	
	IO		005		1/1	
	IO		010		1/1	
DL1S10A	IO		004		1/1	
DL1S20A	IO		003	(Z)	1/1	
DL1S30A	IO		002	(Z)	1/1	
DL100S0A	IO		007		1/1	
000S480A	IO		008		1/1	

PART OF FS 1  
SYMBOL(S) 1 2 3

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TRANSMISSION RATE CONVERTER UNIT		DWG SIZE Z	ISSUE 4M
AT&T BELL LABORATORIES	SD-50086-01	B1CA	

PART OF FS 1  
TRANSMISSION RATE CONVERTER UNIT, SIDE 0A

SYMBOL NO. 3 (CONT) SIDE 0A(A)							SYMBOL NO. 4 (CONT) SIDE 0A							SYMBOL NO. 4 (CONT) SIDE 0A							SYMBOL NO. 5 (CONT) SIDE 0A(B)						
DESIG	EQPT LOC	CODE	ELEM IDENT	OPT			DESIG	EQPT LOC	CODE	ELEM IDENT	OPT			DESIG	EQPT LOC	CODE	ELEM IDENT	OPT			DESIG	EQPT LOC	CODE	ELEM IDENT	OPT		
NCT0AA	04-026	TN1344	A				DSX0A	04-034	SN563	A				DSX0A	04-034	SN563	A				NCT0AB	04-042	TN1344	A			
LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE	LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE	LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE	LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	GRD		348					GRD		039					GRD		153					GRD		020			
	GRD		350					GRD		040					GRD		155					GRD		021		TO CAD 1 - BR	
	GRD		352					GRD		041					GRD		156					GRD		034		TO CAD 1 - BR	
	GRD		354					GRD		042					GRD							GRD		040		TO CAD 1 - BR	
MSTROA	GRD		355		1/5	TO CAD 1 - BW		GRD		043					GRD							GRD		052		TO CAD 1 - BR	
	GRD		356					GRD		044					GRD							GRD		104			
	IO		039					GRD		045					GRD							GRD		108			
NCTRA0A	IO		153		TO CAD 1 - BX			GRD		046					GRD							GRD		113			
NCTTADA	IO		140		TO CAD 1 - BW			GRD		047					GRD							GRD		116			
SELREFOA	IO		150		TO CAD 1 - BX			GRD		048					GRD							GRD		120			
								GRD		049					GRD							GRD		121			
8KREFA0A	IO		035		TO CAD 1 - BW			GRD		051					GRD							GRD		139			
								GRD		052					GRD							GRD		148			
								GRD		053					GRD							GRD		152		TO CAD 1 - BR	
								GRD		054					GRD							GRD		152			
								GRD		055					GRD							GRD		200			
								GRD		056					GRD							GRD		201			
								GRD		100					GRD							GRD		202			
								GRD		101					GRD							GRD		204			
								GRD		103					GRD							GRD		206			
								GRD		104					GRD							GRD		208			
								GRD		105					GRD							GRD		210			
								GRD		106					GRD							GRD		212			
								GRD		107					GRD							GRD		214			
								GRD		108					GRD							GRD		216			
								GRD		109					GRD							GRD		218			
								GRD		110					GRD							GRD		220			
								GRD		111					GRD							GRD		222			
DS3A0A	IO		014		1/3			GRD		112					GRD							GRD		223			
DS3B0A	IO		010		1/5			GRD		113					GRD							GRD		224			
D3A0A	IO		050		1/3			GRD		114					GRD							GRD		232			
D3B0A	IO		038		1/5			GRD		115					GRD							GRD		233			
GRD04034	GRD		000					GRD		116					GRD							GRD		234			
	GRD		001					GRD		117					GRD							GRD		236			
	GRD		002					GRD		118					GRD							GRD		238			
	GRD		003					GRD		119					GRD							GRD		240			
	GRD		004					GRD		120					GRD							GRD		242			
	GRD		005					GRD		121					GRD							GRD		244			
	GRD		006					GRD		123					GRD							GRD		246			
	GRD		007					GRD		124					GRD							GRD		248			
	GRD		008					GRD		132					GRD							GRD		250			
	GRD		009					GRD		133					GRD							GRD		252			
	GRD		011					GRD		135					GRD							GRD		254			
	GRD		012					GRD		136					GRD							GRD		255			
	GRD		013					GRD		137					GRD							GRD		256			
	GRD		015					GRD		138					GRD							GRD		300			
	GRD		016					GRD		139					GRD							GRD		301			
	GRD		017					GRD		140					GRD							GRD		302			
	GRD		018					GRD		141					GRD							GRD		304			
	GRD		019					GRD		142					GRD							GRD		306			
	GRD		020					GRD		143					GRD												
	GRD		021					GRD		144					GRD												
	GRD		022					GRD		145					GRD												
	GRD		023					GRD		146					GRD												
	GRD		024					GRD		147					GRD												
	GRD		032					GRD		148					GRD												
	GRD		033					GRD		149					GRD												
	GRD		034					GRD		150					GRD												
	GRD		035					GRD		151					GRD												
	GRD		036					GRD		152					GRD												
	GRD		037																								

PART OF FS 1  
SYMBOL(S) 3 4 5

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TRANSMISSION RATE CONVERTER UNIT

DWG SIZE: 12  
ISSUE: 3M

AT&T BELL LABORATORIES SD-5D086-01 B1CB

PART OF FS 1  
TRANSMISSION RATE CONVERTER UNIT, SIDE 0A

SYMBOL NO. 5 (CONT)  
SIDE 0A(B)

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCT0AB	04-042	TN1344	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	GRD		308			
	GRD		310			
	GRD		312			
	GRD		314			
	GRD		316			
	GRD		318			
	GRD		320			
	GRD		322			
	GRD		323			
	GRD		324			
	GRD		332			
	GRD		333			
	GRD		334			
	GRD		336			
	GRD		338			
	GRD		340			
	GRD		342			
	GRD		344			
	GRD		346			
	GRD		348			
	GRD		350			
	GRD		352			
	GRD		354			
	GRD		355			
	GRD		356			
MSTROA	10		039		1/3 TO CAD 1 - BR	
NCTRBOA	10		153		TO CAD 1 - BG	
NCTTBOA	10		140			
SELREFOA	10		150		1/3 TO CAD 1 - BG	
8KREFBOA	10		035			

SYMBOL NO. 6  
SIDE 0A

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
PRLOA	02-016	LUG	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
-48RTN0A	GRD		004		1/1 TO CAD 1 - BZ	
-480A	PWR		008		1/1 TO CAD 1 - BY	

SYMBOL NO. 7  
SIDE 0A

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
COAX0A	02-038A	COAX	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
DS31NBOA	10		002		TO CAD 1 - AO	308

SYMBOL NO. 8  
SIDE 0A

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
COAX0A	02-038B	COAX	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
DS31NAOA	10		022		TO CAD 1 - AP	308

SYMBOL NO. 9  
SIDE 0A

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
COAX0A	06-038A	COAX	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
DS30TBOA	10		034		TO CAD 1 - BS	308

SYMBOL NO. 10  
SIDE 0A

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
COAX0A	06-038B	COAX	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
DS30TAOA	10		054		TO CAD 1 - BT	308

PART OF FS 1  
SYMBOL(S) 5 6 7 8 9 10

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TRANSMISSION RATE CONVERTER UNIT	DWG SIZE C2	ISSUE 3M
AT&T BELL LABORATORIES	SD-5D086-01	B1CC



