



## Bill of Materials for the AR0822 mPBG75 Evaluation Board

Designator (Main Board)	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C1 C17 C19 C21 C30 C32 C38 C79 C84 C86 C88 C89 C90 C150	14	CAP, CERAMIC, 22uF, 10V, 20%, X6S, -55°C ~ 105°C, 0805, Automotive AEC-Q200 compliant	22uF	20%	SM_2_CAP_0805_50H	Murata	GRT21BC81A226ME13L	Yes	Yes
C2 C22 C25 C39 C73 C74 C81 C92	8	CAP, TANTALUM CHIP, LOW ESR, 10uF, 10V, 10%, 3216	10uF	10%	SM_2_CAP_3216_80H	AVX	TPSA106K010R0900	Yes	Yes
C3 C10 C12 C13 C14 C15 C18 C20 C23 C26 C27 C28 C31 C40 C41 C42 C43 C44 C45 C47 C48 C49 C51 C53 C54 C56 C58 C60 C62 C63 C64 C65 C66 C67 C68 C69 C71 C75 C76 C78 C80 C82 C83 C85 C93 C95 C98 C104 C106 C107	50	CAP, CERAMIC, 100nF, 10V, X7S, 20%, 0201, -55/+125C	100nF	20%	SM_2_CAP_0201_20H	TDK	C0603X7S1A104M030	Yes	Yes
C4 C6 C8 C11 C16 C34 C35 C36 C37 C50 C52 C55 C57 C59 C61 C70 C97	17	CAP, TANTALUM CHIP, STD, 10uF, 10V, 10%, 3216	10uF	10%	SM_2_CAP_3216_80H	AVX	TAJA106K010R	Yes	Yes
C5 C24 C33 C46	4	CAP, CERAMIC, 1uF, 25V, X7R, 10%, 0805	1uF	10%	SM_2_CAP_0805_60H	Murata	GCM21BR71E105KA56L	Yes	Yes
C29 C72 C87	3	CAP, CERAMIC, 150pF, 50V, X7R, 10%, 0402	150pF	10%	SM_2_CAP_0402_30H	AVX	04025C151KAT2A	Yes	Yes
C91	1	CAP, CERAMIC, 10nF, 10V, X7R, 10%, 0201	10nF	10%	SM_2_CAP_0201_20H	Murata	GRM033R71A103KA01D	Yes	Yes
D1	1	DIODE, LED, CHIP, GRN, CLEAR LENS, 2.0V, 20mA, SMD, 0603	GRN	NA	SM_2_LED_0603_40H	Lite-On	LTST-C190KGKT	Yes	Yes
J1	1	CONN, SOCKET, HIGH SPEED, 2x26, 52 SIG PINS, 0.635MM PITCH, ALGNMNT PINS, 1 GND BUS PIN, LIGHT GOLD PLT'G, RETENTION PINS	CON52-2x26-J (QF5)	NA	SM_55_CON_SAMTEC_QFS-RT1_300H	Samtec	QFS-026-04-25-L-D-A-RT1	No	Yes
L1	1	IND, FERRITE CHIP, 220 OHM AT 100MHz, 0.1 OHM DC, 0603, AEC-Q200	1.4A	NA	SM_2_BEAD_0603_40H	Murata	BLM18PG221SH1D	Yes	Yes
L2	1	IND, POWER, SHIELDED, SMD, 3.3uH, 2A, .157"L x .157"W x .047"H	3.3uH	NA	SM_2_IND_LPS4012_157x157_50H	Coilcraft	LPS4012-332MLB	Yes	Yes
P1 P2 P3 P4 P5 P9 P15	7	CONN, HEADER, VERTICAL, 1x2, 2 PIN, 2MM PITCH, THRU-HOLE	HDR2-1x2-P	NA	TH 2 HDR1X2 78P74LS ST_240H	3M	951102-8622-AR	Yes	Yes
