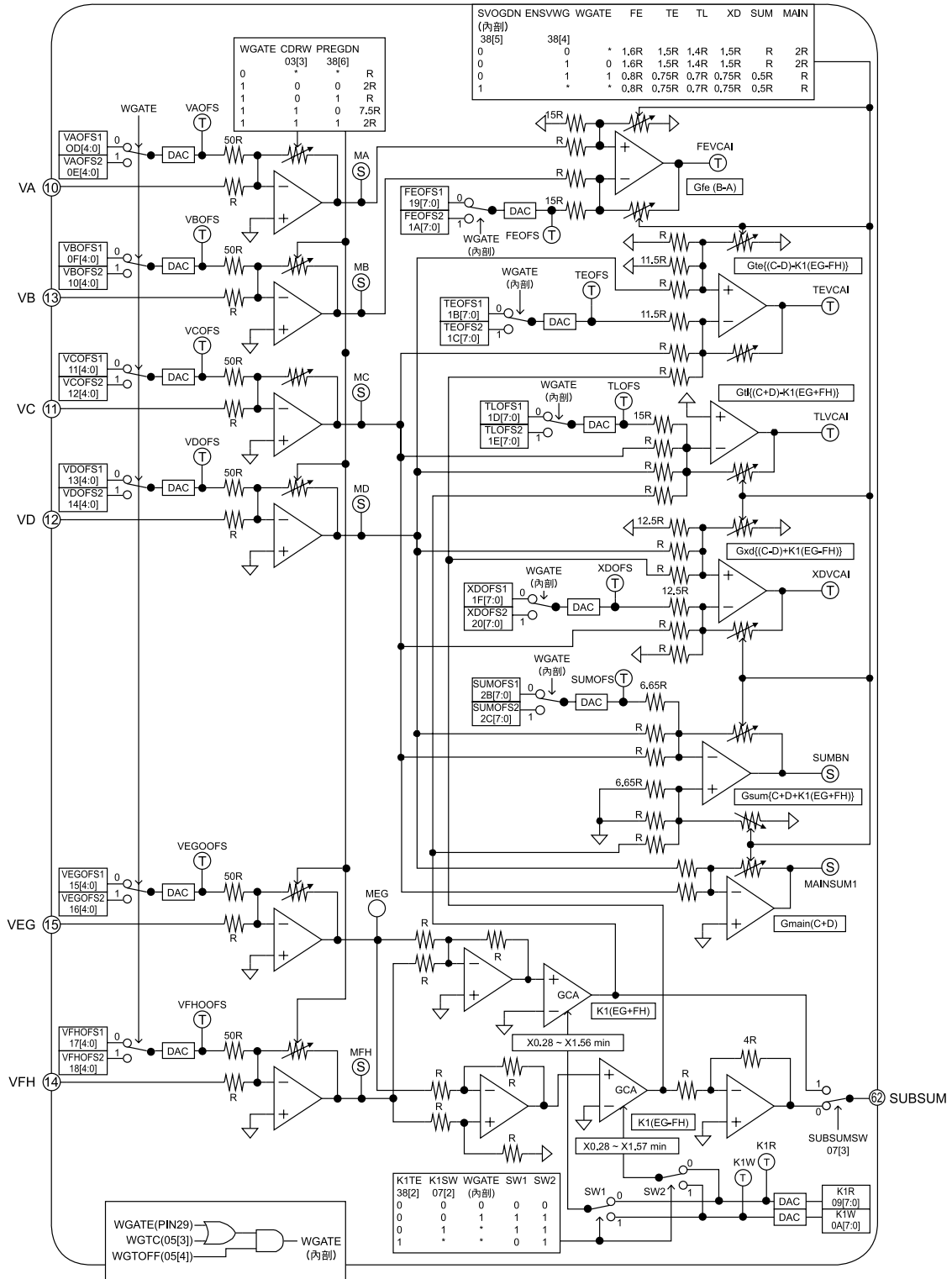


● Main Components Block Diagram and Pin Description

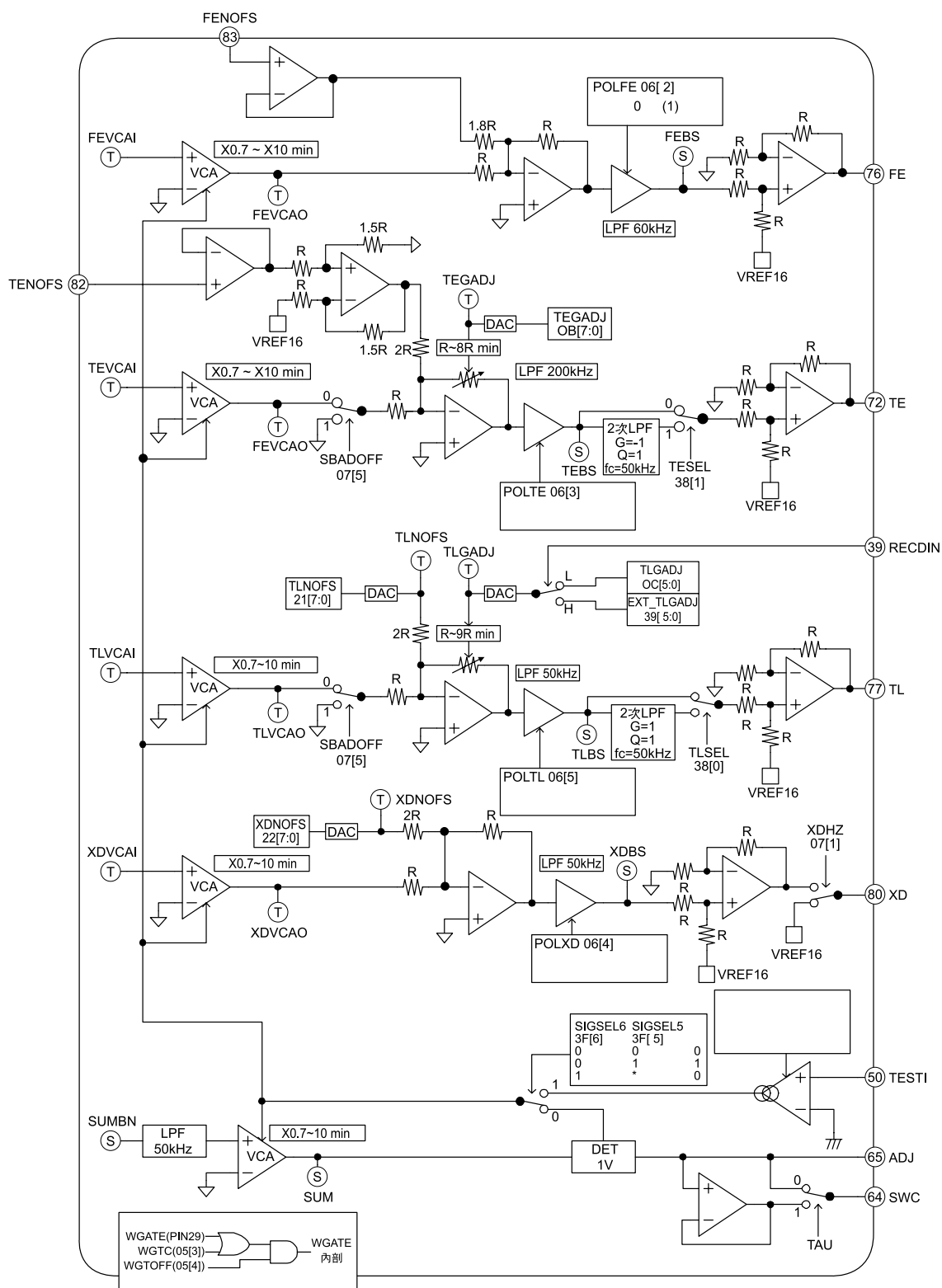
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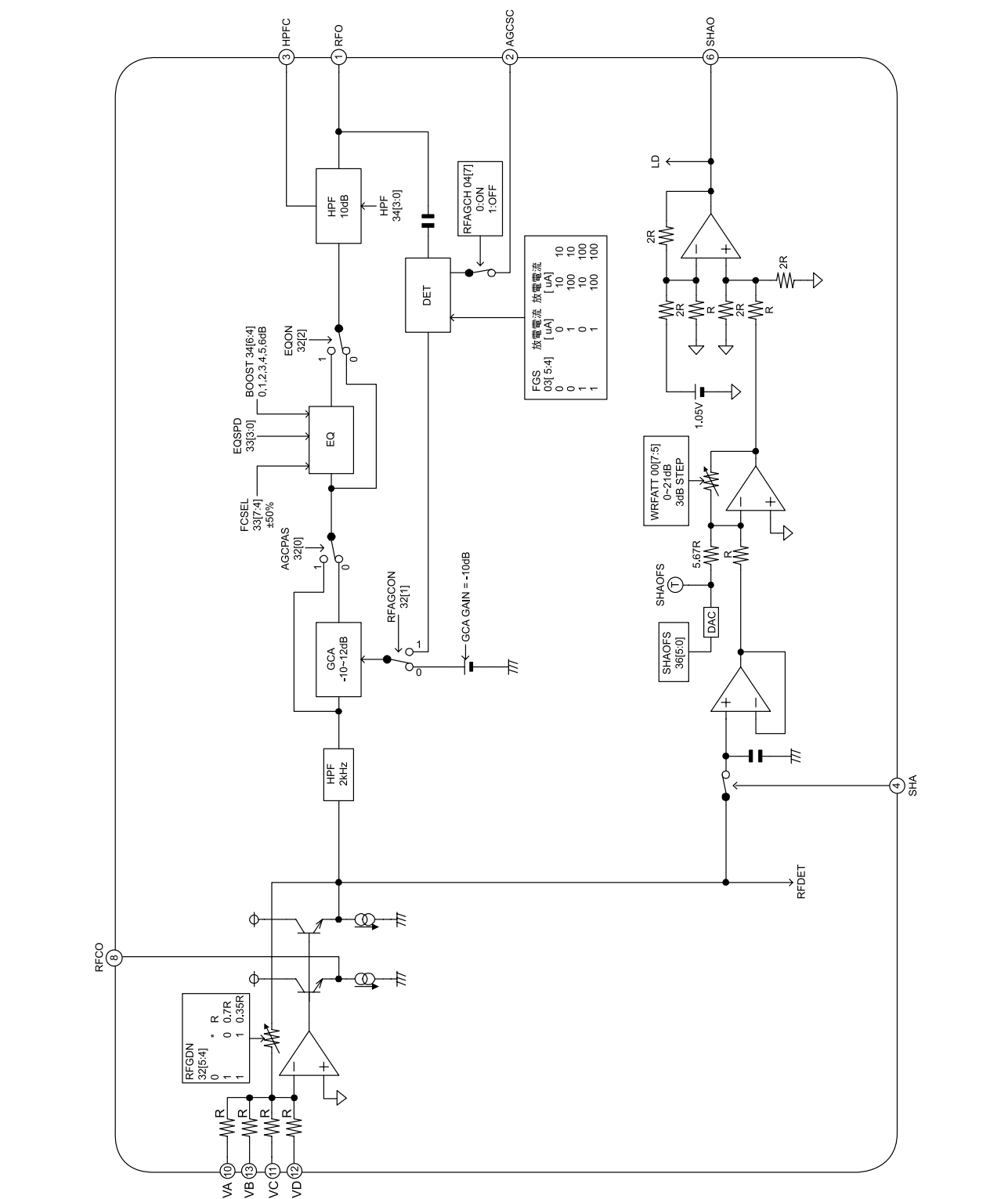
1	RFO	VREF2IN	100
2	AGCSC	FSPD	99
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4	SHA	IRCM1	97
5	AGND	IRCAN	96
6	SHAO	IRC	95
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19	PKC	TEN	82
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27	AGCHOLD		
28	XWGATE		
29	WGATE		
30	XRESET		
31	XLDON		
32	ALD		
33	SCFCLK		
34	XACS		
35	SCK		
36	SI		
37	SO		
38	TED		
39	RECDIN		
40	NC		
41	VDD		
42	DGND		
43	VCCA		
44	RESMP		
45	AGND		
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47	MTR1		
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49	WBL		
50	TESTI		
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		WBLC1	59
		WBLC2	58
		WBLC3	57
		WBLC4	56
		AGC1	55
		AGC2	54
		NC	53
		PPO	52
		PPI	51