PART OF FS 2  
TRANSMISSION RATE CONVERTER UNIT, SIDE 08

SYMBOL NO. 3 (CONT) SIDE 08(A)							SYMBOL NO. 4 (CONT) SIDE 08							SYMBOL NO. 4 (CONT) SIDE 08							SYMBOL NO. 5 (CONT) SIDE 08(B)						
DESIG	EQPT LOC	CODE	ELEM IDENT	OPT			DESIG	EQPT LOC	CODE	ELEM IDENT	OPT			DESIG	EQPT LOC	CODE	ELEM IDENT	OPT			DESIG	EQPT LOC	CODE	ELEM IDENT	OPT		
NCTOBA	04-066	TN1344	A				DSX0B	04-074	SN563	A				DSX0B	04-074	SN563	A				NCT0BB	04-082	TN1344	A			
LEAD DESIG	FUNC	TERM. MOD	TERM. OPT	DESTINATION	NOTE		LEAD DESIG	FUNC	TERM. MOD	TERM. OPT	DESTINATION	NOTE		LEAD DESIG	FUNC	TERM. MOD	TERM. OPT	DESTINATION	NOTE		LEAD DESIG	FUNC	TERM. MOD	TERM. OPT	DESTINATION	NOTE	
	GRD		348					GRD		039					GRD		153					GRD		020			
	GRD		350					GRD		040					GRD		155					GRD		021			
	GRD		354					GRD		041					GRD		156					GRD		034		TO CAD 1 - BI	
	GRD		355					GRD		042					GRD		042					GRD		040		TO CAD 1 - BI	
MSTROB	GRD		356					GRD		043					GRD		043					GRD		052		TO CAD 1 - BJ	
	IO		039		2/5	TO CAD 1 - BO		GRD		044					GRD		044					GRD		104			
								GRD		045					GRD		045					GRD		108			
NCTRA0B	IO		153			TO CAD 1 - BP		GRD		046					GRD		046					GRD		113			
NCTTA0B	IO		140			TO CAD 1 - BO		GRD		047					GRD		047					GRD		116			
SELREF0B	IO		150			2/5		GRD		048					GRD		048					GRD		120			
						TO CAD 1 - BP		GRD		049					GRD		049					GRD		121			
BKREFA0B	IO		035			TO CAD 1 - BO		GRD		051					GRD		051					GRD		139			
								GRD		052					GRD		052					GRD		148			
								GRD		053					GRD		053					GRD		152		TO CAD 1 - BJ	
								GRD		054					GRD		054					GRD		200			
								GRD		055					GRD		055					GRD		201			
								GRD		056					GRD		056					GRD		202			
								GRD		100					GRD		100					GRD		204			
								GRD		101					GRD		101					GRD		206			
								GRD		103					GRD		103					GRD		208			
								GRD		104					GRD		104					GRD		210			
								GRD		105					GRD		105					GRD		212			
								GRD		106					GRD		106					GRD		214			
								GRD		107					GRD		107					GRD		216			
								GRD		108					GRD		108					GRD		218			
								GRD		109					GRD		109					GRD		220			
								GRD		110					GRD		110					GRD		222			
								GRD		111					GRD		111					GRD		223			
DS3A0B	IO		014			2/3		GRD		112					GRD		112					GRD		224			
DS3B0B	IO		010			2/5		GRD		113					GRD		113					GRD		232			
DS3A0B	IO		050			2/3		GRD		114					GRD		114					GRD		233			
								GRD		115					GRD		115					GRD		234			
DS3B0B	IO		038			2/5		GRD		116					GRD		116					GRD		236			
GRD04074	GRD		000					GRD		117					GRD		117					GRD		238			
	GRD		001					GRD		118					GRD		118					GRD		240			
	GRD		002					GRD		119					GRD		119					GRD		242			
	GRD		003					GRD		120					GRD		120					GRD		244			
	GRD		004					GRD		121					GRD		121					GRD		246			
	GRD		005					GRD		123					GRD		123					GRD		248			
	GRD		006					GRD		124					GRD		124					GRD		250			
	GRD		007					GRD		125					GRD		125					GRD		252			
	GRD		008					GRD		126					GRD		126					GRD		254			
	GRD		009					GRD		127					GRD		127					GRD		255			
	GRD		011					GRD		128					GRD		128					GRD		256			
	GRD		012					GRD		129					GRD		129					GRD		300			
	GRD		013					GRD		130					GRD		130					GRD		301			
	GRD		015					GRD		131					GRD		131					GRD		302			
	GRD		016					GRD		132					GRD		132					GRD		304			
	GRD		017					GRD		133					GRD		133					GRD		306			
	GRD		018					GRD		134					GRD		134					GRD		308			
	GRD		019					GRD		135					GRD		135					GRD					
	GRD		020					GRD		136					GRD		136										
	GRD		021					GRD		137					GRD		137										
	GRD		022					GRD		138					GRD		138										
	GRD		023					GRD		139					GRD		139										
	GRD		024					GRD		140					GRD		140										
	GRD		032					GRD		141					GRD		141										
	GRD		033					GRD		142					GRD		142										
	GRD		034					GRD		143					GRD		143										
	GRD		035					GRD		144					GRD		144										
	GRD		036					GRD		145					GRD		145										
	GRD		037					GRD		146					GRD		146										
								GRD		147					GRD		147										
								GRD		148					GRD		148										
								GRD		149					GRD		149										
								GRD		150					GRD		150										
								GRD		151					GRD		151										
								GRD		152					GRD		152										

PART OF FS 2  
SYMBOL(S) 3 4 5

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TRANSMISSION RATE CONVERTER UNIT

DWG SIZE C2	ISSUE 3M
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AT&T  
BELL LABORATORIES

SD-5D086-01

B2CB

PART OF FS 2  
TRANSMISSION RATE CONVERTER UNIT, SIDE 08

SYMBOL NO. 5 (CONT)  
SIDE 08(B)

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCT08B	04-082	TN1344	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	GRD		310			
	GRD		312			
	GRD		314			
	GRD		316			
	GRD		318			
	GRD		320			
	GRD		322			
	GRD		323			
	GRD		324			
	GRD		332			
	GRD		333			
	GRD		334			
	GRD		336			
	GRD		338			
	GRD		340			
	GRD		342			
	GRD		344			
	GRD		346			
	GRD		348			
	GRD		350			
	GRD		352			
	GRD		354			
MSTROB	ID		355		2/3	
	ID		356			
	ID		359			
NCTR08B	ID		153		TO CAD 1 - BJ	
NCTT08B	ID		140		TO CAD 1 - BI	
SELREF08B	ID		150		2/3	
8KREFB08B	ID		035		TO CAD 1 - BI	

SYMBOL NO. 6  
SIDE 08

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
PRLOB	02-056	LUG	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
-48RTN08B	GRD		004		Z/1 TO CAD 1 - BZ	
-4808B	PHR		006		Z/1 TO CAD 1 - BY	

SYMBOL NO. 7  
SIDE 08

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
COAX08B	02-078A	COAX	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
DS31N808B	10		002		TO CAD 1 - AJ	308

SYMBOL NO. 8  
SIDE 08

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
COAX08B	02-078B	COAX	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
DS31NA08B	10		022		TO CAD 1 - AK	308

SYMBOL NO. 9  
SIDE 08

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
COAX08B	06-078A	COAX	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
DS30TB08B	10		034		TO CAD 1 - BK	308

SYMBOL NO. 10  
SIDE 08

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
COAX08B	06-078B	COAX	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
DS30TA08B	10		054		TO CAD 1 - BL	308

PART OF FS 2  
SYMBOL(S) 5 6 7 8 9 10

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TRANSMISSION RATE CONVERTER UNIT		DWG SIZE CZ
AT&T BELL LABORATORIES		ISSUE 3M
SD-5D086-01		B2CC

PART OF FS 3  
TRANSMISSION RATE CONVERTER UNIT, SIDE 1A

SYMBOL NO. 1  
SIDE 1A

SYMBOL NO. 1 (CONT)  
SIDE 1A

SYMBOL NO. 3  
SIDE 1A(A)

SYMBOL NO. 3 (CONT)  
SIDE 1A(A)

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT	DESIG	EQPT LOC	CODE	ELEM IDENT	OPT	DESIG	EQPT LOC	CODE	ELEM IDENT	OPT	DESIG	EQPT LOC	CODE	ELEM IDENT	OPT				
S1A	04-106	494GB	A		S1A	04-106	494GB	A		NCT1AA	04-114	TN1344	A		NCT1AA	04-114	TN1344	A					
LEAD DESIG	FUNC	TERM. MOD	TERM. OPT	DESTINATION	NOTE	LEAD DESIG	FUNC	TERM. MOD	TERM. OPT	DESTINATION	NOTE	LEAD DESIG	FUNC	TERM. MOD	TERM. OPT	DESTINATION	NOTE	LEAD DESIG	FUNC	TERM. MOD	TERM. OPT	DESTINATION	NOTE
+CRPR1A +51A	PHR		017	3/3, 3/5			GRD		038			+CRPR1A +51A	PHR		102	3/1			GRD		206		
	PHR		018	3/1	310		GRD		039				PHR		000	3/1			GRD		208		
	PHR		045	3/1	310		GRD		040				PHR		001	3/1			GRD		210		
	PHR		046	3/1			GRD		041				PHR		006	3/1			GRD		212		
	PHR		047	3/1			GRD		042				PHR		010	3/1			GRD		214		
	PHR		048	3/1			GRD		043				PHR		014	3/1			GRD		216		
	PHR		049	3/1			GRD		119	310			PHR		018	3/1			GRD		218		
	PHR		050	3/1			GRD		123				PHR		023	3/1			GRD		220		
	PHR		052	3/1			GRD		124				PHR		024	3/1			GRD		222		
	PHR		053	3/1			GRD		132				PHR		051	3/1			GRD		223		
	PHR		054	3/1			GRD		133				PHR		055	3/1			GRD		224		
	PHR		055	3/1			GRD		134				PHR		056	3/1			GRD		232		
	PHR		056	3/1			GRD		135				PHR		100	3/1			GRD		233		
	PHR		145	3/1			GRD		136				PHR		101	3/1			GRD		234		
	PHR		146	3/1			GRD		137				PHR		106	3/1			GRD		236		
	PHR		147	3/1			GRD		138				PHR		110	3/1			GRD		238		
	PHR		148	3/1			GRD		139				PHR		112	3/1			GRD		240		
	PHR		149	3/1			GRD		140				PHR		114	3/1			GRD		242		
	PHR		150	3/1			GRD		141				PHR		118	3/1			GRD		244		
	PHR		151	3/1			GRD		142				PHR		123	3/1			GRD		246		
	PHR		152	3/1			GRD		143				PHR		124	3/1			GRD		248		
	PHR		153	3/1									PHR		134	3/1			GRD		250		
	PHR		154	3/1									PHR		155	3/1	TO CAD 1 - BG		GRD		252		
	PHR		155	3/1									PHR		156	3/1			GRD		254		
	PHR		156	3/1									PHR		002	3/1			GRD		255		
	PHR		051	3/3, 3/5									PHR		049	3/1			GRD		256		
	PHR		117	3/3, 3/5									PHR		012	3/1			GRD		300		
-CRPR1A																							
-48RTN1A	GRD		003	3/6	310																		
	GRD		004	3/1																			
	GRD		005	3/1																			
	GRD		103	3/1																			
	GRD		104	3/1																			
	GRD		105	3/1																			
-481A	PHR		006	3/1																			
	PHR		007	3/1																			
	PHR		008	3/1																			
	PHR		106	3/1																			
	PHR		107	3/1																			
	PHR		108	3/3, 3/5																			
	PHR		023	3/1																			
	PHR		222	3/1																			
	PHR		022	3/3, 3/5																			
A1NT1A	ID		112	3/2																			
B1NT1A	ID		012	3/2																			
DL1ALM1A	ID		014	3/2																			
DL1AMP1A	ID		113	3/2																			
DL1S1A	ID		109	(Y) 3/1																			
	ID		110	(Y) 3/1																			
DL1S11A	ID		011	3/2																			
DL1S21A	ID		110	(Z) 3/2																			
DL1S31A	ID		109	(Z) 3/2																			
DL100S1A	ID		015	3/2																			
DL100S1A	ID		115	3/2																			
DOOS481A	GRD		024																				
	GRD		032																				
	GRD		033																				
	GRD		034																				
	GRD		035																				
	GRD		036																				
	GRD		037																				

