



Project FmcAdc100M14b4cha  
 Title **FmcAdc100M14b4cha**  
 EDA Number **EDA-02063-V3-0**  
 Designer Maciej Fimiarez  
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Rev.  
 Drawn by B. Civel  
 EDMS URL <https://edms.cern.ch/nav/EDA-02063/EDA-02063-V3-0>

Ref	Qty	Scem	Description	Val&Device	Manufacturer P/N	Case
R2 R11 R25 R35 R51 R62 R72 R83	8		±0.1% 0.063W ±10ppm Thin Film Chip Resistor	121	GENERIC R0603_121R_0.1%_0.063W_10PPM	0603
R3 R19 R26 R43 R52 R64 R73 R85	8		±0.1% 0.063W ±10ppm Thin Film Chip Resistor	511	GENERIC R0603_511R_0.1%_0.063W_10PPM	0603
R4 R21 R27 R44 R53 R65 R74 R86	8		±1% 0.1W ±100ppm/°C General Purpose Thick Film Chip Resistor	120	GENERIC R0603_120R_1%_0.1W_100PPM	0603
R5 R31 R45 R66 R107, R108 R110 > R112 R114 R117 > R119 R122 > R124	16		±0.1% 0.1W ±15ppm Thin Film Chip Resistor	86R6	GENERIC R0603_86R6_0.1%_0.1W_15PPM	0603
R6 R22 R46 R67	4		±1% 0.125W ±100ppm/°C General Purpose Thick Film Chip Resistor	2k2	GENERIC R0805_2K2_1%_0.125W_100PPM	0805
R7 R23 R47 R68	4		±0.1% 0.125W ±10ppm Thin Film Chip Resistor	820	GENERIC R0805_820R_0.1%_0.125W_10PPM	0805
R8 R24 R48 R69	4		±0.1% 0.1W ±10ppm Thin Film Chip Resistor	825	GENERIC R0805_825R_0.1%_0.1W_10PPM	0805
R9, R10 R32, R33 R49, R50 R70, R71	8		±0.1% 0.063W ±10ppm Thin Film Chip Resistor	825	GENERIC R0603_825R_0.1%_0.063W_10PPM	0603
R12 > R18 R36 > R42 R54 > R60 R75 > R81	28		±1% 0.1W ±100ppm/°C General Purpose Thick Film Chip Resistor	220	GENERIC R0603_220R_1%_0.1W_100PPM	0603
R20 R34 R61 R82	4		±0.1% 0.063W ±10ppm Thin Film Chip Resistor	243	GENERIC R0603_243R_0.1%_0.063W_10PPM	0603
R28 R63 R113 R116 R121 R127	6		±1% 0.1W ±100ppm/°C General Purpose Thick Film Chip Resistor	100	GENERIC R0603_100R_1%_0.1W_100PPM	0603