● RL3E804

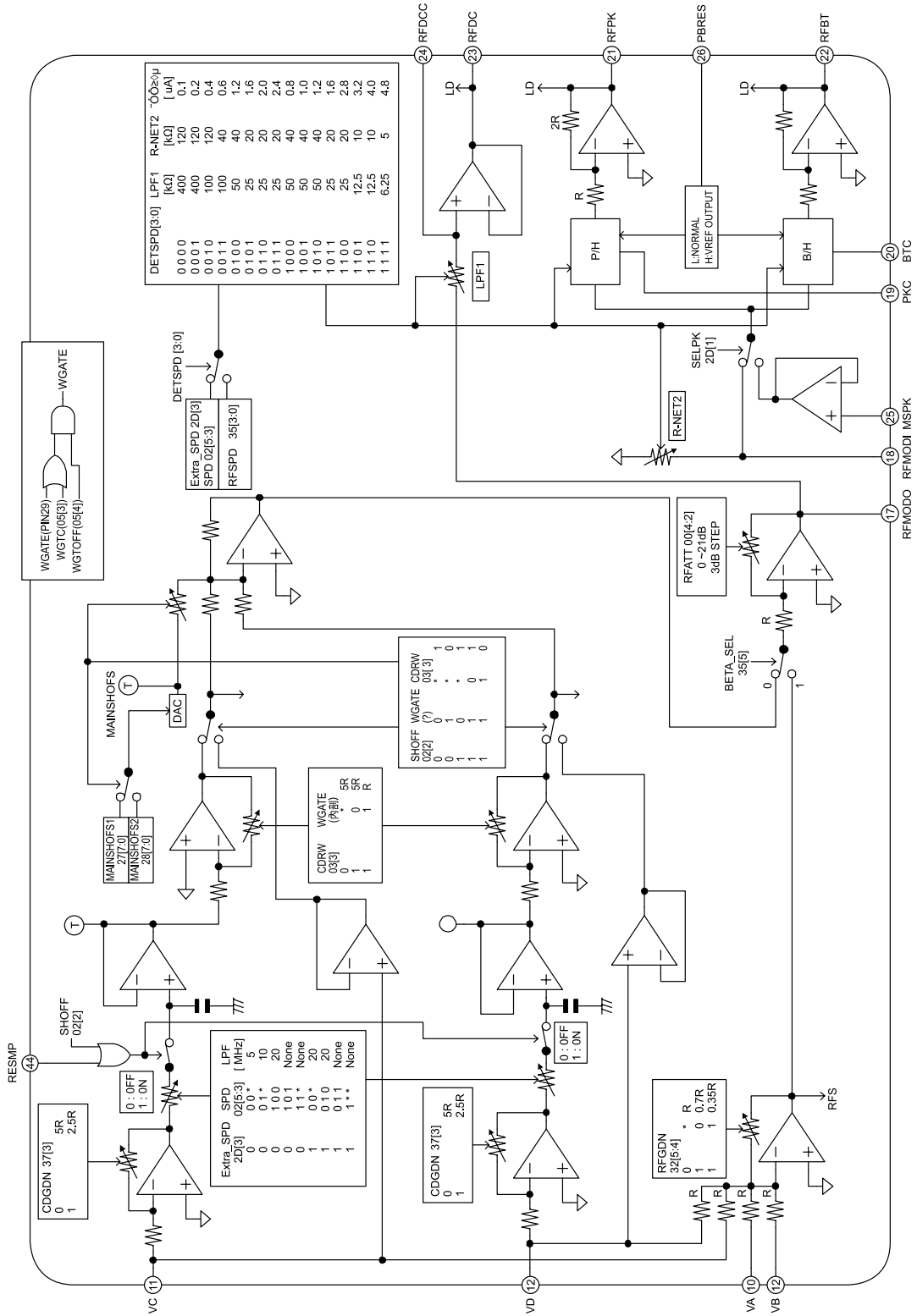


● RL3E804

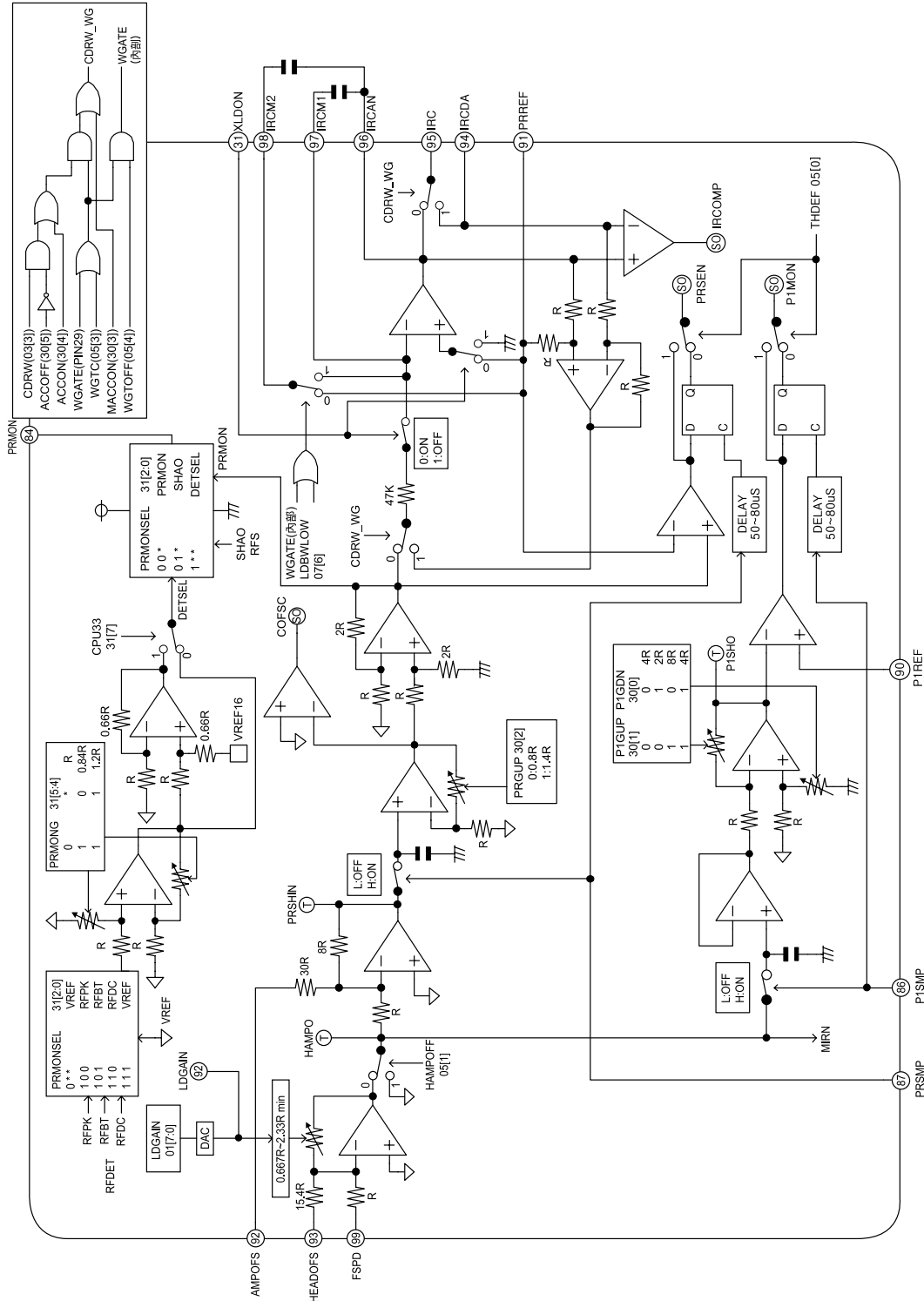