SYMBOL NO. 2  
SIDE 1A

PART OF FS 3  
SYMBOL(S) 1 2 3

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TRANSMISSION RATE CONVERTER UNIT		DWG SIZE C2	ISSUE 4M
AT&T BELL LABORATORIES	SD-5D086-01	B3CA	

PART OF FS 3  
TRANSMISSION RATE CONVERTER UNIT, SIDE 1A

SYMBOL NO. 3 (CONT) SIDE 1A(A)							SYMBOL NO. 4 (CONT) SIDE 1A							SYMBOL NO. 4 (CONT) SIDE 1A							SYMBOL NO. 5 (CONT) SIDE 1A(B)						
DESIG	EQPT LOC	CODE	ELEM IDENT	OPT			DESIG	EQPT LOC	CODE	ELEM IDENT	OPT			DESIG	EQPT LOC	CODE	ELEM IDENT	OPT			DESIG	EQPT LOC	CODE	ELEM IDENT	OPT		
NCT1AA	04-114	TN1344	A				DSX1A	04-122	SN563	A				DSX1A	04-122	SN563	A				NCT1AB	04-130	TN1344	A			
LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE	LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE	LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE	LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	GRD		348					GRD		039					GRD		153					GRD		020			
	GRD		350					GRD		040					GRD		155					GRD		021			
	GRD		352					GRD		041					GRD		156					GRD		034		TO CAD 1 - BA	
	GRD		354					GRD		042					GRD							GRD		040		TO CAD 1 - BA	
HSTR1A	GRD		355					GRD		043					GRD							GRD		052		TO CAD 1 - BB	
	GRD		356					GRD		044					GRD							GRD		104			
	IO		039		3/5 TO CAD 1 - BG			GRD		045					GRD							GRD		108			
NCTRA1A	IO		153		TO CAD 1 - BH			GRD		046					GRD							GRD		113			
NCTTA1A	IO		140		TO CAD 1 - BG			GRD		047					GRD							GRD		116			
SELREF1A	IO		150		3/5 TO CAD 1 - BH			GRD		048					GRD							GRD		120			
								GRD		049					GRD							GRD		121			
8KREFA1A	IO		035		TO CAD 1 - BG			GRD		051					GRD							GRD		139			
								GRD		052					GRD							GRD		148			
								GRD		053					GRD							GRD		152		TO CAD 1 - BB	
								GRD		054					GRD							GRD		200			
								GRD		055					GRD							GRD		201			
								GRD		056					GRD							GRD		202			
								GRD		100					GRD							GRD		204			
								GRD		101					GRD							GRD		206			
								GRD		103					GRD							GRD		208			
								GRD		104					GRD							GRD		210			
								GRD		105					GRD							GRD		212			
								GRD		106					GRD							GRD		214			
								GRD		107					GRD							GRD		216			
								GRD		108					GRD							GRD		218			
								GRD		109					GRD							GRD		220			
								GRD		110					GRD							GRD		222			
								GRD		111					GRD							GRD		223			
DS3A1A	IO		014		3/5			GRD		112					GRD							GRD		224			
DS3B1A	IO		010		3/5			GRD		113					GRD							GRD		232			
D3A1A	IO		050		3/5			GRD		114					GRD							GRD		233			
								GRD		115					GRD							GRD		234			
D3B1A	IO		038		3/5			GRD		116					GRD							GRD		236			
GRD04122	GRD		000					GRD		117					GRD							GRD		238			
	GRD		001					GRD		118					GRD							GRD		240			
	GRD		002					GRD		119					GRD							GRD		242			
	GRD		003					GRD		120					GRD							GRD		244			
	GRD		004					GRD		121					GRD							GRD		246			
	GRD		005					GRD		123					GRD							GRD		248			
	GRD		006					GRD		124					GRD							GRD		250			
	GRD		007					GRD		132					GRD							GRD		252			
	GRD		008					GRD		133					GRD							GRD		254			
	GRD		009					GRD		135					GRD							GRD		255			
	GRD		011					GRD		136					GRD							GRD		256			
	GRD		012					GRD		137					GRD							GRD		300			
	GRD		013					GRD		138					GRD							GRD		301			
	GRD		015					GRD		139					GRD							GRD		302			
	GRD		016					GRD		140					GRD							GRD		304			
	GRD		017					GRD		141					GRD							GRD		306			
	GRD		018					GRD		142					GRD							GRD		308			
	GRD		019					GRD		143					GRD												
	GRD		020					GRD		144					GRD												
	GRD		021					GRD		145					GRD												
	GRD		022					GRD		146					GRD												
	GRD		023					GRD		147					GRD												
	GRD		024					GRD		148					GRD												
	GRD		032					GRD		149					GRD												
	GRD		033					GRD		150					GRD												
	GRD		034					GRD		151					GRD												
	GRD		035					GRD		152					GRD												
	GRD		036																								
	GRD		037																								

PART OF FS 3  
SYMBOL(S) 3 4 5

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TRANSMISSION RATE CONVERTER UNIT

DWG SIZE	ISSUE
C2	3M

AT&T  
BELL LABORATORIES

SD-50086-01

B3CB

PART OF FS 3  
TRANSMISSION RATE CONVERTER UNIT, SIDE 1A

SYMBOL NO. 5 (CONT)  
SIDE 1A(B)

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCT1AB	04-130	TN1344	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	GRD		310			
	GRD		312			
	GRD		314			
	GRD		316			
	GRD		318			
	GRD		320			
	GRD		322			
	GRD		324			
	GRD		326			
	GRD		328			
	GRD		330			
	GRD		332			
	GRD		334			
	GRD		336			
	GRD		338			
	GRD		340			
	GRD		342			
	GRD		344			
	GRD		346			
	GRD		348			
	GRD		350			
	GRD		352			
	GRD		354			
MSTR1A	GRD		355			
	GRD		356			
	IO		039		3/3	
NCTTB1A	IO		153		TO CAD 1 - BB	
NCTTB1A	IO		140		TO CAD 1 - BA	
SELREF1A	IO		150		3/3	
8KREFB1A	IO		035		TO CAD 1 - BA	

SYMBOL NO. 6  
SIDE 1A

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
PRL1A	02-104	LUG	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
-48RTN1A	GRD		004		3/1 TO CAD 1 - BZ	
-481A	PWR		008		3/1 TO CAD 1 - BY	

SYMBOL NO. 7  
SIDE 1A

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
COAX1A	02-126A	COAX	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
DS31NB1A	IO		002		TO CAD 1 - AE	308

SYMBOL NO. 8  
SIDE 1A

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
COAX1A	02-126B	COAX	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
DS31NA1A	IO		022		TO CAD 1 - AF	308

SYMBOL NO. 9  
SIDE 1A

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
COAX1A	06-126A	COAX	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
DS30TB1A	IO		034		TO CAD 1 - BC	308

SYMBOL NO. 10  
SIDE 1A

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
COAX1A	06-126B	COAX	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
DS30TA1A	IO		054		TO CAD 1 - BD	308