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R29 R126 R128 R135	4		±1% 0.1W ±100ppm/°C General Purpose Thick Film Chip Resistor	4k7	GENERIC R0603_4K7_1%_0.1W_100PPM	0603
R30	1		±1% 0.1W ±100ppm/°C General Purpose Thick Film Chip Resistor	2k2	GENERIC R0603_2K2_1%_0.1W_100PPM	0603
R84 R90	2		±1% 0.1W ±100ppm/°C General Purpose Thick Film Chip Resistor	510	GENERIC R0603_510R_1%_0.1W_100PPM	0603
R87	1		±1% 0.1W ±100ppm/°C General Purpose Thick Film Chip Resistor	1k8	GENERIC R0603_1K8_1%_0.1W_100PPM	0603
R88	1		±1% 0.125W ±100ppm/°C General Purpose Thick Film Chip Resistor	150	GENERIC R0805_150R_1%_0.125W_100PPM	0805
R89 R136	2		±1% 0.1W ±100ppm/°C General Purpose Thick Film Chip Resistor	47	GENERIC R0603_47R_1%_0.1W_100PPM	0603
R91, R92 R100, R101	4		±1% 0.1W ±100ppm/°C General Purpose Thick Film Chip Resistor	22	GENERIC R0603_22R_1%_0.1W_100PPM	0603
R93 R130	2		±1% 0.1W ±100ppm/°C General Purpose Thick Film Chip Resistor	330	GENERIC R0603_330R_1%_0.1W_100PPM	0603
R94 > R97	4		±1% 0.1W ±100ppm/°C General Purpose Thick Film Chip Resistor	330k	GENERIC R0603_330K_1%_0.1W_100PPM	0603
R102	1		±1% 0.1W ±100ppm/°C General Purpose Thick Film Chip Resistor	13k	GENERIC R0603_13K_1%_0.1W_100PPM	0603
R103	1		±0.1% 0.063W ±10ppm Thin Film Chip Resistor	86k6	GENERIC R0603_86K6_0.1%_0.063W_10PPM	0603
R104	1		±1% 0.1W ±100ppm/°C General Purpose Thick Film Chip Resistor	150k	GENERIC R0603_150K_1%_0.1W_100PPM	0603
R105	1		±1% 0.1W ±100ppm/°C General Purpose Thick Film Chip Resistor	68k	GENERIC R0603_68K_1%_0.1W_100PPM	0603
R106	1		±1% 0.1W ±100ppm/°C General Purpose Thick Film Chip Resistor	620k	GENERIC R0603_620K_1%_0.1W_100PPM	0603
R109 R115 R120 R125 R133, R134	6		±1% 1W ±100ppm/°C Thick Film Chip Resistor	47	GENERIC R2512_47R_1%_1W_100PPM	2512
R129	1		±5% 1W ±200ppm/°C Surface Mount Power Resistors	56R	GENERIC R2512_56R_5%_1W_200PPM	2512
R132	1		±1% 0.1W ±100ppm/°C General Purpose Thick Film Chip Resistor	10k	GENERIC R0603_10K_1%_0.1W_100PPM	0603
C1, C2 C40 C42 > C44 C67 C91	8		±10% 16V X5R SMD Multilayer Chip Ceramic Capacitor	10uF	GENERIC CC0805_10UF_16V_10%_X5R	0805
C3 C68	2		±10% 25V X7R SMD Multilayer Chip Ceramic Capacitor	1uF	GENERIC CC0805_1UF_25V_10%_X7R	0805
C4 > C6 C10, C11 C13 C15, C16 C18 C20 C22, C23 C26 C28 C30 C33, C34 C37, C38 C48 C53 C55 C57 C65 C69 C71 C73 C75 C77 C82 C84 C86 C88, C89 C92 C98 C101, C102 C106, C107 C117 > C120	44		±10% 50V X7R SMD Multilayer Chip Ceramic Capacitor	100nF	GENERIC CC0603_100NF_50V_10%_X7R	0603
C7 C12 C17 C21	8		±5% 50V NP0 SMD Multilayer Chip Ceramic Capacitor	33pF	GENERIC CC0603_33PF_50V_5%_NP0	0603

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C52 C62 C80 C96						
C8 C14 C19 C27 C50 C60 C78 C94	8		±5% 50V NP0 SMD Multilayer Chip Ceramic Capacitor	22pF	GENERIC CC0603_22PF_50V_5%_NP0	0603
C9 C51 C61 C79 C95 C104, C105 C112 C115	9		±10% 50V X7R SMD Multilayer Chip Ceramic Capacitor	10nF	GENERIC CC0603_10NF_50V_10%_X7R	0603
C29 C47 C49 C54 C56 C58, C59 C64 C66 C70 C72 C74 C76 C83 C87 C90 C93 C99, C100 C103	20		±20% 6.3V X5R SMD Multilayer Chip Ceramic Capacitor	10uF	GENERIC CC0603_10uF_6.3V_20%_X5R	0603
C31, C32 C35, C36 C41	5		±5% 50V NP0 SMD Multilayer Chip Ceramic Capacitor	100pF	GENERIC CC0603_100PF_50V_5%_NP0	0603
C39 C108 > C111 C113, C114 C116	8		±10% 16V X7R SMD Multilayer Chip Ceramic Capacitor	1uF	GENERIC CC0603_1uF_16V_10%_X7R	0603
C45, C46 C63 C81 C97	5		±5% 50V NP0 SMD Multilayer Chip Ceramic Capacitor	10pF	GENERIC CC0603_10PF_50V_5%_NP0	0603
C85	1		±10% 6.3V X5R SMD Multilayer Chip Ceramic Capacitor	2.2uF	GENERIC CC0603_2.2uF_6.3V_10%_X5R	0603
C121 > C124	4		±10% 16V X7R SMD Multilayer Chip Ceramic Capacitor	4.7uF	GENERIC CC1206_4.7UF_16V_10%_X5R	1206
L1	1		±25% Dual Winding Shielded Power Inductor/Transformer CTX OCTA-PAC® PLUS Serie	10uH	COOPER BUSSMANN CTX10-1A-R	
L2 L8, L9 L17 > L27	14		±20% 300mA Wound Chip Power Inductors (CB Serie)	4.7uH	TAIYO YUDEN CB2012T4R7M	0805
L3 L6 L11 L14	4		±5% 180mA Wirewound, Surface Mount Inductors	1uH	VISHAY IMC0805ER1R0J01	0805
L4, L5 L7 L10 L12, L13 L15, L16	8		±5% 100mA High Frequency Chip Inductor 3650 Serie	390nH	TYCO 36501JR39JTDG	0603
D1	1		30V 500mA Schottky Power Rectifier	MBR0530T1G	ON SEMICONDUCTOR MBR0530T1G	SOD-123
D2 > D7	6		150V 250mA Silicon PIN Diode Array (Series Connected)	BAR66	INFINEON BAR66	SOT23
IC1	1		5V 500mA Negative Low Dropout Micropower Regulator	LT1175CS8#PBF	LINEAR TECHNOLOGY LT1175CS8#PBF	SOIC8
IC2 IC5 IC7	4		Unity-Gain Stable, Ultralow Distortion, 1 nV/sqrt Hz Voltage Noise, High Speed Operational Amplifier	ADA4899-1YCPZ	ANALOG DEVICES ADA4899-1YCPZ	SON8