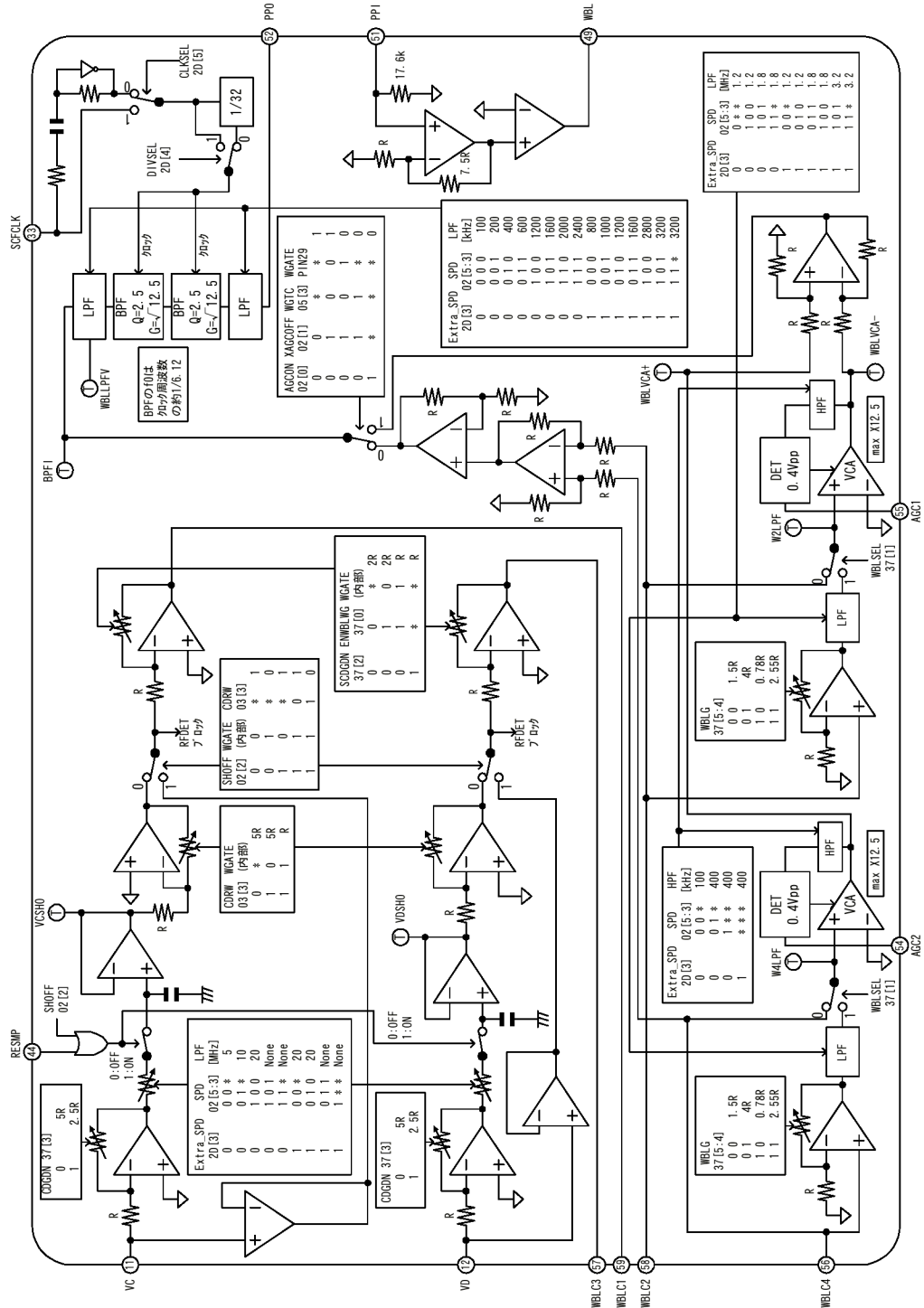
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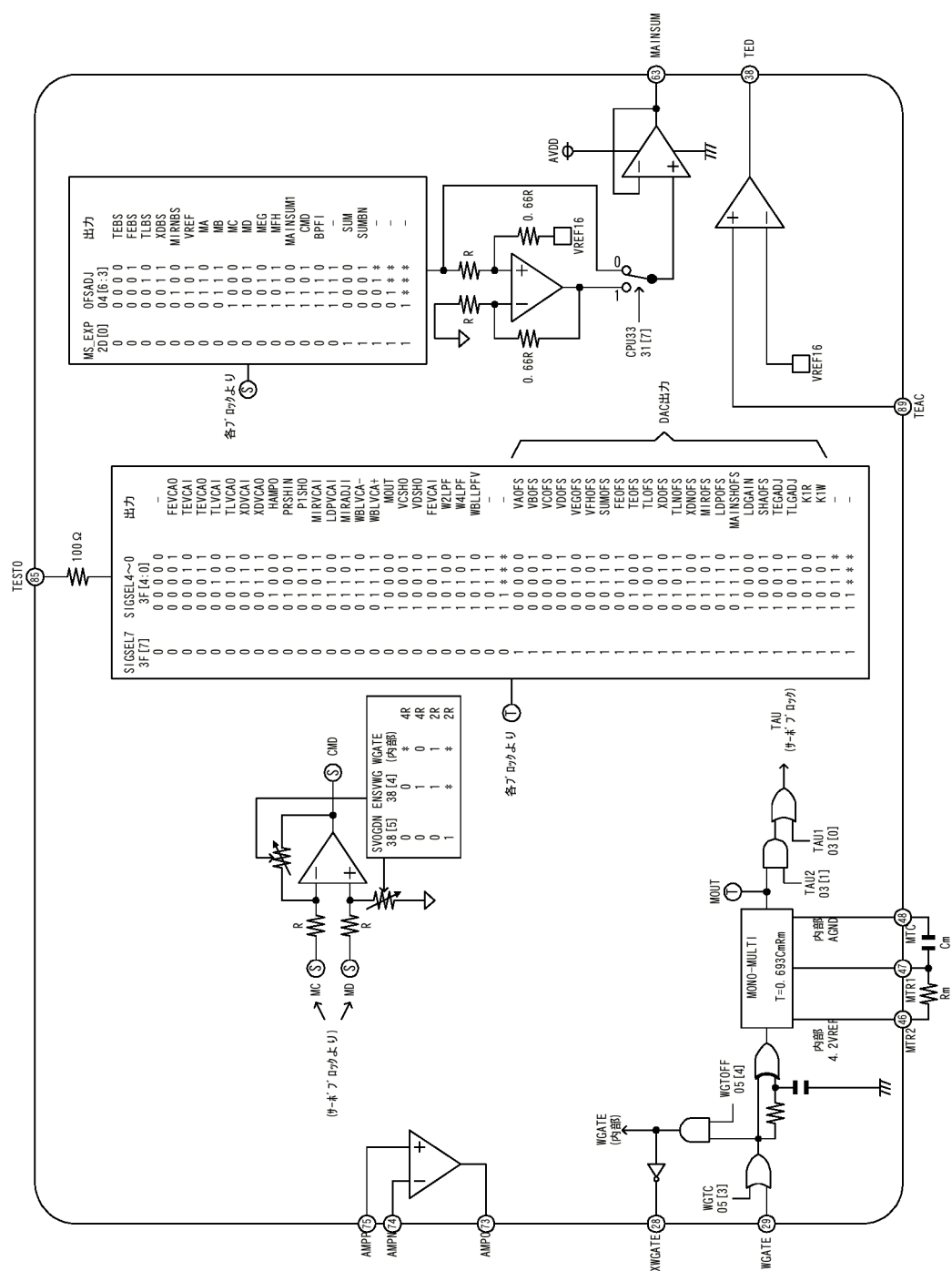
● RL3E804