PART OF FS 3  
SYMBOL(S) 5 6 7 8 9 10

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TRANSMISSION RATE CONVERTER UNIT	DWG SIZE CZ	ISSUE 3M
AT&T BELL LABORATORIES	SD-5D086-01	B3CC

PART OF FS 4  
TRANSMISSION RATE CONVERTER UNIT, SIDE 1B

SYMBOL NO. 1  
SIDE 1B

SYMBOL NO. 1 (CONT)  
SIDE 1B

SYMBOL NO. 3  
SIDE 1B(A)

SYMBOL NO. 3 (CONT)  
SIDE 1B(A)

DESIG EQPT CODE ELEM OPT  
S1B 04-146 494GB A

DESIG EQPT CODE ELEM OPT  
S1B 04-146 494GB A

DESIG EQPT CODE ELEM OPT  
NCT1BA 04-154 TN1344 A

DESIG EQPT CODE ELEM OPT  
NCT1BA 04-154 TN1344 A

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
+CRPR1B +51B	PHR PHR PHR		017 045 046		4/3, 4/5 4/1 4/1	310
	PHR PHR PHR		047 048 049		4/1 4/1 4/1	
	PHR PHR PHR		050 051 052		4/1 4/1 4/1	
	PHR PHR PHR		053 054 055		4/1 4/1 4/1	
	PHR PHR PHR		056 145 146		4/1 4/1 4/1	
	PHR PHR PHR		147 148 149		4/1 4/1 4/1	
	PHR PHR PHR		150 151 152		4/1 4/1 4/1	
	PHR PHR PHR		153 154 155		4/1 4/1 4/1	
-CRPR1B	PHR PHR PHR		156 018 117		4/1 4/3, 4/5 4/3, 4/5	310
-48RTN1B	GRD GRD GRD		003 004 005		4/1 4/1 4/6	
	GRD GRD GRD		103 104 105		4/1 4/1 4/1	
-481B	PHR PHR PHR		006 008 106		4/1 4/1 4/1	
	PHR PHR PHR		107 108 007		4/1 4/1 4/3, 4/5 4/6	
-51B	PHR PHR PHR		022 023 122		4/1 4/1 4/3, 4/5	
A1NT1B B1NT1B DL1ALM1B	IO IO IO		112 012 014		4/2 4/2 4/2	
DL1AMP1B DL1S1B	IO IO		113 109	(Y) (Y)	4/2 (Y)4/1	
DL1S11B DL1S21B DL1S31B	IO IO IO		011 110 109		4/2 (2)4/2 (2)4/2	
DL100S1B DOOS481B GRD04146	IO IO GRD		015 115 024		4/2 4/2	
	GRD GRD GRD		032 033 034			310
	GRD GRD GRD		035 036 037			

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	GRD GRD GRD		038 039 040			
	GRD GRD GRD		041 042 043			310
	GRD GRD GRD		119 123 124			
	GRD GRD GRD		132 133 134			
	GRD GRD GRD		135 136 137			
	GRD GRD GRD		138 139 140			
	GRD GRD GRD		141 142 143			

SYMBOL NO. 2  
SIDE 1B

DESIG EQPT CODE ELEM OPT  
S1B 04-149 TERMINAL FIELD A

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
A1NT1B B1NT1B DL1ALM1B	IO IO IO		000 001 006		4/1 4/1 4/1	
DL1AMP1B	IO IO		009 005		4/1 4/1	
DL1S11B DL1S21B DL1S31B	IO IO IO		004 003 002	(Z) (Z)	4/1 4/1	
DL100S1B DOOS481B	IO IO		007 008		4/1 4/1	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
+CRPR1B +51B	PHR PHR PHR		102 000 001		4/1 4/1 4/1	
	PHR PHR PHR		006 010 014		4/1 4/1 4/1	
	PHR PHR PHR		018 023 024		4/1 4/1 4/1	
	PHR PHR PHR		051 055 056		4/1 4/1 4/1	
	PHR PHR PHR		100 101 106		4/1 4/1 4/1	
	PHR PHR PHR		110 112 114		4/1 4/1 4/1	
	PHR PHR PHR		118 123 124		4/1 4/1 4/1	
	PHR PHR PHR		134 155 156		4/1 4/1 4/1	
-CRPR1B -481B -51B	PHR PHR PHR		002 049 012		4/1 4/1 4/1	
	PHR PHR PHR		032 033 044		4/1 4/1 4/1	
	PHR PHR PHR		132 133 144		4/1 4/1 4/1	
DOOFA1B DS3A1B	IO IO		237 050 335		4/1 TO CAD 1 - AZ 4/4	
D3A1B GRD04154	IO GRD GRD		337 004 008		4/4	
	GRD GRD GRD		011 013 016			
	GRD GRD GRD		020 021 034			
	GRD GRD GRD		040 052 104			
	GRD GRD GRD		108 113 116			
	GRD GRD GRD		120 121 139			
	GRD GRD GRD		148 152 200			
	GRD GRD GRD		201 202 204			

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	GRD GRD GRD		206 208 210			
	GRD GRD GRD		212 214 216			
	GRD GRD GRD		218 220 222			
	GRD GRD GRD		223 224 232			
	GRD GRD GRD		233 234 236			
	GRD GRD GRD		238 240 242			
	GRD GRD GRD		244 246 248			
	GRD GRD GRD		250 252 254			
	GRD GRD GRD		255 256 300			
	GRD GRD GRD		301 302 304			
	GRD GRD GRD		306 308 310			
	GRD GRD GRD		312 314 316			
	GRD GRD GRD		318 320 322			
	GRD GRD GRD		323 324 332			
	GRD GRD GRD		333 334 336			
	GRD GRD GRD		338 340 342			
	GRD GRD		344 346			

PART OF FS 4  
SYMBOL(S) 1 2 3

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TRANSMISSION RATE CONVERTER UNIT		DWG SIZE C2
AT&T BELL LABORATORIES		ISSUE 4M
SD-5D086-01		B4CA

PART OF FS 4  
TRANSMISSION RATE CONVERTER UNIT, SIDE 1B

SYMBOL NO. 3 (CONT) SIDE 1B(A)							SYMBOL NO. 4 (CONT) SIDE 1B							SYMBOL NO. 4 (CONT) SIDE 1B							SYMBOL NO. 5 (CONT) SIDE 1B(B)						
DESIG	EOPT LOC	CODE	ELEM IDENT	OPT			DESIG	EOPT LOC	CODE	ELEM IDENT	OPT			DESIG	EOPT LOC	CODE	ELEM IDENT	OPT			DESIG	EOPT LOC	CODE	ELEM IDENT	OPT		
NCT1BA	04-154	TN1344	A				DSX1B	04-162	SN563	A				DSX1B	04-162	SN563	A				NCT1BB	04-170	TN1344	A			
LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE	LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE	LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE	LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	GRD		348					GRD		039					GRD		153					GRD		020			
	GRD		350					GRD		040					GRD		155					GRD		021			
	GRD		352					GRD		041					GRD		156					GRD		021			
	GRD		354					GRD		042					GRD							GRD		021			
	GRD		355					GRD		043					GRD							GRD		021			
MSTR1B	GRD		356					GRD		044					GRD							GRD		021			
	IO		039		4/5	TO CAD 1 - AY		GRD		045					GRD							GRD		021			
								GRD		046					GRD							GRD		021			
NCTRA1B	ID		153		TO CAD 1 - AZ			GRD		047					GRD							GRD		021			
NCTTA1B	ID		140		TO CAD 1 - AY			GRD		048					GRD							GRD		021			
SELREF1B	ID		150		4/5	TO CAD 1 - AZ		GRD		049					GRD							GRD		021			
								GRD		051					GRD							GRD		021			
BKREFA1B	ID		035		TO CAD 1 - AY			GRD		052					GRD							GRD		021			
								GRD		053					GRD							GRD		021			
								GRD		054					GRD							GRD		021			
								GRD		055					GRD							GRD		021			
								GRD		056					GRD							GRD		021			
								GRD		100					GRD							GRD		021			
								GRD		101					GRD							GRD		021			
								GRD		103					GRD							GRD		021			
								GRD		104					GRD							GRD		021			
								GRD		105					GRD							GRD		021			
								GRD		106					GRD							GRD		021			
								GRD		107					GRD							GRD		021			
								GRD		108					GRD							GRD		021			
								GRD		109					GRD							GRD		021			
								GRD		110					GRD							GRD		021			
								GRD		111					GRD							GRD		021			
DS3A1B	IO		014		4/3			GRD		112					GRD							GRD		021			
DS3B1B	IO		010		4/5			GRD		113					GRD							GRD		021			
D3A1B	IO		050		4/3			GRD		114					GRD							GRD		021			
								GRD		115					GRD							GRD		021			
D3B1B	IO		038		4/5			GRD		116					GRD							GRD		021			
GRD04162	GRD		000					GRD		117					GRD							GRD		021			
	GRD		001					GRD		118					GRD							GRD		021			
	GRD		002					GRD		119					GRD							GRD		021			
	GRD		003					GRD		120					GRD							GRD		021			
	GRD		004					GRD		121					GRD							GRD		021			
	GRD		005					GRD		122					GRD							GRD		021			
	GRD		006					GRD		123					GRD							GRD		021			
	GRD		007					GRD		124					GRD							GRD		021			
	GRD		008					GRD		125					GRD							GRD		021			
	GRD		009					GRD		126					GRD							GRD		021			
	GRD		011					GRD		127					GRD							GRD		021			
	GRD		012					GRD		128					GRD							GRD		021			
	GRD		013					GRD		129					GRD							GRD		021			
	GRD		015					GRD		130					GRD							GRD		021			
	GRD		016					GRD		131					GRD							GRD		021			
	GRD		017					GRD		132					GRD							GRD		021			
	GRD		018					GRD		133					GRD							GRD		021			
	GRD		019					GRD		134					GRD							GRD		021			
	GRD		020					GRD		135					GRD							GRD		021			
	GRD		021					GRD		136					GRD							GRD		021			
	GRD		022					GRD		137					GRD							GRD		021			
	GRD		023					GRD		138					GRD							GRD		021			
	GRD		024					GRD		139					GRD							GRD		021			
	GRD		032					GRD		140					GRD							GRD		021			
	GRD		033					GRD		141					GRD							GRD		021			
	GRD		034					GRD		142					GRD							GRD		021			
	GRD		035					GRD		143					GRD							GRD		021			
	GRD		036					GRD		144					GRD							GRD		021			
	GRD		037					GRD		145					GRD							GRD		021			
								GRD		146					GRD							GRD		021			
								GRD		147					GRD							GRD		021			
								GRD		148					GRD							GRD		021			
								GRD		149					GRD							GRD		021			
								GRD		150					GRD							GRD		021			
								GRD		151					GRD							GRD		021			
								GRD		152					GRD							GRD		021			