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IC10																				
IC3	1		1.8V 500mA, Low Noise, LDO Adjustable Micropower Regulator	LT1763IDE-1.8#PBF	LINEAR TECHNOLOGY LT1763IDE-1.8#PBF	SON12														
IC4	4		Differential, High Speed Operational Amplifier	LMH6551MM/NOPB	NATIONAL SEMICONDUCTOR LMH6551MM/NOPB	MSOP8														
IC6																				
IC8																				
IC11																				
IC9	1		14-Bit, 105MSPS Low Power Quad ADCs	LTC2174CUKG-14#PBF	LINEAR TECHNOLOGY LTC2174CUKG-14#PBF	QFN52														
IC12	1		400Mbps, Low-Jitter, Low-Noise LVDS Repeater	MAX9180EXT-T	MAXIM MAX9180EXT-T	SOT363														
IC13	1		Programmable Resolution 1-Wire Digital Thermometer (-55°C to +125°C)	DS18B20U+	DALLAS MAXIM DS18B20U+	uSOP8														
IC14	1		1.8 nV/sqrt Hz, 36V Precision Amplifiers	ADA4004-4ACPZ	ANALOG DEVICES ADA4004-4ACPZ	QFN16														
IC15	1		5V ±6mV 10ppm Ultralow Noise, LDO XFET Voltage References with Current Sink and Source	ADR445BRZ	ANALOG DEVICES ADR445BRZ	SOIC8														
IC16 > IC19	4		+5V, Serial-Input, Voltage-Output, 16-Bit ±2LSB DAC	MAX5442ACUB+	MAXIM MAX5442ACUB+	MSOP10														
IC20	1		0 To 36V Adjustable 1.1A Single Resistor Low Dropout Regulator	LT3080EDD#PBF	LINEAR TECHNOLOGY LT3080EDD#PBF	SON8														
IC21	1		+16V to (-0.4V to -36V), 1.2MHz Inverting DC-DC Converters	LT1931ES5#TRMPBF	LINEAR TECHNOLOGY LT1931ES5#TRMPBF	SOT23														
IC22	1		1.7V-5.5V, 64K (8K x 8-bit) I2C Serial EEPROM	24AA64T-I/MC	MICROCHIP TECHNOLOGY 24AA64T-I/MC	DFN8														
LD1	1		Dual 2mm Green LEDs CBI® Circuit Board Indicator (With positioning pins)		DIALIGHT 571-0122-100F															
OSC1	1		10-280MHz 3.3V ±20ppm LVDS Any-Rate I2C Programmable XO Oscillator Si570 Serie	10-280MHz	SILICON LABS 570BBC000121DG															
SW1 > SW28	28		Micro-miniature SON package Lower output capacitance and on resistance (CxR5) 25V load voltage PhotoMOS Relay	AQY221N3M	PANASONIC ELECTRIC WORKS AQY221N3M	SON4														
T1, T2	2		50V 200mA N-Channel Enhancement Mode Field-Effect Transistor	BSH103	NXP SEMICONDUCTORS BSH103	SOT23-3														
J1 > J5	5	09.46.11.180.6	Size 00, 50 Ohms Coaxial Elbow (90°) socket		LEMO EPL.00.250.NTN															
J6	1		400 contacts (10 rows abcdefghj) Surface Mount Male Connector, VITA 57		SAMTEC ASP-134488-01															
<b>Not Mounted</b>																				
C24, C25	2		±10% 50V X7R SMD Multilayer Chip Ceramic Capacitor	100nF	GENERIC CC0603_100NF_50V_10%_X7R	0603														
<table border="1" style="width: 100%;"> <tr> <td style="width: 15%;">Dimension :</td> <td colspan="6"></td> </tr> <tr> <td>76.5x69 mm</td> <td colspan="6"></td> </tr> </table>							Dimension :							76.5x69 mm						
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