● RL3E804

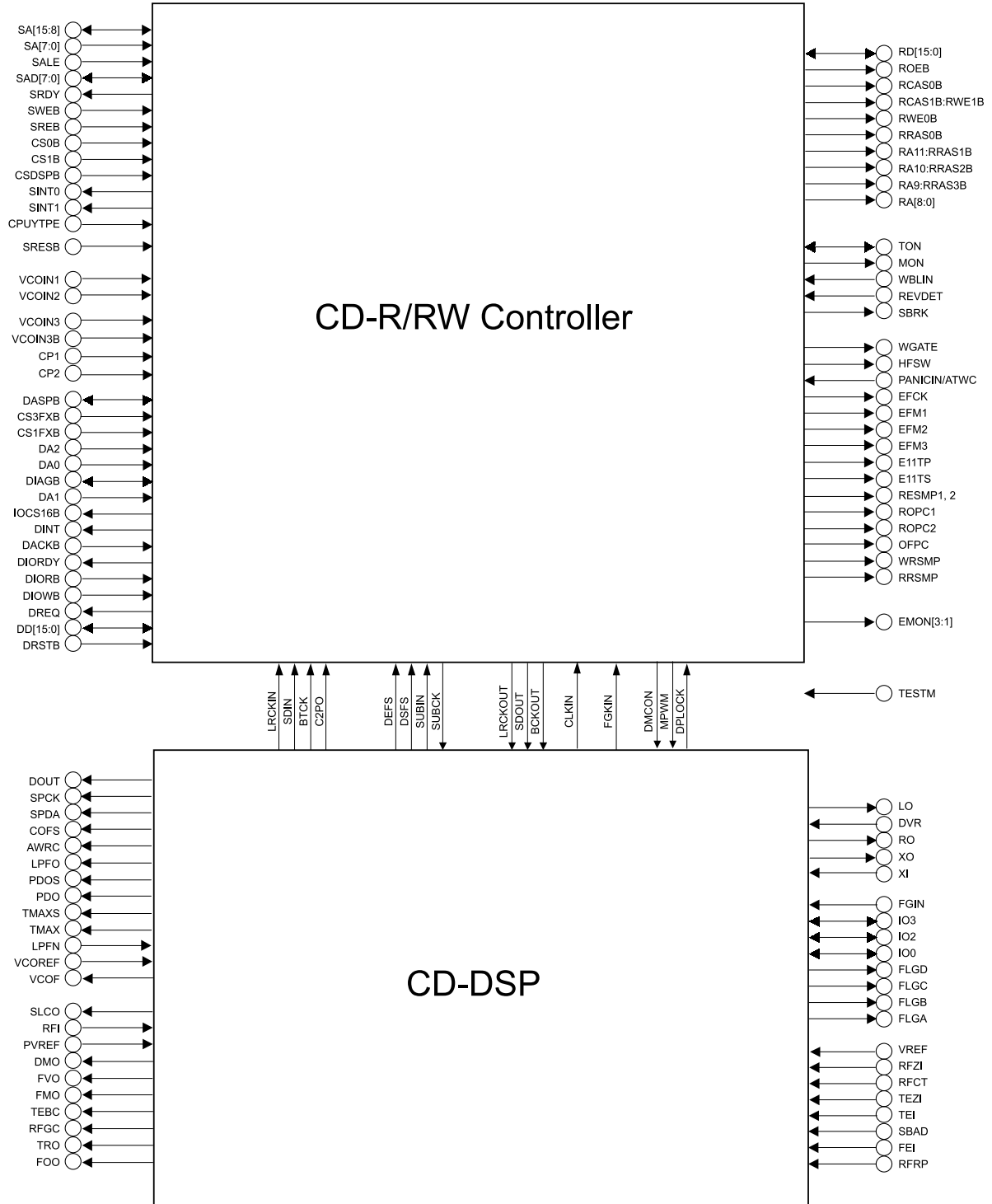


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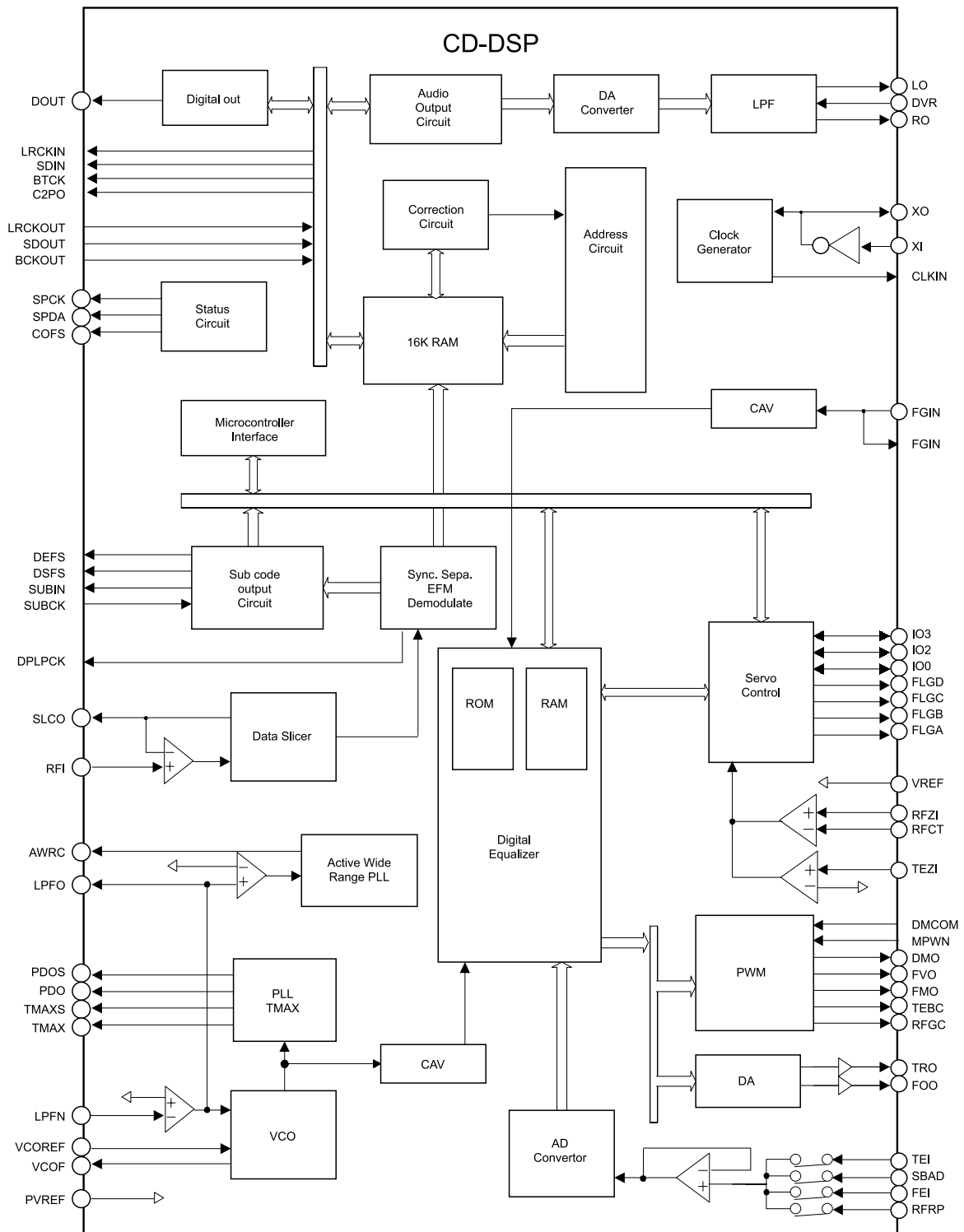


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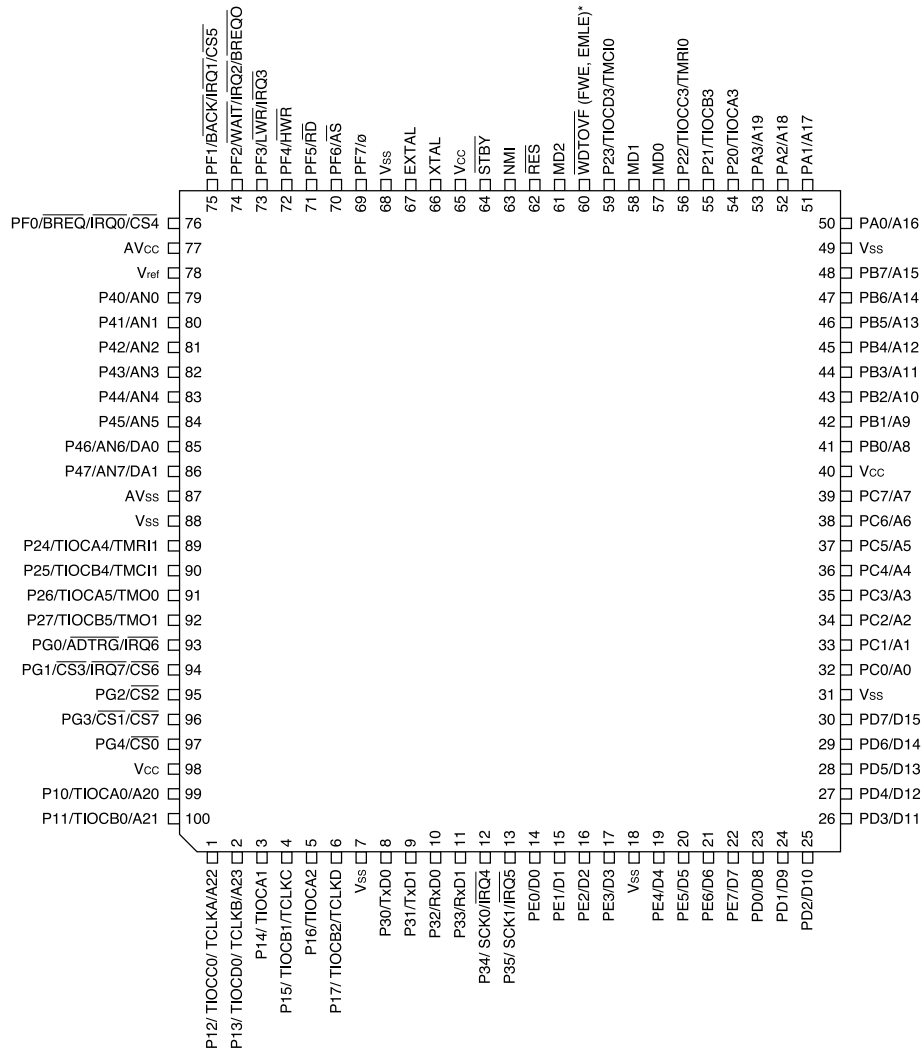
● RL3E804



● RL3E804

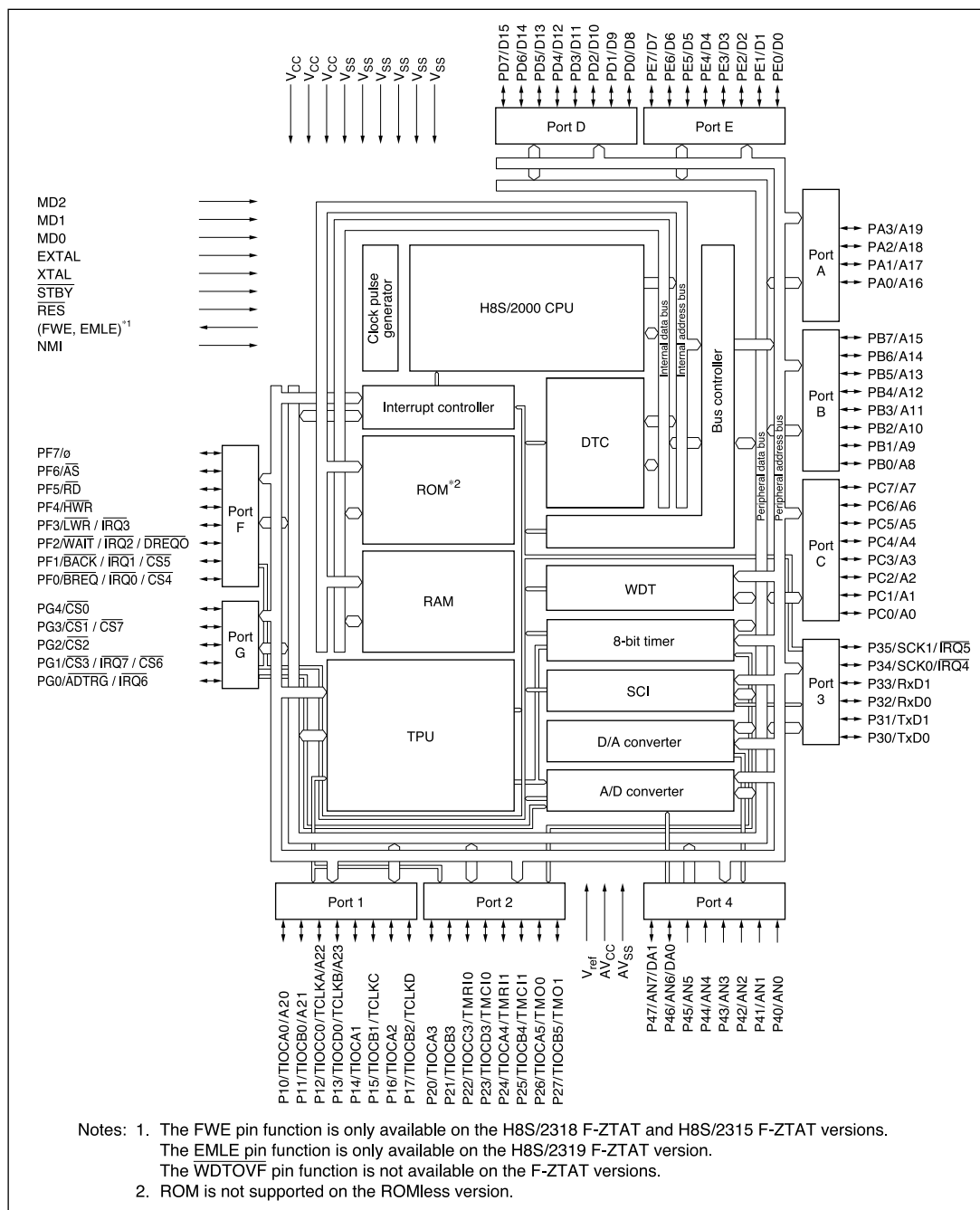


● RL3E804



Note: * The FWE pin function is only available on the H8S/2318 F-ZTAT and H8S/2315 F-ZTAT versions.
The EMLE pin function is only available on the H8S/2319 F-ZTAT version.
The WDTOVF pin function is not available on the F-ZTAT versions.