PART OF FS 4  
SYMBOL(S) 3 4 5

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TRANSMISSION RATE CONVERTER UNIT

DWG SIZE: 12 ISSUE: 3M

AT&T BELL LABORATORIES SD-5D086-01 B4CB

PART OF FS 4  
TRANSMISSION RATE CONVERTER UNIT, SIDE 1B

SYMBOL NO. 5 (CONT)  
SIDE 1B(B)

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCT1B8	04-170	TN1344	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
			310			
			312			
			314			
			316			
			318			
			320			
			322			
			323			
			324			
			332			
			333			
			334			
			336			
			338			
			340			
			342			
			344			
			346			
			348			
			350			
			352			
			354			
MSTR1B			355			
			356			
			039		4/3	
NCTB1B	10		153		TO CAD 1 - AT	
NCTB1B	10		140		TO CAD 1 - AS	
SELREF1B	10		150		4/3	
SKREFB1B	10		035		TO CAD 1 - AS	

SYMBOL NO. 6  
SIDE 1B

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
PRL1B	02-144	LUG	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
-48RTH1B			004		4/1	
					TO CAD 1 - BZ	
-481B	PWR		008		4/1	
					TO CAD 1 - BY	

SYMBOL NO. 7  
SIDE 1B

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
COAX1B	02-166A	COAX	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
DS31NB1B	10		002		TO CAD 1 - AA	308

SYMBOL NO. 8  
SIDE 1B

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
COAX1B	02-166B	COAX	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
DS31NA1B	10		022		TO CAD 1 - AB	308

SYMBOL NO. 9  
SIDE 1B

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
COAX1B	06-166A	COAX	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
DS30TB1B	10		034		TO CAD 1 - AU	308

SYMBOL NO. 10  
SIDE 1B

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
COAX1B	06-166B	COAX	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
DS30TA1B	10		054		TO CAD 1 - AV	308

PART OF FS 4  
SYMBOL(S) 5 6 7 8 9 10

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TRANSMISSION RATE CONVERTER UNIT		DWG SIZE C2
AT&T BELL LABORATORIES		ISSUE 3M
SD-5D086-01		B4CC



0 1 2 3 4 5 6 7 8 9

A  
B  
C  
D  
E  
F  
G  
H

A  
B  
C  
D  
E  
F  
G  
H

CIRCUIT NOTES:

101.

DESIG	FUSE AMP	POTENTIAL	ONE PER
<u>BATTERY SYMBOL</u>		<u>VOLTAGE RANGE</u>	

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TRANSMISSION RATE CONVERTER UNIT		
DWG SIZE	ISSUE	
00	/	
AT&T BELL LABORATORIES	SD-50086-01	SHEET DIA

0 1 2 3 4 5 6 7 8 9

0 1 2 3 4 5 6 7 8 9

A  
B  
C  
D  
E  
F  
G  
H

A  
B  
C  
D  
E  
F  
G  
H

EQUIPMENT NOTES:

201. UNLESS OTHERWISE SPECIFIED, ALL BACKPLANE WIRING WILL BE AUTOMATIC MACHINE WIRING (A-D41 30 GAUGE WHICH HAS BEEN PROCESSED BY THE WESWRAP PROGRAMS.

202.

APPARATUS CODE	CIRCUIT PACK REMOVAL PROCEDURES		
	PULL "HOT"	REMOVE UNIT POWER	SEQUENCED
TN1544	X		
SN563	X		

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TRANSMISSION RATE CONVERTER UNIT		
DWG SIZE	ISSUE	
08	2B	
AT&T BELL LABORATORIES	SD-50086-01	SHEET D2A

0 1 2 3 4 5 6 7 8 9

INFORMATION NOTES:

301. UNLESS OTHERWISE SPECIFIED:  
RESISTANCE VALUES ARE IN OHMS,  
CAPACITANCE VALUES ARE IN MICROFARADS  
VALUES PRECEDED BY THE SYMBOL + (PLUS)  
OR - (MINUS) ARE IN VOLTS.

302.

FEATURE OR OPTION	PROVIDE		QUANTITY
	APP FIG.	APP OR WRG	
BACKPLANE & WIRING	1		1 PER UNIT
MINIMUM EQUIPAGE FOR A REMOTE OFFICE OR A HOST OFFICE THAT SUPPORT ONLY ONE REMOTE	2		1 PER UNIT
POWER-494GB NDRC-TN1344 SN563-DS3 INTERFACE CIRCUIT			
ADDITIONAL EQUIPAGE FOR HOST OFFICE TO HANDLE 1 ADDITIONAL REMOTE OFFICE	3		1 PER UNIT
POWER-494GB NDRC-TN1344 SN563-DS3 INTERFACE CIRCUIT			
FOR TRCU USED AT REMOTE SITE		Z	1 PER UNIT
FOR TRCU USED IN HOST OFFICE		Y	1 PER UNIT

INFORMATION NOTES (CONT):

303.

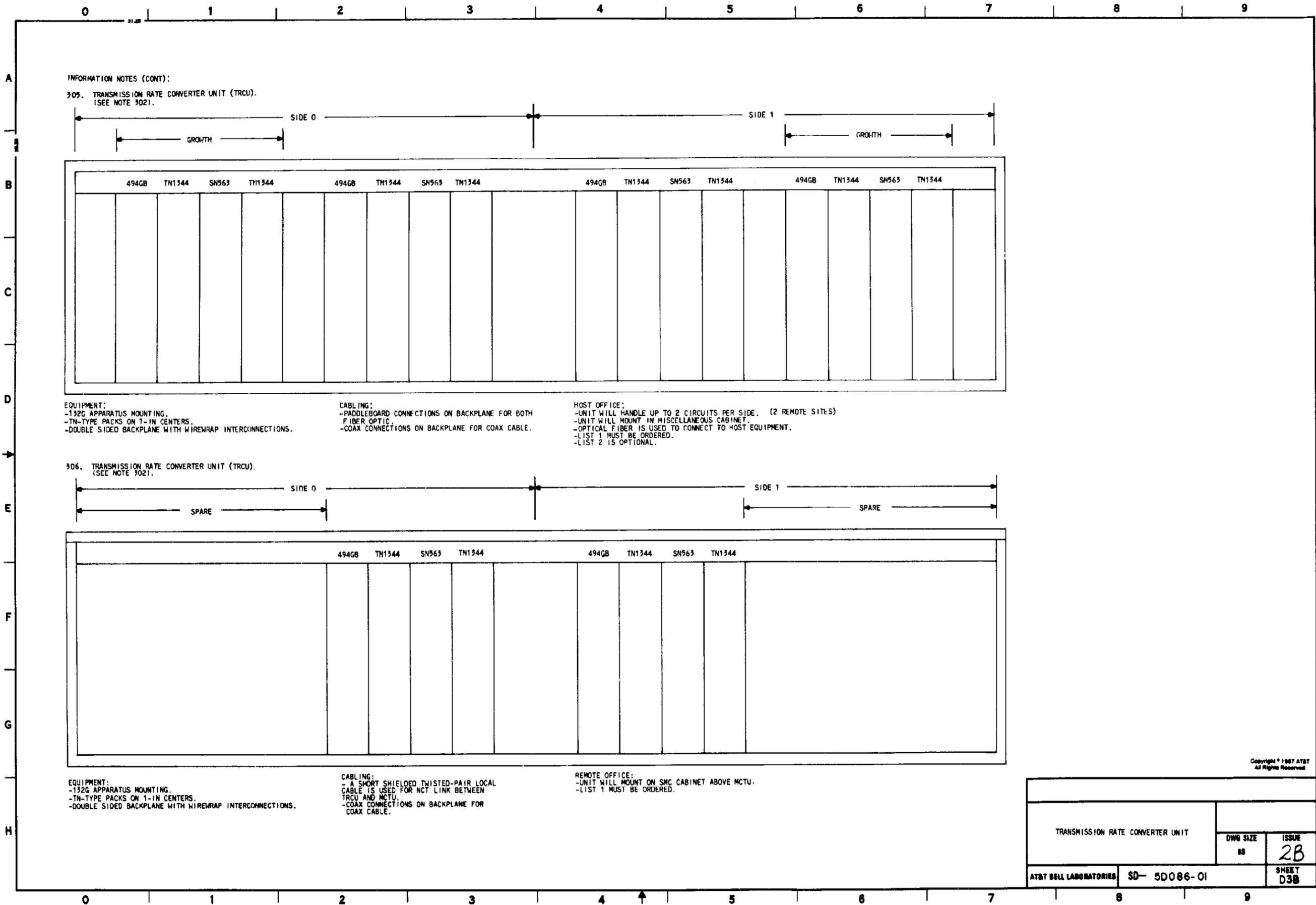
RECORD OF FIGURES, WIRING AND APPARATUS CHANGES					
CHANGED ON ISSUE	IF JOB RECORDS DO NOT SPECIFY	THIS OPTION WAS FURN	SEE NOTE	USE IN CIRCUIT	
				AVAIL	DA
3M	Z			Z	
3M	Y			Y	

304.

CIRCUIT PACK CODE OR MICROCODE	COMMON LANGUAGE EQUIPMENT IDENTIFICATION CODE (CLEI)
SN563 TN1344 494GB	E5IC800AXX E5ICAD0AXX PMPQ55VAXX

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TRANSMISSION RATE CONVERTER UNIT		DWG SIZE	ISSUE
		88	3M
AT&T BELL LABORATORIES	SD-5D086-01	SHEET D3A	

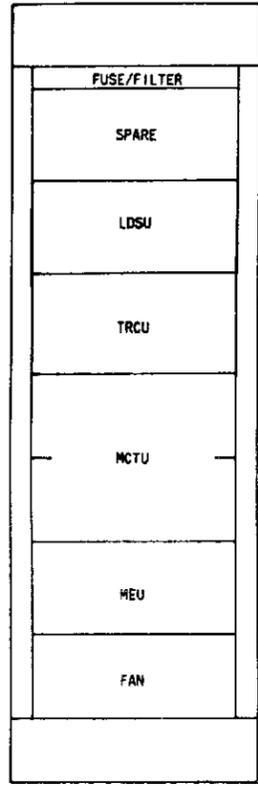


TRANSMISSION RATE CONVERTER UNIT		DWG SIZE	ISSUE
		88	2B
AT&T BELL LABORATORIES	SD- 5D086-01	SHEET 038	

0 1 2 3 4 5 6 7 8 9

A  
B  
C  
D  
E  
F  
G  
H

INFORMATION NOTES (CONT):  
 307. SWITCHING MODULE CONTROL CABINET  
 EQUIPPED WITH  
 TRANSMISSION RATE CONVERTER UNIT



J50003E

308. CABLING FOR COAX CONNECTORS ON BACKPLANE IS PRINTED WIRE FOR BOTH CENTER CONDUCTOR AND SHIELD.
309. WHEN O.R.M. IS INSTALLED IN SSS MOST EQUIPPED WITH A CM1, AN OPTION MUST BE APPLIED TO J50001AA TMSU. SEE SD-90037-01 FOR DESCRIPTION OF OPTION.
310. THE FOLLOWING TERMINALS ARE CONNECTED VIA SURFACE WIRES:

FROM	TO
04-018-018	04-018-045
04-018-119	04-018-032
04-058-018	04-058-045
04-058-119	04-058-032
04-106-018	04-106-045
04-106-119	04-106-032
04-146-018	04-146-045
04-146-119	04-146-032

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TRANSMISSION RATE CONVERTER UNIT		DWG SIZE	ISSUE
		68	3M
AT&T BELL LABORATORIES	SD-50086-01	SHEET D3C	

0 1 2 3 4 5 6 7 8 9

0 1 2 3 4 5 6 7 8 9

A  
B  
C  
D  
E  
F  
G  
H

UNIT SYMBOL TABLE OF CONTENTS			
FUNCTION	DESCRIPTION (LOWER LEFT PIN OF CONNECTOR)	SIZE	ELEMENT
CONTROL & DISPLAY	CONTROL & DISPLAY (04-110-000)	2 X 12	AI
	CONTROL & DISPLAY (04-062-000)	2 X 12	AM
POWER	POWER LUGS (02-016-008)	LUG	BY
	POWER LUGS (02-096-008)	LUG	BY
	POWER LUGS (02-104-008)	LUG	BY
	POWER LUGS (02-144-008)	LUG	BY
	RETURN LUGS (02-016-004)	LUG	BZ
	RETURN LUGS (02-096-004)	LUG	BZ
	RETURN LUGS (02-104-004)	LUG	BZ
	RETURN LUGS (02-144-004)	LUG	BZ
DS3 RATE CONVERTER	RATE CONVERTER (04-170-132)	2 X 12	AS
	RATE CONVERTER (04-170-149)	2 X 12	AT
	RATE CONVERTER (04-194-132)	2 X 12	AY
	RATE CONVERTER (04-194-149)	2 X 12	AZ
	RATE CONVERTER (04-190-132)	2 X 12	BA
	RATE CONVERTER (04-190-149)	2 X 12	BB
	RATE CONVERTER (04-114-132)	2 X 12	BG
	RATE CONVERTER (04-114-149)	2 X 12	BH
	RATE CONVERTER (04-082-132)	2 X 12	BI
	RATE CONVERTER (04-082-149)	2 X 12	BJ
	RATE CONVERTER (04-066-132)	2 X 12	BB
	RATE CONVERTER (04-066-149)	2 X 12	BP
	RATE CONVERTER (04-042-132)	2 X 12	BQ
	RATE CONVERTER (04-042-149)	2 X 12	BR
RATE CONVERTER (04-026-132)	2 X 12	BS	
RATE CONVERTER (04-026-149)	2 X 12	BT	

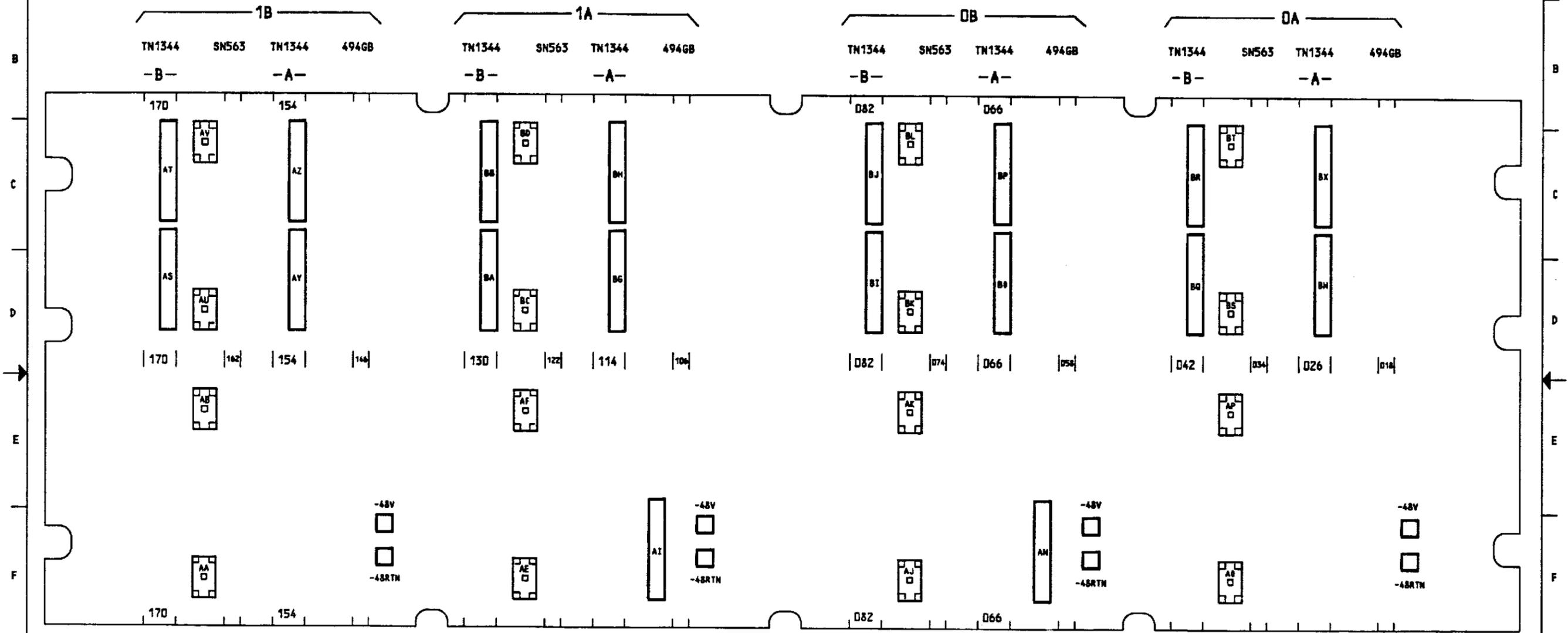
UNIT SYMBOL TABLE OF CONTENTS			
FUNCTION	DESCRIPTION (LOWER LEFT PIN OF CONNECTOR)	SIZE	ELEMENT
COAX CONNECTORS	COAX (02-098A-002)	COAX	AA
	COAX (02-098B-022)	COAX	AP
	COAX (02-078A-002)	COAX	AJ
	COAX (02-078B-022)	COAX	AK
	COAX (02-126A-002)	COAX	AE
	COAX (02-126B-022)	COAX	AF
	COAX (02-166A-002)	COAX	AA
	COAX (02-166B-022)	COAX	AB
	COAX (06-098A-034)	COAX	BS
	COAX (06-098B-054)	COAX	BT
	COAX (06-078A-034)	COAX	BK
	COAX (06-078B-054)	COAX	BL
	COAX (06-126A-034)	COAX	BC
	COAX (06-126B-054)	COAX	BD
	COAX (06-166A-034)	COAX	AU
	COAX (06-166B-054)	COAX	AV