● RL3E804



●Pin Functions in Each Operating Mode

Pin No.		Pin Name				
TFP-100B	FP-100A	Mode	Mode	Mode	Mode	Flash Memory Programmer Mode ^{*2}
		4	5	6 ^{*1}	7 ^{*1}	
1	3	P12/TIOCC0/ TCLKA/A22	P12/TIOCC0/ TCLKA/A22	P12/TIOCC0/ TCLKA/A22	P12/TIOCC0/ TCLKA	NC
2	4	P13/TIOCD0/ TCLKB/A23	P13/TIOCD0/ TCLKB/A23	P13/TIOCD0/ TCLKB/A23	P13/TIOCD0/ TCLKB	NC
3	5	P14/TIOCA1	P14/TIOCA1	P14/TIOCA1	P14/TIOCA1	NC
4	6	P15/TIOCB1/ TCLKC	P15/TIOCB1/ TCLKC	P15/TIOCB1/ TCLKC	P15/TIOCB1/ TCLKC	NC
5	7	P16/TIOCA2	P16/TIOCA2	P16/TIOCA2	P16/TIOCA2	NC
6	8	P17/TIOCB2/ TCLKD	P17/TIOCB2/ TCLKD	P17/TIOCB2/ TCLKD	P17/TIOCB2/ TCLKD	NC
7	9	Vss	Vss	Vss	Vss	Vss
8	10	P30/TxD0	P30/TxD0	P30/TxD0	P30/TxD0	NC
9	11	P31/TxD1	P31/TxD1	P31/TxD1	P31/TxD1	NC
10	12	P32/RxD0	P32/RxD0	P32/RxD0	P32/RxD0	NC
11	13	P33/RxD1	P33/RxD1	P33/RxD1	P33/RxD1	NC
12	14	P34/SCK0/IRQ4	P34/SCK0/IRQ4	P34/SCK0/IRQ4	P34/SCK0/IRQ4	NC
13	15	P35/SCK1/IRQ5	P35/SCK1/IRQ5	P35/SCK1/IRQ5	P35/SCK1/IRQ5	NC
14	16	PE0/D0	PE0/D0	PE0/D0	PE0	NC
15	17	PE1/D1	PE1/D1	PE1/D1	PE1	NC
16	18	PE2/D2	PE2/D2	PE2/D2	PE2	NC
17	19	PE3/D3	PE3/D3	PE3/D3	PE3	NC
18	20	Vss	Vss	Vss	Vss	Vss
19	21	PE4/D4	PE4/D4	PE4/D4	PE4	NC
20	22	PE5/D5	PE5/D5	PE5/D5	PE5	NC
21	23	PE6/D6	PE6/D6	PE6/D6	PE6	NC
22	24	PE7/D7	PE7/D7	PE7/D7	PE7	NC
23	25	D8	D8	D8	PD0	FO0
24	26	D9	D9	D9	PD1	FO1
25	27	D10	D10	D10	PD2	FO2
26	28	D11	D11	D11	PD3	FO3
27	29	D12	D12	D12	PD4	FO4
28	30	D13	D13	D13	PD5	FO5
29	31	D14	D14	D14	PD6	FO6
30	32	D15	D15	D15	PD7	FO7
31	33	Vss	Vss	Vss	Vss	Vss
32	34	A0	A0	PC0/A0	PC0	A0
33	35	A1	A1	PC1/A1	PC1	A1
34	36	A2	A2	PC2/A2	PC2	A2
35	37	A3	A3	PC3/A3	PC3	A3
36	38	A4	A4	PC4/A4	PC4	A4
37	39	A5	A5	PC5/A5	PC5	A5
38	40	A6	A6	PC6/A6	PC6	A6
39	41	A7	A7	PC7/A7	PC7	A7
40	42	Vcc	Vcc	Vcc	Vcc	Vcc
41	43	A8	A8	PB0/A8	PB0	A8
42	44	A9	A9	PB1/A9	PB1	A9
43	45	A10	A10	PB2/A10	PB2	A10
44	46	A11	A11	PB3/A11	PB3	A11
45	47	A12	A12	PB4/A12	PB4	A12
46	48	A13	A13	PB5/A13	PB5	A13
47	49	A14	A14	PB6/A14	PB6	A14
48	50	A15	A15	PB7/A15	PB7	A15

●Pin Functions in Each Operating Mode

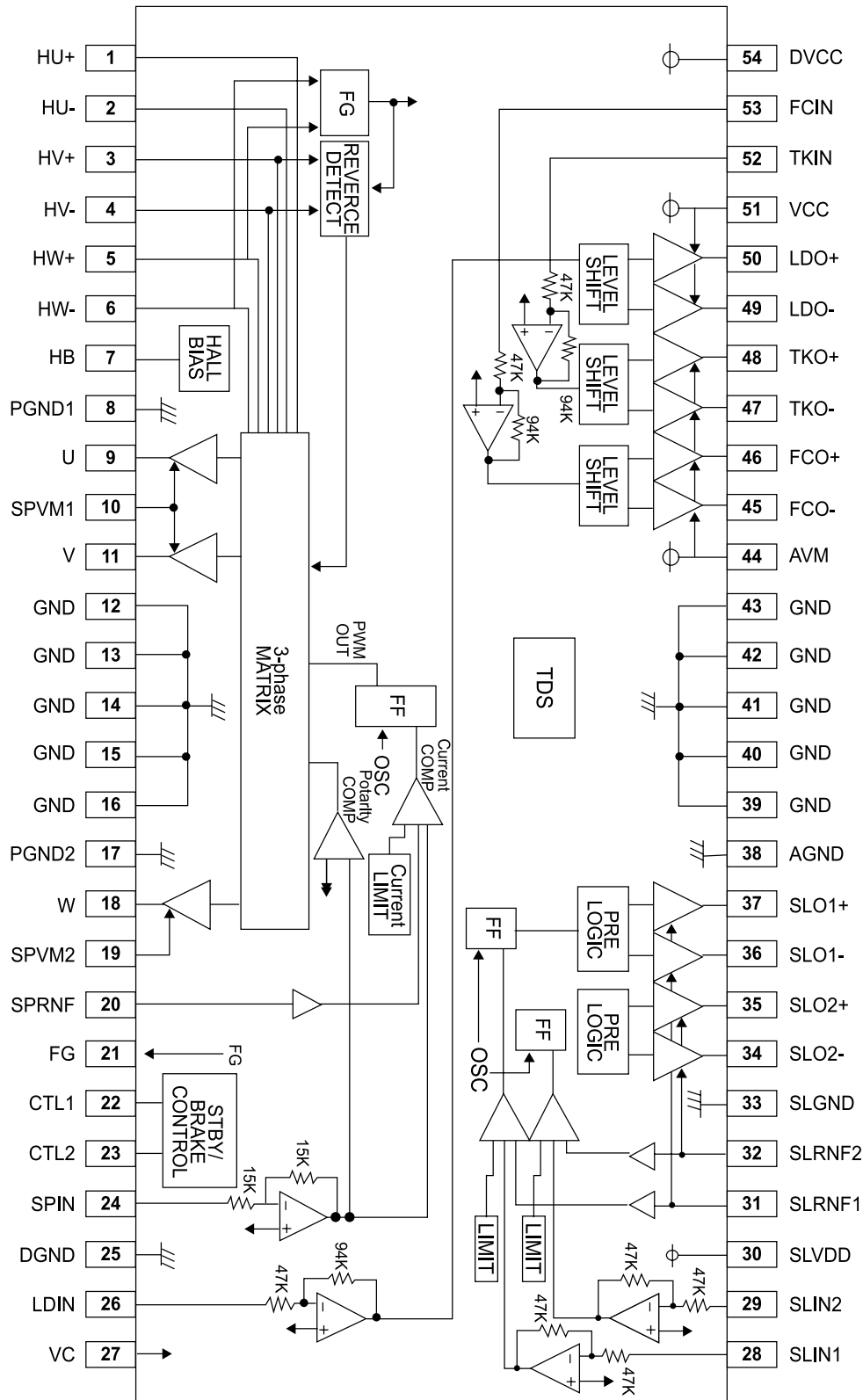
Pin No.		Pin Name				
TFP-100B	FP-100A	Mode	Mode	Mode	Mode	Flash Memory Programmer Mode ^{*2}
		4	5	6 ^{*1}	7 ^{*1}	
49	51	Vss	Vss	Vss	Vss	Vss
50	52	A16	A16	PA0/A16	PA0	A16
51	53	A17	A17	PA1/A17	PA1	A17
52	54	A18	A18	PA2/A18	PA2	A18
53	55	A19	A19	PA3/A19	PA3	NC
54	56	P20/TIOCA3	P20/TIOCA3	P20/TIOCA3	P20/TIOCA3	OE
55	57	P21/TIOCB3	P21/TIOCB3	P21/TIOCB3	P21/TIOCB3	CE
56	58	P22/TIOCC3/ TMR10	P22/TIOCC3/ TMR10	P22/TIOCC3/ TMR10	P22/TIOCC3/ TMR10	WE
57	59	MD0	MD0	MD0	MD0	Vss
58	60	MD1	MD1	MD1	MD1	Vss
59	61	P23/TIOCD3/ TMC10	P23/TIOCD3/ TMC10	P23/TIOCD3/ TMC10	P23/TIOCD3/ TMC10	Vcc
60	62	WDTOVF (FWE, EMLE) ^{*3}	WDTOVF (FWE, EMLE) ^{*3}	WDTOVF (FWE, EMLE) ^{*3}	WDTOVF (FWE, EMLE) ^{*3}	FWE
61	63	MD2	MD2	MD2	MD2	Vss
62	64	RES	RES	RES	RES	RES
63	65	NMI	NMI	NMI	NMI	Vcc
64	66	STBY	STBY	STBY	STBY	Vcc
65	67	Vcc	Vcc	Vcc	Vcc	Vcc
66	68	XTAL	XTAL	XTAL	XTAL	XTAL
67	69	EXTAL	EXTAL	EXTAL	EXTAL	EXTAL
68	70	Vss	Vss	Vss	Vss	Vss
69	71	PF7/Ø	PF7/Ø	PF7/Ø	PF7/Ø	NC
70	72	PF6/AS	PF6/AS	PF6/AS	PF6	NC
71	73	RD	RD	RD	PF5	NC
72	74	HWR	HWR	HWR	PF4	NC
73	75	PF3/LWR/IRQ3	PF3/LWR/IRQ3	PF3/LWR/IRQ3	PF3/IRQ3	NC
74	76	PF2/WAIT/ IRQ2/DREQO	PF2/WAIT/ IRQ2/DREQO	PF2/WAIT/ IRQ2/DREQO	PF2/IRQ2	Vcc
75	77	PF1/BACK/ IRQ1/CS5	PF1/BACK/ IRQ1/CS5	PF1/BACK/ IRQ1/CS5	PF1/IRQ1	Vss
76	78	PF0/BREQ/ IRQ0/CS4	PF0/BREQ/ IRQ0/CS4	PF0/BREQ/ IRQ0/CS4	PF0/IRQ0	Vss
77	79	AVcc	AVcc	AVcc	AVCC	Vcc
78	80	Vref	Vref	Vref	Vref	Vcc
79	81	P40/AN0	P40/AN0	P40/AN0	P40/AN0	NC
80	82	P41/AN1	P41/AN1	P41/AN1	P41/AN1	NC
81	83	P42/AN2	P42/AN2	P42/AN2	P42/AN2	NC
82	84	P43/AN3	P43/AN3	P43/AN3	P43/AN3	NC
83	85	P44/AN4	P44/AN4	P44/AN4	P44/AN4	NC
84	86	P45/AN5	P45/AN5	P45/AN5	P45/AN5	NC
85	87	P46/AN6/DA0	P46/AN6/DA0	P46/AN6/DA0	P46/AN6/DA0	NC
86	88	P47/AN7/DA1	P47/AN7/DA1	P47/AN7/DA1	P47/AN7/DA1	NC
87	89	AVss	AVss	AVss	AVss	Vss
88	90	Vss	Vss	Vss	Vss	Vss
89	91	P24/TIOCA4/ TMR11	P24/TIOCA4/ TMR11	P24/TIOCA4/ TMR11	P24/TIOCA4/ TMR11	NC
90	92	P25/TIOCB4/ TMC11	P25/TIOCB4/ TMC11	P25/TIOCB4/ TMC11	P25/TIOCB4/ TMC11	Vss
91	93	P26/TIOCA5/ TMO0	P26/TIOCA5/ TMO0	P26/TIOCA5/ TMO0	P26/TIOCA5/ TMO0	NC

●Pin Functions in Each Operating Mode

Pin No.		Pin Name				
TFP-100B	FP-100A	Mode	Mode	Mode	Mode	Flash Memory Programmer Mode ^{*2}
		4	5	6 ^{*1}	7 ^{*1}	
92	94	P27/TIOCB5/ TMO1	P27/TIOCB5/ TMO1	P27/TIOCB5/ TMO1	P27/TIOCB5/ TMO1	NC
93	95	PG0/IRQ6/ ADTRG	PG0/IRQ6/ ADTRG	PG0/IRQ6/ ADTRG	PG0/IRQ6/ ADTRG	NC
94	96	PG1/CS3/ IRQ7/CS6	PG1/CS3/ IRQ7/CS6	PG1/CS3/ IRQ7/CS6	PG1/IRQ7	NC
95	97	PG2/CS2	PG2/CS2	PG2/CS2	PG2	NC
96	98	PG3/CS1/CS7	PG3/CS1/CS7	PG3/CS1/CS7	PG3	NC
97	99	PG4/CS0	PG4/CS0	PG4/CS0	PG4	NC
98	100	Vcc	Vcc	Vcc	Vcc	Vcc
99	1	P10/TIOCA0/A20	P10/TIOCA0/A20	P10/TIOCA0/A20	P10/TIOCA0	NC
100	2	P11/TIOCB0/A21	P11/TIOCB0/A21	P11/TIOCB0/A21	P11/TIOCB0	NC

- Notes :**
1. Only modes 4 and 5 are available on the ROMless version.
 2. Flash memory programmer mode information is preliminary.
 3. The FWE pin function is only available on the H8S/2318 F-ZTAT and H8S/2315 F-ZTAT versions.
The EMLE pin function is only available on the H8S/2319 F-ZTAT version.
It cannot be used as a WDTOVF pin on the F-ZTAT version.

● BD7902CFS



● BD7902CFS

Pin Descriptions

Terminal	Symbol	Terminal Function	Terminal	Symbol	Terminal Function
1	HU+	Hall amp.U positive input	54	DVCC	PWM block control power supply
2	HU-	Hall amp.U negative input	53	FCIN	Focus driver input
3	HV+	Hall amp.U positive input	52	TKIN	Tracking driver input
4	HV-	Hall amp.U negative input	51	VCC	BTL pre and Loading power supply
5	HW+	Hall amp.U positive input	50	LDO+	Loading driver positive output
6	HW-	Hall amp.U negative input	49	LDO-	Loading driver negative output
7	HB	Hall bias	48	TKO+	Tracking driver positive output
8	PGND1	Spindle driver power ground1	47	TKO-	Tracking driver negative output
9	U	Spindle driver output U	46	FCO+	Focus driver positive output
10	SPVM1	Spindle driver power supply1	45	FCO-	Focus driver negative output
11	V	Spindle driver output V	44	AVM	Actuator driver block power supply
12	GND	GND	43	GND	GND
13	GND	GND	42	GND	GND
14	GND	GND	41	GND	GND
15	GND	GND	40	GND	GND
16	GND	GND	39	GND	GND
17	PGND2	Spindle driver power ground 2	38	AGND	Ground
18	W	Spindle driver output W	37	SLO1+	Sled drive 1 positive output
19	SPVM2	Spindle driver power supply 2	36	SLO1-	Sled drive 1 negative output
20	SPRNF	Spindle driver urrent sense	35	SLO2+	Sled drive 2 positive output
21	FG	Frequency generator output	34	SLO2-	Sled drive 2 negative output
22	CTL1	Driver logic control input1	33	SLGND	Sled driver power ground
23	CTL2	Driver logic control input2	32	SLRNF2	Sled driver 2 current sense
24	SPIN	Spindle driver input	31	SLRNF1	Sled driver 1 current sense
25	DGND	PWM block pre-ground	30	SLVDD	Sled driver PowerMos pre-supply
26	LDIN	Loading driver input	29	SLIN2	Sled driver 2 input
27	VC	Reference voltage input	28	SLIN1	Sled driver 1 input

●Electrical Parts List

LOC	CODE NO	DESCRIPTION
B501	3301-001082	"CORE-FERRITE BEAD;AB,60OHM,3.2X2.5X1.3MM"
B502	3301-001082	"CORE-FERRITE BEAD;AB,60OHM,3.2X2.5X1.3MM"
B503	3301-001082	"CORE-FERRITE BEAD;AB,60OHM,3.2X2.5X1.3MM"
B504	3301-001082	"CORE-FERRITE BEAD;AB,60OHM,3.2X2.5X1.3MM"
B505	3301-001082	"CORE-FERRITE BEAD;AB,60OHM,3.2X2.5X1.3MM"
C101	2203-000888	"C-CERAMIC,CHIP;4.7nF,10%,50V,X7R,TP,1608"
C102	2203-000972	"C-CERAMIC,CHIP;47nF,10%,16V,X7R,TP,1608"
C103	2203-000236	"C-CERAMIC,CHIP;0.1nF,5%,50V,NP0,TP,1608"
C104	2203-001724	"C-CERAMIC,CHIP;4700NF,+80-20%,16V,Y5V,TP"
C105	2203-000440	"C-CERAMIC,CHIP;1nF,10%,50V,X7R,TP,1608,-"
C106	2203-000888	"C-CERAMIC,CHIP;4.7nF,10%,50V,X7R,TP,1608"
C107	2203-000888	"C-CERAMIC,CHIP;4.7nF,10%,50V,X7R,TP,1608"
C108	2203-001607	"C-CERAMIC,CHIP;0.22nF,5%,50V,NP0,TP,1608"
C109	2203-000783	"C-CERAMIC,CHIP;0.33nF,5%,50V,NP0,TP,1608"
C110	2203-001656	"C-CERAMIC,CHIP;0.47nF,5%,50V,NP0,TP,1608"
C111	2404-001020	"C-TA,CHIP;10uF,20%,10V,GP,TP,3216,3.2"
C112	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C113	2402-000136	"C-AL,SMD;22uF,20%,16V,GP,TP,5.3x5.3x5.2"
C114	2203-000257	"C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608"
C115	2203-001630	"C-CERAMIC,CHIP;330nF,+80-20%,16V,Y5V,TP,"
C116	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C117	2203-002398	"C-CERAMIC,CHIP;22nF,10%,50V,X7R,TP,1608"
C118	2203-000257	"C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608"
C119	2203-000257	"C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608"
C120	2402-000112	"C-AL,SMD;10uF,20%,16V,GP,TP,3.3x3.3x5.4"
C122	2203-000440	"C-CERAMIC,CHIP;1nF,10%,50V,X7R,TP,1608,-"
C123	2203-000440	"C-CERAMIC,CHIP;1nF,10%,50V,X7R,TP,1608,-"
C124	2402-000112	"C-AL,SMD;10uF,20%,16V,GP,TP,3.3x3.3x5.4"
C126	2203-000236	"C-CERAMIC,CHIP;0.1nF,5%,50V,NP0,TP,1608"
C127	2203-001724	"C-CERAMIC,CHIP;4700NF,+80-20%,16V,Y5V,TP"
C128	2203-000236	"C-CERAMIC,CHIP;0.1nF,5%,50V,NP0,TP,1608"
C129	2203-000236	"C-CERAMIC,CHIP;0.1nF,5%,50V,NP0,TP,1608"
C131	2404-001020	"C-TA,CHIP;10uF,20%,10V,GP,TP,3216,3.2"
C133	2404-001020	"C-TA,CHIP;10uF,20%,10V,GP,TP,3216,3.2"
C135	2203-000357	"C-CERAMIC,CHIP;0.15nF,5%,50V,NP0,TP,1608"
C136	2203-000357	"C-CERAMIC,CHIP;0.15nF,5%,50V,NP0,TP,1608"
C137	2203-000783	"C-CERAMIC,CHIP;0.33nF,5%,50V,NP0,TP,1608"
C138	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C139	2404-001131	"C-TA,CHIP;22UF,10%,10V,GP,TP,3528"
C140	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C141	2404-001131	"C-TA,CHIP;22UF,10%,10V,GP,TP,3528"
C142	2203-000531	"C-CERAMIC,CHIP;2.7nF,10%,50V,X7R,TP,1608"
C143	2203-005065	"C-CERAMIC,CHIP;1000nF,+80-20%,10V,Y5V,TP"
C144	2203-001724	"C-CERAMIC,CHIP;4700NF,+80-20%,16V,Y5V,TP"
C145	2203-001598	"C-CERAMIC,CHIP;2200nF,+80-20%,16V,Y5V,TP"
C146	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C148	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C149	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C150	2203-001402	"C-CERAMIC,CHIP;220nF,+80-20%,16V,Y5V,TP,"
C151	2203-001126	"C-CERAMIC,CHIP;0.68nF,10%,50V,X7R,TP,160"
C199	2203-001086	"C-CERAMIC,CHIP;0.005nF,0.25pF,50V,NP0,TP"
C201	2203-000257	"C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608"