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TRANSMISSION RATE CONVERTER UNIT		DWG SIZE	ISSUE
		40	3M
AT&T BELL LABORATORIES	SD-5D086-01	SHEET GBIA	

0 1 2 3 4 5 6 7 8 9

# CIRCUIT ACCESS REFERENCE DATA



**NOTES:**

1. POWER AND GROUND LUGS ARE IN ELEMENT BY AND BZ.
2. FOR COAX CONNECTORS, SEE NOTE 308.
3. ELEMENTS AC, AD, AG, AH, AL, AM, AQ, AR, AX, AW, BE, BF, BH, BN, BU AND BV WERE REMOVED PER LDI 1A, DRAWING ISSUE 3M.

**FIG. 1**

BACKPLANE PICTORIAL WIRING SIDE

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TRANSMISSION RATE CONVERTER UNIT	DWG SIZE C2	ISSUE <b>3M</b>
AT&T BELL LABORATORIES	SD-50086-01	GB1B

CAD 1  
UNIT SYMBOL

ELEMENT IDENTIFIER  
AA

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
DS31NB1B	IO	02-166A-002	02-166A-002	4/7	

ELEMENT IDENTIFIER  
AJ

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
DS31NB0B	IO	02-078A-002	02-078A-002	2/7	

ELEMENT IDENTIFIER  
AP

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
DS31NA0A	IO	02-038B-022	02-038B-022	1/8	

ELEMENT IDENTIFIER  
AV

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
DS30TA1B	IO	06-166B-054	06-166B-054	4/10	

ELEMENT IDENTIFIER  
AB

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
DS31NA1B	IO	02-166B-022	02-166B-022	4/8	

ELEMENT IDENTIFIER  
AK

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
DS31NA0B	IO	02-078B-022	02-078B-022	2/8	

ELEMENT IDENTIFIER  
AS

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
GRD04170	G	04-170-040	04-170-034	4/5	
GRD04170	G	04-170-034	04-170-034	4/5	
NCTTB1B	IO	04-170-140	04-170-140	4/5	
8KREFB1B	IO	04-170-035	04-170-035	4/5	

ELEMENT IDENTIFIER  
AY

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
MSTR1B	IO	04-154-039	04-154-039	4/3	
NCTTA1B	IO	04-154-140	04-154-140	4/3	
8KREFA1B	IO	04-154-035	04-154-035	4/3	

ELEMENT IDENTIFIER  
AE

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
DS31NB1A	IO	02-126A-002	02-126A-002	3/7	

ELEMENT IDENTIFIER  
AN

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
AJNT1A	IO	04-109-000	04-109-000	3/2	
BINT1A	IO	04-109-001	04-109-001	3/2	
DLIALM1A	IO	04-109-006	04-109-006	3/2	
DLIALM1A	IO	04-109-009	04-109-006	3/2	
DLIAMP1A	IO	04-109-005	04-109-005	3/2	
DLIAMP1A	IO	04-109-010	04-109-005	3/2	
DLIS11A	IO	04-109-004	04-109-004	3/2	
DLIS21A	IO	04-109-003	04-109-003	3/2	(Z)
DLIS31A	IO	04-109-002	04-109-002	3/2	(Z)
DLI00S1A	IO	04-109-007	04-109-007	3/2	
DOOS481A	IO	04-109-008	04-109-008	3/2	

ELEMENT IDENTIFIER  
AT

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
DOOFB1B	IO	04-170-050	04-170-050	4/5	
GRD04170	G	04-170-052	04-170-034	4/5	
GRD04170	G	04-170-152	04-170-034	4/5	
NCTRB1B	IO	04-170-153	04-170-153	4/5	

ELEMENT IDENTIFIER  
AZ

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
DOOFA1B	IO	04-154-050	04-154-050	4/3	
NCTRA1B	IO	04-154-153	04-154-153	4/3	
SELREF1B	IO	04-154-150	04-154-150	4/3	

ELEMENT IDENTIFIER  
AF

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
DS31NA1A	IO	02-126B-022	02-126B-022	3/8	

ELEMENT IDENTIFIER  
AO

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
DS31NB0A	IO	02-038A-002	02-038A-002	1/7	

ELEMENT IDENTIFIER  
AU

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
DS30TB1B	IO	06-166A-034	06-166A-034	4/9	

ELEMENT IDENTIFIER  
BA

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
GRD04130	G	04-130-034	04-130-052	3/5	
GRD04130	G	04-130-040	04-130-052	3/5	
NCTTB1A	IO	04-130-140	04-130-140	3/5	
8KREFB1A	IO	04-130-035	04-130-035	3/5	

ELEMENT IDENTIFIER  
AI

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
AINT0B	IO	04-061-000	04-061-000	2/2	
BINT0B	IO	04-061-001	04-061-001	2/2	
DLIALM0B	IO	04-061-009	04-061-006	2/2	
DLIALM0B	IO	04-061-006	04-061-006	2/2	
DLIAMP0B	IO	04-061-010	04-061-005	2/2	
DLIAMP0B	IO	04-061-005	04-061-005	2/2	
DLIS10B	IO	04-061-004	04-061-004	2/2	
DLIS20B	IO	04-061-003	04-061-003	2/2	(Z)
DLIS30B	IO	04-061-002	04-061-002	2/2	(Z)
DLI00S0B	IO	04-061-007	04-061-007	2/2	
DOOS480B	IO	04-061-008	04-061-008	2/2	

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TRANSMISSION RATE CONVERTER UNIT

DWG SIZE: C2      ISSUE: 4M

AT&T BELL LABORATORIES      SD-5D086-01      GBZ

CAD 1  
UNIT SYMBOL

ELEMENT IDENTIFIER  
BB

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
DOOFB1A	IO	04-130-050	04-130-050	3/5	
GRD04130	G	04-130-052	04-130-152	3/5	
GRD04130	G	04-130-152	04-130-152	3/5	
NCTRB1A	IO	04-130-153	04-130-153	3/5	

ELEMENT IDENTIFIER  
BH

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
DOOFA1A	IO	04-114-050	04-114-050	3/3	
GRD04114	G	04-114-152	04-114-152	3/3	
GRD04114	G	04-114-052	04-114-152	3/3	
GRD04114	G	04-114-148	04-114-152	3/3	
NCTRA1A	IO	04-114-153	04-114-153	3/3	
SELREF1A	IO	04-114-150	04-114-150	3/3	

ELEMENT IDENTIFIER  
BL

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
DS30TA0B	IO	06-0788-054	06-0788-054	2/10	

ELEMENT IDENTIFIER  
BR

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
DOOFB0A	IO	04-042-050	04-042-050	1/5	
GRD04042	G	04-042-152	04-042-052	1/5	
GRD04042	G	04-042-052	04-042-052	1/5	
NCTRB0A	IO	04-042-153	04-042-153	1/5	

ELEMENT IDENTIFIER  
BC

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
DS30TB1A	IO	06-126A-034	06-126A-034	3/9	