●Electrical Parts List

LOC	CODE NO	DESCRIPTION
C202	2203-000257	"C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608"
C203	2203-000257	"C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608"
C204	2203-000257	"C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608"
C205	2203-000257	"C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608"
C206	2203-000257	"C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608"
C207	2203-001103	"C-CERAMIC,CHIP;6.8nF,10%,50V,X7R,TP,1608"
C208	2203-005342	"C-CERAMIC,CHIP;82nF,10%,16V,X7R,TP,1608"
C209	2203-002085	"C-CERAMIC,CHIP;56nF,10%,50V,X7R,TP,2012,"
C210	2404-001020	"C-TA,CHIP;10uF,20%,10V,GP,TP,3216,3.2"
C211	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C212	2203-000041	"C-CERAMIC,CHIP;0.01nF,0.25pF,50V,NP0,TP,"
C213	2203-000041	"C-CERAMIC,CHIP;0.01nF,0.25pF,50V,NP0,TP,"
C214	2203-000041	"C-CERAMIC,CHIP;0.01nF,0.25pF,50V,NP0,TP,"
C215	2203-000041	"C-CERAMIC,CHIP;0.01nF,0.25pF,50V,NP0,TP,"
C216	2203-000257	"C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608"
C217	2203-000236	"C-CERAMIC,CHIP;0.1nF,5%,50V,NP0,TP,1608"
C218	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C220	2203-000257	"C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608"
C221	2203-001724	"C-CERAMIC,CHIP;4700NF,+80-20%,16V,Y5V,TP"
C223	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C224	2203-000257	"C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608"
C225	2203-002398	"C-CERAMIC,CHIP;22nF,10%,50V,X7R,TP,1608"
C226	2203-000440	"C-CERAMIC,CHIP;1nF,10%,50V,X7R,TP,1608,-"
C227	2203-000783	"C-CERAMIC,CHIP;0.33nF,5%,50V,NP0,TP,1608"
C228	2203-001052	"C-CERAMIC,CHIP;0.56nF,10%,50V,X7R,TP,160"
C229	2203-000783	"C-CERAMIC,CHIP;0.33nF,5%,50V,NP0,TP,1608"
C230	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C231	2203-000372	"C-CERAMIC,CHIP;15nF,10%,50V,X7R,TP,1608,"
C232	2203-000372	"C-CERAMIC,CHIP;15nF,10%,50V,X7R,TP,1608,"
C233	2203-000972	"C-CERAMIC,CHIP;47nF,10%,16V,X7R,TP,1608"
C234	2203-000257	"C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608"
C235	2203-000041	"C-CERAMIC,CHIP;0.01nF,0.25pF,50V,NP0,TP,"
C236	2203-000041	"C-CERAMIC,CHIP;0.01nF,0.25pF,50V,NP0,TP,"
C237	2404-001020	"C-TA,CHIP;10uF,20%,10V,GP,TP,3216,3.2"
C238	2404-001020	"C-TA,CHIP;10uF,20%,10V,GP,TP,3216,3.2"
C240	2203-001724	"C-CERAMIC,CHIP;4700NF,+80-20%,16V,Y5V,TP"
C241	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C242	2203-000257	"C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608"
C243	2203-001598	"C-CERAMIC,CHIP;2200nF,+80-20%,16V,Y5V,TP"
C244	2203-000257	"C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608"
C245	2404-001020	"C-TA,CHIP;10uF,20%,10V,GP,TP,3216,3.2"
C246	2404-001020	"C-TA,CHIP;10uF,20%,10V,GP,TP,3216,3.2"
C247	2203-000140	"C-CERAMIC,CHIP;1.5nF,10%,50V,X7R,TP,1608"
C248	2203-000140	"C-CERAMIC,CHIP;1.5nF,10%,50V,X7R,TP,1608"
C249	2203-000257	"C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608"
C250	2203-000257	"C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608"
C251	2404-001020	"C-TA,CHIP;10uF,20%,10V,GP,TP,3216,3.2"
C301	2203-001683	"C-CERAMIC,CHIP;0.068nF,5%,50V,NP0,TP,160"
C302	2203-001656	"C-CERAMIC,CHIP;0.47nF,5%,50V,NP0,TP,1608"
C303	2203-001598	"C-CERAMIC,CHIP;2200nF,+80-20%,16V,Y5V,TP"
C304	2203-000783	"C-CERAMIC,CHIP;0.33nF,5%,50V,NP0,TP,1608"
C305	2203-000257	"C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608"
C306	2203-000041	"C-CERAMIC,CHIP;0.01nF,0.25pF,50V,NP0,TP,"
C307	2203-000041	"C-CERAMIC,CHIP;0.01nF,0.25pF,50V,NP0,TP,"
C308	2203-000257	"C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608"
C309	2203-001607	"C-CERAMIC,CHIP;0.22nF,5%,50V,NP0,TP,1608"
C310	2203-000715	"C-CERAMIC,CHIP;3.3nF,10%,50V,X7R,TP,1608"

●Electrical Parts List

LOC	CODE NO	DESCRIPTION
C311	2203-000783	"C-CERAMIC,CHIP;0.33nF,5%,50V,NP0,TP,1608"
C312	2203-000783	"C-CERAMIC,CHIP;0.33nF,5%,50V,NP0,TP,1608"
C313	2203-000140	"C-CERAMIC,CHIP;1.5nF,10%,50V,X7R,TP,1608"
C314	2203-000815	"C-CERAMIC,CHIP;0.033nF,5%,50V,NP0,TP,160"
C315	2203-000888	"C-CERAMIC,CHIP;4.7nF,10%,50V,X7R,TP,1608"
C316	2203-000783	"C-CERAMIC,CHIP;0.33nF,5%,50V,NP0,TP,1608"
C317	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C318	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C319	2203-001607	"C-CERAMIC,CHIP;0.22nF,5%,50V,NP0,TP,1608"
C320	2203-001607	"C-CERAMIC,CHIP;0.22nF,5%,50V,NP0,TP,1608"
C321	2203-000257	"C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608"
C322	2203-000783	"C-CERAMIC,CHIP;0.33nF,5%,50V,NP0,TP,1608"
C323	2203-000041	"C-CERAMIC,CHIP;0.01nF,0.25pF,50V,NP0,TP,"
C324	2203-001724	"C-CERAMIC,CHIP;4700NF,+80-20%,16V,Y5V,TP"
C401	2402-001042	"C-AL,SMD;100uF,20%,16V,GP,TP,6.6x6.6x5."
C402	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C403	2203-001598	"C-CERAMIC,CHIP;2200nF,+80-20%,16V,Y5V,TP"
C405	2203-001598	"C-CERAMIC,CHIP;2200nF,+80-20%,16V,Y5V,TP"
C406	2203-000888	"C-CERAMIC,CHIP;4.7nF,10%,50V,X7R,TP,1608"
C407	2203-000888	"C-CERAMIC,CHIP;4.7nF,10%,50V,X7R,TP,1608"
C408	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C409	2402-001042	"C-AL,SMD;100uF,20%,16V,GP,TP,6.6x6.6x5."
C410	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C411	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C412	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C413	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C414	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C419	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C501	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C502	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C503	2402-001042	"C-AL,SMD;100uF,20%,16V,GP,TP,6.6x6.6x5."
C504	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C505	2203-001724	"C-CERAMIC,CHIP;4700NF,+80-20%,16V,Y5V,TP"
C506	2402-001042	"C-AL,SMD;100uF,20%,16V,GP,TP,6.6x6.6x5."
C507	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C508	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C509	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C510	2203-000140	"C-CERAMIC,CHIP;1.5nF,10%,50V,X7R,TP,1608"
C511	2203-001724	"C-CERAMIC,CHIP;4700NF,+80-20%,16V,Y5V,TP"
C512	2203-000257	"C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608"
C513	2203-000257	"C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608"
C514	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
C515	2404-001270	"C-TA,CHIP;47UF,20%,10V,-,TP,3216"
C516	2203-000189	"C-CERAMIC,CHIP;100nF,+80-20%,25V,Y5V,TP,"
CN30	3708-001524	"CONNECTOR-FPC/FFC/PIC;13P,1mm,SMD-A,SN"
CN40	3708-001606	"CONNECTOR-FPC/FFC/PIC;15P,1MM,SMD-A,SN"
D501	0407-000123	"DIODE-ARRAY;DAN202K,80V,100MA,CA2-3,SOT-"
IC102	1002-001262	"IC-D/A CONVERTER;BU2505FV,10BIT,SOIC,20P"
IC202B	1105-001261	"IC-DRAM;12L1616A,16BIT,TSOP,50P,400MIL"
IC203	0801-002414	"IC-CMOS LOGIC;7W53,MULTI/DEMULTIPLEXER,S"
IC402	1201-001001	"IC-OP AMP;2100,SOP,8P,250MIL,DUAL,80mV/V"
IC501	1203-001394	"IC-VOL. DETECTOR;9735,SOT-23,3P,-,PLASTI"
JP101	2007-000070	"R-CHIP;0ohm,5%,1/16W,DA,TP,1608"
JP201	2007-000070	"R-CHIP;0ohm,5%,1/16W,DA,TP,1608"
JP211	2007-000070	"R-CHIP;0ohm,5%,1/16W,DA,TP,1608"
Q101	0504-000110	"TR-DIGITAL;DTC114EU,NPN,200MW,10K/10K,SC"
Q501	0504-000110	"TR-DIGITAL;DTC114EU,NPN,200MW,10K/10K,SC"

●Electrical Parts List

LOC	CODE NO	DESCRIPTION
Q502	0504-000110	"TR-DIGITAL;DTC114EU,NPN,200MW,10K/10K,SC"
Q503	0504-000105	"TR-DIGITAL;DTA114EU,PNP,200MW,10K/10K,SC"
Q504	0504-000105	"TR-DIGITAL;DTA114EU,PNP,200MW,10K/10K,SC"
R101	2007-000669	"R-CHIP;2Kohm,1%,1/16W,DA,TP,1608"
R102	2007-000109	"R-CHIP;1Mohm,5%,1/16W,DA,TP,1608"
R103	2007-000074	"R-CHIP;100ohm,5%,1/16W,DA,TP,1608"
R106	2007-000102	"R-CHIP;100Kohm,5%,1/16W,DA,TP,1608"
R107	2007-000090	"R-CHIP;10KOHM,5%,1/16W,DA,TP,1608"
R109	2007-000076	"R-CHIP;330ohm,5%,1/16W,DA,TP,1608"
R110	2007-000090	"R-CHIP;10KOHM,5%,1/16W,DA,TP,1608"
R111	2007-001179	"R-CHIP;8.2Kohm,5%,1/16W,DA,TP,1608"
R112	2007-000134	"R-CHIP;33Kohm,5%,1/16W,DA,TP,1608"
R113	2007-000134	"R-CHIP;33Kohm,5%,1/16W,DA,TP,1608"
R114	2007-000067	"R-CHIP;15Kohm,1%,1/16W,DA,TP,1608"
R115	2007-000090	"R-CHIP;10KOHM,5%,1/16W,DA,TP,1608"
R116	2007-000084	"R-CHIP;4.7Kohm,5%,1/16W,DA,TP,1608"
R117	2007-000070	"R-CHIP;0ohm,5%,1/16W,DA,TP,1608"
R118	2007-000070	"R-CHIP;0ohm,5%,1/16W,DA,TP,1608"
R119	2007-001002	"R-CHIP;510ohm,5%,1/16W,DA,TP,1608"
R120	2007-001044	"R-CHIP;56ohm,5%,1/16W,DA,TP,1608"
R121	2007-000071	"R-CHIP;22ohm,5%,1/16W,DA,TP,1608"
R122	2007-000071	"R-CHIP;22ohm,5%,1/16W,DA,TP,1608"
R201	2007-000115	"R-CHIP;82ohm,5%,1/16W,DA,TP,1608"
R202	2007-000071	"R-CHIP;22ohm,5%,1/16W,DA,TP,1608"
R203	2007-000071	"R-CHIP;22ohm,5%,1/16W,DA,TP,1608"
R204	2007-000115	"R-CHIP;82ohm,5%,1/16W,DA,TP,1608"
R205	2007-000071	"R-CHIP;22ohm,5%,1/16W,DA,TP,1608"
R206	2007-000115	"R-CHIP;82ohm,5%,1/16W,DA,TP,1608"
R207	2007-000115	"R-CHIP;82ohm,5%,1/16W,DA,TP,1608"
R208	2007-000071	"R-CHIP;22ohm,5%,1/16W,DA,TP,1608"
R209	2007-000115	"R-CHIP;82ohm,5%,1/16W,DA,TP,1608"
R210	2007-000070	"R-CHIP;0ohm,5%,1/16W,DA,TP,1608"
R212	2007-000074	"R-CHIP;100ohm,5%,1/16W,DA,TP,1608"
R213	2007-000074	"R-CHIP;100ohm,5%,1/16W,DA,TP,1608"
R214	2007-000512	"R-CHIP;2.4Kohm,5%,1/16W,DA,TP,1608"
R215	2007-000076	"R-CHIP;330ohm,5%,1/16W,DA,TP,1608"
R216	2007-000113	"R-CHIP;33ohm,5%,1/16W,DA,TP,1608"
R217	2007-000116	"R-CHIP;120ohm,5%,1/16W,DA,TP,1608"
R218	2007-000882	"R-CHIP;4.7ohm,5%,1/16W,DA,TP,1608"
R220	2007-000708	"R-CHIP;3.9Kohm,1%,1/16W,DA,TP,1608"
R222	2007-000772	"R-CHIP;33Kohm,1%,1/16W,DA,TP,1608"
R223	2007-000772	"R-CHIP;33Kohm,1%,1/16W,DA,TP,1608"
R224	2007-000772	"R-CHIP;33Kohm,1%,1/16W,DA,TP,1608"
R226	2007-000060	"R-CHIP;100Kohm,1%,1/16W,DA,TP,1608"
R227	2007-000583	"R-CHIP;22Kohm,1%,1/16W,DA,TP,1608"
R228	2007-001206	"R-CHIP;82Kohm,1%,1/16W,DA,TP,1608"
R229	2007-000090	"R-CHIP;10KOHM,5%,1/16W,DA,TP,1608"
R230	2007-000090	"R-CHIP;10KOHM,5%,1/16W,DA,TP,1608"
R231	2007-000133	"R-CHIP;330Kohm,5%,1/16W,DA,TP,1608"
R232	2007-000090	"R-CHIP;10KOHM,5%,1/16W,DA,TP,1608"
R233	2007-000092	"R-CHIP;15Kohm,5%,1/16W,DA,TP,1608"
R234	2007-000090	"R-CHIP;10KOHM,5%,1/16W,DA,TP,1608"
R235	2007-000084	"R-CHIP;4.7Kohm,5%,1/16W,DA,TP,1608"
R236	2007-000431	"R-CHIP;16Kohm,5%,1/16W,DA,TP,1608"
R237	2007-000109	"R-CHIP;1Mohm,5%,1/16W,DA,TP,1608"
R238	2007-000070	"R-CHIP;0ohm,5%,1/16W,DA,TP,1608"
R239	2007-000312	"R-CHIP;10OHM,5%,1/8W,DA,TP,3216"

●Electrical Parts List

LOC	CODE NO	DESCRIPTION
R240	2007-000074	"R-CHIP;100ohm,5%,1/16W,DA,TP,1608"
R241	2007-000074	"R-CHIP;100ohm,5%,1/16W,DA,TP,1608"
R242	2007-000078	"R-CHIP;1Kohm,5%,1/16W,DA,TP,1608"
R243	2007-000078	"R-CHIP;1Kohm,5%,1/16W,DA,TP,1608"
R245	2007-000077	"R-CHIP;470ohm,5%,1/16W,DA,TP,1608"
R246	2007-000084	"R-CHIP;4.7Kohm,5%,1/16W,DA,TP,1608"
R247	2007-000094	"R-CHIP;22Kohm,5%,1/16W,DA,TP,1608"
R250	2007-000309	"R-CHIP;10ohm,5%,1/16W,DA,TP,1608"
R251	2007-000883	"R-CHIP;4.7OHM,5%,1/8W,DA,TP,3216"
R301	2007-000075	"R-CHIP;220ohm,5%,1/16W,DA,TP,1608"
R302	2007-001157	"R-CHIP;750ohm,5%,1/16W,DA,TP,1608"
R303	2007-000075	"R-CHIP;220ohm,5%,1/16W,DA,TP,1608"
R304	2007-000076	"R-CHIP;330ohm,5%,1/16W,DA,TP,1608"
R305	2007-000090	"R-CHIP;10KOHM,5%,1/16W,DA,TP,1608"
R306	2007-000123	"R-CHIP;1.5Kohm,5%,1/16W,DA,TP,1608"
R307	2007-000094	"R-CHIP;22Kohm,5%,1/16W,DA,TP,1608"
R308	2007-000094	"R-CHIP;22Kohm,5%,1/16W,DA,TP,1608"
R309	2007-000094	"R-CHIP;22Kohm,5%,1/16W,DA,TP,1608"
R312	2007-000075	"R-CHIP;220ohm,5%,1/16W,DA,TP,1608"
R313	2007-000076	"R-CHIP;330ohm,5%,1/16W,DA,TP,1608"
R314	2007-000090	"R-CHIP;10KOHM,5%,1/16W,DA,TP,1608"
R315	2007-000094	"R-CHIP;22Kohm,5%,1/16W,DA,TP,1608"
R316	2007-000070	"R-CHIP;0ohm,5%,1/16W,DA,TP,1608"
R317	2007-000094	"R-CHIP;22Kohm,5%,1/16W,DA,TP,1608"
R318	2007-000109	"R-CHIP;1Mohm,5%,1/16W,DA,TP,1608"
R319	2007-000094	"R-CHIP;22Kohm,5%,1/16W,DA,TP,1608"
R322	2007-000094	"R-CHIP;22Kohm,5%,1/16W,DA,TP,1608"
R323	2007-000094	"R-CHIP;22Kohm,5%,1/16W,DA,TP,1608"
R324	2007-000094	"R-CHIP;22Kohm,5%,1/16W,DA,TP,1608"
R325	2007-000080	"R-CHIP;2Kohm,5%,1/16W,DA,TP,1608"
R326	2007-000080	"R-CHIP;2Kohm,5%,1/16W,DA,TP,1608"
R327	2007-000080	"R-CHIP;2Kohm,5%,1/16W,DA,TP,1608"
R328	2007-000080	"R-CHIP;2Kohm,5%,1/16W,DA,TP,1608"
R329	2007-000078	"R-CHIP;1Kohm,5%,1/16W,DA,TP,1608"
R331	2007-000125	"R-CHIP;3.9Kohm,5%,1/16W,DA,TP,1608"
R332	2007-000125	"R-CHIP;3.9Kohm,5%,1/16W,DA,TP,1608"
R333	2007-000125	"R-CHIP;3.9Kohm,5%,1/16W,DA,TP,1608"
R334	2007-000125	"R-CHIP;3.9Kohm,5%,1/16W,DA,TP,1608"
R335	2007-000075	"R-CHIP;220ohm,5%,1/16W,DA,TP,1608"
R336	2007-000076	"R-CHIP;330ohm,5%,1/16W,DA,TP,1608"
R337	2007-000080	"R-CHIP;2Kohm,5%,1/16W,DA,TP,1608"
R338	2007-000094	"R-CHIP;22Kohm,5%,1/16W,DA,TP,1608"
R339	2007-000094	"R-CHIP;22Kohm,5%,1/16W,DA,TP,1608"
R340	2007-000094	"R-CHIP;22Kohm,5%,1/16W,DA,TP,1608"
R341	2007-000094	"R-CHIP;22Kohm,5%,1/16W,DA,TP,1608"
R342	2007-000094	"R-CHIP;22Kohm,5%,1/16W,DA,TP,1608"
R345	2007-000080	"R-CHIP;2Kohm,5%,1/16W,DA,TP,1608"
R346	2007-000078	"R-CHIP;1Kohm,5%,1/16W,DA,TP,1608"
R395	2007-000084	"R-CHIP;4.7Kohm,5%,1/16W,DA,TP,1608"
R396	2007-000120	"R-CHIP;680ohm,5%,1/16W,DA,TP,1608"
R397	2007-000120	"R-CHIP;680ohm,5%,1/16W,DA,TP,1608"
R398	2007-000094	"R-CHIP;22Kohm,5%,1/16W,DA,TP,1608"
R399	2007-000094	"R-CHIP;22Kohm,5%,1/16W,DA,TP,1608"
R401	2007-000113	"R-CHIP;33ohm,5%,1/16W,DA,TP,1608"
R402	2007-000034	"R-CHIP;1OHM,5%,1/4W,DA,TP,3216"
R403	2007-000034	"R-CHIP;1OHM,5%,1/4W,DA,TP,3216"
R404	2007-000034	"R-CHIP;1OHM,5%,1/4W,DA,TP,3216"

●Electrical Parts List

LOC	CODE NO	DESCRIPTION
R405	2007-000883	"R-CHIP;4.7OHM,5%,1/8W,DA,TP,3216"
R406	2007-000094	"R-CHIP;22Kohm,5%,1/16W,DA,TP,1608"
R407	2007-000094	"R-CHIP;22Kohm,5%,1/16W,DA,TP,1608"
R408	2007-000094	"R-CHIP;22Kohm,5%,1/16W,DA,TP,1608"
R409	2007-000131	"R-CHIP;91Kohm,5%,1/16W,DA,TP,1608"
R410	2007-000131	"R-CHIP;91Kohm,5%,1/16W,DA,TP,1608"
R411	2007-000090	"R-CHIP;10KOHM,5%,1/16W,DA,TP,1608"
R412	2007-000090	"R-CHIP;10KOHM,5%,1/16W,DA,TP,1608"
R413	2007-000034	"R-CHIP;1OHM,5%,1/4W,DA,TP,3216"
R414	2007-002749	"R-CHIP;3.3OHM,5%,1/8W,DA,TP,3216"
R415	2007-000034	"R-CHIP;1OHM,5%,1/4W,DA,TP,3216"
R416	2007-002749	"R-CHIP;3.3OHM,5%,1/8W,DA,TP,3216"
R417	2007-000104	"R-CHIP;150Kohm,5%,1/16W,DA,TP,1608"
R418	2007-000092	"R-CHIP;15Kohm,5%,1/16W,DA,TP,1608"
R419	2007-000103	"R-CHIP;120Kohm,5%,1/16W,DA,TP,1608"
R420	2007-000134	"R-CHIP;33Kohm,5%,1/16W,DA,TP,1608"
R421	2007-000097	"R-CHIP;47Kohm,5%,1/16W,DA,TP,1608"
R422	2007-000125	"R-CHIP;3.9Kohm,5%,1/16W,DA,TP,1608"
R423	2007-000124	"R-CHIP;2.2Kohm,5%,1/16W,DA,TP,1608"
R424	2007-000103	"R-CHIP;120Kohm,5%,1/16W,DA,TP,1608"
R425	2007-000127	"R-CHIP;9.1Kohm,5%,1/16W,DA,TP,1608"
R426	2007-001134	"R-CHIP;68ohm,5%,1/16W,DA,TP,1608"
R501	2007-000036	"R-CHIP;2OHM,5%,1/8W,DA,TP,3216"
R502	2007-000036	"R-CHIP;2OHM,5%,1/8W,DA,TP,3216"
R503	2007-000090	"R-CHIP;10KOHM,5%,1/16W,DA,TP,1608"
R504	2007-000090	"R-CHIP;10KOHM,5%,1/16W,DA,TP,1608"
R505	2007-000090	"R-CHIP;10KOHM,5%,1/16W,DA,TP,1608"
R506	2007-000094	"R-CHIP;22Kohm,5%,1/16W,DA,TP,1608"
R507	2007-000102	"R-CHIP;100Kohm,5%,1/16W,DA,TP,1608"
R508	2007-000102	"R-CHIP;100Kohm,5%,1/16W,DA,TP,1608"
RA201	2011-001085	"R-NETWORK;82ohm,5%,63mW,L,CHIP,8P,TP"