ELEMENT IDENTIFIER  
BI

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
GRD04082	G	04-082-034	04-082-052	2/5	
GRD04082	G	04-082-040	04-082-052	2/5	
NCTTB0B	IO	04-082-140	04-082-140	2/5	
8KREFB0B	IO	04-082-035	04-082-035	2/5	

ELEMENT IDENTIFIER  
BO

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
*50B	P	04-066-134	04-066-134	2/3	
GRD04066	G	04-066-139	04-066-052	2/3	
GRD04066	G	04-066-040	04-066-052	2/3	
MSTROB	IO	04-066-039	04-066-039	2/3	
NCTTA0B	IO	04-066-140	04-066-140	2/3	
8KREFA0B	IO	04-066-035	04-066-035	2/3	

ELEMENT IDENTIFIER  
BS

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
DS30TBOA	IO	06-038A-034	06-038A-034	1/9	

ELEMENT IDENTIFIER  
BD

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
DS30TA1A	IO	06-126B-054	06-126B-054	3/10	

ELEMENT IDENTIFIER  
BJ

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
DOOFB0B	IO	04-082-050	04-082-050	2/5	
GRD04082	G	04-082-152	04-082-052	2/5	
GRD04082	G	04-082-052	04-082-052	2/5	
NCTRB0B	IO	04-082-153	04-082-153	2/5	

ELEMENT IDENTIFIER  
BP

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
DOOFA0B	IO	04-066-050	04-066-050	2/3	
GRD04066	G	04-066-152	04-066-052	2/3	
GRD04066	G	04-066-052	04-066-052	2/3	
GRD04066	G	04-066-148	04-066-052	2/3	
NCTRA0B	IO	04-066-153	04-066-153	2/3	
SELREF0B	IO	04-066-150	04-066-150	2/3	

ELEMENT IDENTIFIER  
BT

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
DS30TA0A	IO	06-038B-054	06-038B-054	1/10	

ELEMENT IDENTIFIER  
BG

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
*51A	P	04-114-134	04-114-134	3/3	
GRD04114	G	04-114-040	04-114-152	3/3	
GRD04114	G	04-114-139	04-114-152	3/3	
MSTR1A	IO	04-114-039	04-114-039	3/3	
NCTTA1A	IO	04-114-140	04-114-140	3/3	
8KREFA1A	IO	04-114-035	04-114-035	3/3	

ELEMENT IDENTIFIER  
BK

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
DS30TB0B	IO	06-078A-034	06-078A-034	2/9	

ELEMENT IDENTIFIER  
BO

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
GRD04042	G	04-042-034	04-042-052	1/5	
GRD04042	G	04-042-040	04-042-052	1/5	
NCTTB0A	IO	04-042-140	04-042-140	1/5	
8KREFB0A	IO	04-042-035	04-042-035	1/5	

ELEMENT IDENTIFIER  
BW

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
*50A	P	04-026-134	04-026-134	1/3	
GRD04026	G	04-026-040	04-026-040	1/3	
GRD04026	G	04-026-139	04-026-040	1/3	
MSTROA	IO	04-026-039	04-026-039	1/3	
NCTTA0A	IO	04-026-140	04-026-140	1/3	
8KREFA0A	IO	04-026-035	04-026-035	1/3	

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TRANSMISSION RATE CONVERTER UNIT

OWG SIZE	ISSUE
C2	3M

AT&T  
BELL LABORATORIES

SD-5D086-01

GB3

CAD 1  
UNIT SYMBOL

ELEMENT IDENTIFIER  
BX

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
DODFA0A	ID	04-026-090	04-026-050	1/3	
GRD04026	G	04-026-152	04-026-040	1/3	
GRD04026	G	04-026-148	04-026-040	1/3	
GRD04026	G	04-026-052	04-026-040	1/3	
NCTRA0A	ID	04-026-153	04-026-153	1/3	
SELREF0A	ID	04-026-150	04-026-150	1/3	

ELEMENT IDENTIFIER  
BY

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
-480A	P	02-016-008	02-016-008	1/6	
-480B	P	02-056-008	02-056-008	2/6	
-481A	P	02-104-008	02-104-008	3/6	
-481B	P	02-144-008	02-144-008	4/6	

ELEMENT IDENTIFIER  
BZ

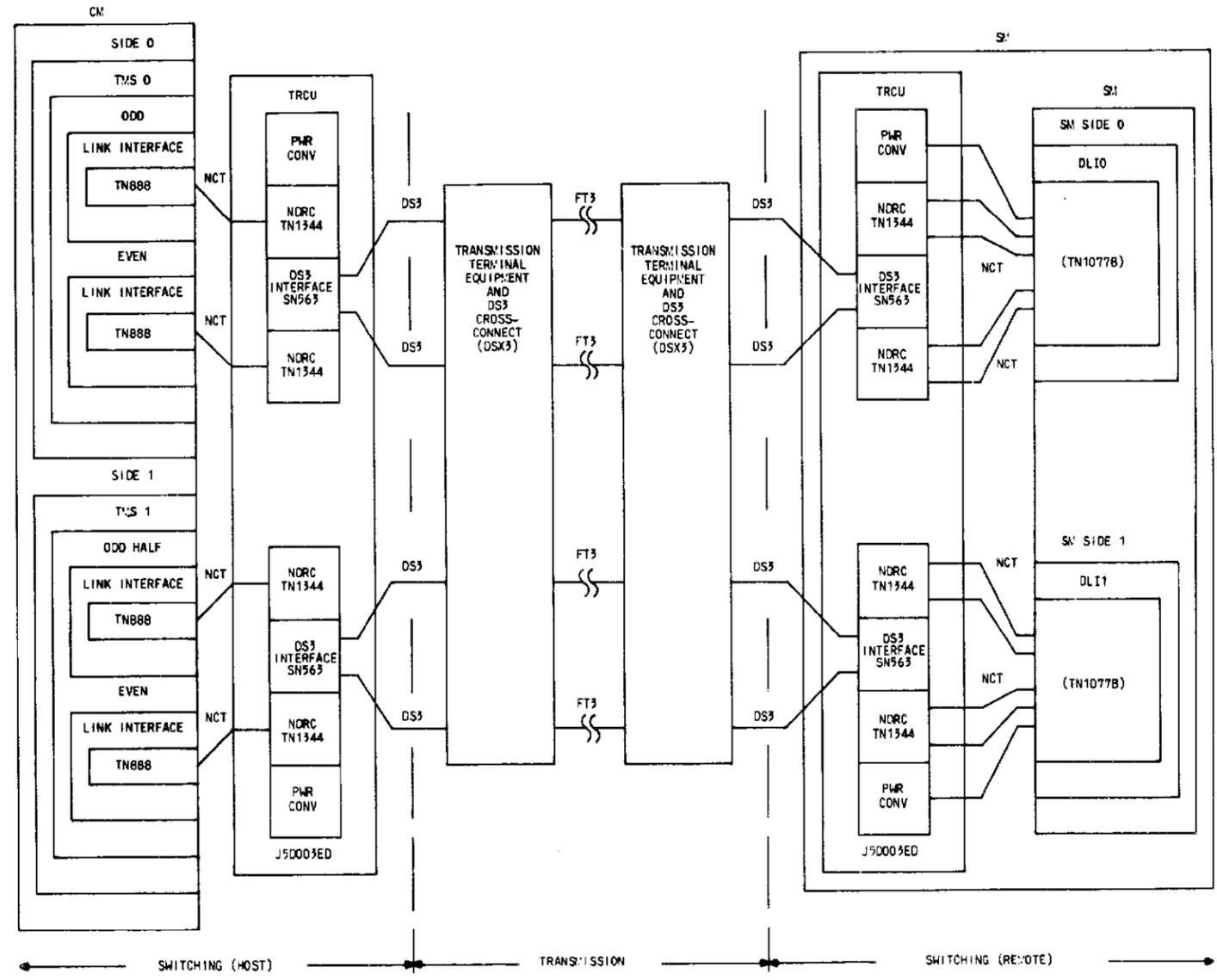
TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
-48RTN0A	G	02-016-004	02-016-004	1/6	
-48RTN0B	G	02-056-004	02-056-004	2/6	
-48RTN1A	G	02-104-004	02-104-004	3/6	
-48RTN1B	G	02-144-004	02-144-004	4/6	

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TRANSMISSION RATE CONVERTER UNIT		ISSUE 3M
AT&T BELL LABORATORIES	SD-50086-01	GB4

0 1 2 3 4 5 6 7 8 9

BD I

SYSTEM APPLICATION DIAGRAM  
DRM NCT LINKS



A  
B  
C  
D  
E  
F  
G  
H

A  
B  
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D  
E  
F  
G  
H

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TRANSMISSION RATE CONVERTER UNIT		DWG SIZE	ISSUE
		68	2B
AT&T BELL LABORATORIES		SD-5D086-01	SHEET HI

0 1 2 3 4 5 6 7 8 9