P6 P8 P10 P11 P12 P14 P16	7	CONN, HEADER, VERTICAL, 1x3, 3 PIN, 2MM PITCH, THRU-HOLE	HDR3-1x3-P	NA	TH 3 HDR1X3 78P74LS ST_240H	3M	951103-8622-AR	Yes	Yes
P7	1	CONN, HEADER, VERTICAL, 1x4, 4 PIN, 2MM PITCH, THRU-HOLE	HDR4-1x4-P	NA	TH 4 HDR1X4 78P74LS ST_240H	3M	951104-8622-AR	Yes	Yes
P13 P24	2	CONN, HEADER, VERTICAL, 2x3, 6 PIN, 2MM PITCH, THRU-HOLE	HDR6-2x3-P	NA	TH 6 HDR2X3 78P74LS ST_240H	3M	951206-8622-AR	Yes	Yes
P20	1	CONN, HEADER, LOW PROFILE, VERTICAL, 2x4, 8 PIN, 2.0MM PITCH, 20 MIL SQ POSTS, THRU-HOLE	HDR4-2x4-P (TMM)	NA	TH 8 HDR2X4 78P74LS ST_190H	Samtec	TMM-104-01-G-D	Yes	Yes
P23	1	CONN, HEADER, VERTICAL, 1x3, 3 PIN, .100 PITCH, 25 MIL SQ POSTS	HDR3-1x3-P (TSW)	NA	TH 3 HDR3X1 100LS ST_330H	Samtec	TSW-103-07-G-S	Yes	Yes
P25 P26	2	CONN, HEADER, SHROUDED, VERTICAL, 2x5, 10 PIN, 2.0MM PITCH, CENTER POLARIZATION SLOT, THRU-HOLE	HDR10-2x5-P	NA	TH_10_HDR2X5_78P74LS_ST_250H	Molex	87831-1020	Yes	Yes
P27	1	CONN, HEADER, VERTICAL, 2x2, 4 PIN, 2MM PITCH, THRU-HOLE	HDR4-2x2-P	NA	TH 4 HDR2X2 78P74 ST_240H	3M	951204-8622-AR	Yes	Yes
R1 R5 R19	3	RESISTOR, PRECISION THICK FILM CHIP, SMD, 1.87K, 0.1W, 1%, 0402	1.87K	1%	SM_2_RES_0402_30H	Panasonic	ERJ2RKF1871X	Yes	Yes
R2 R3 R9 R11 R12 R13 R17 R18 R32 R33 R39 R40 R41 R42 R43 R44 R45 R46 R47	19	RESISTOR, THICK FILM CHIP, SMD, 10K, 0.063W, 5%, 0402, AEC-Q200 compliant	10K	5%	SM_2_RES_0402_20H	Panasonic	ERJ2GEJ103X	Yes	Yes
R4 R14 R20	3	RESISTOR, PRECISION THICK FILM CHIP, SMD, 1.78K, 0.1W, 1%, 0402	1.78K	1%	SM_2_RES_0402_30H	Panasonic	ERJ2RKF1781X	Yes	Yes
R7	1	RESISTOR, THICK FILM CHIP, SMD, 0 OHM JUMPER, 0.1W, 5%, 0603, AEC-Q200 compliant	0	5%	SM_2_RES_0603_30H	Panasonic	ERJ3GEY0R00V	Yes	Yes
R10 R16 R34 R35 R48	5	RESISTOR, PRECISION THICK FILM CHIP, SMD, 0 Ohm, 0.1W, 1%, 0402, Automotive grade, AEC-Q200 compliant	0	1%	SM_2_RES_0402_30H	Panasonic	ERJ2GE0R00X	Yes	Yes
R21 R24 R25	3	RESISTOR, POTENTIOMETER, TOP ADJ, 10K, 0.5W, 10%, SMD, .277"L x .264"W x .192"H	10K	10%	pot-3-s2	Bourns	3361P-1-103GLF	Yes	Yes
R22	1	RESISTOR, PRECISION THICK FILM CHIP, SMD, 24.9K, 0.1W, 1%, 0603	24.9K	1%	SM_2_RES_0603_30H	Panasonic	ERJ3EKF2492V	Yes	Yes
R23	1	RESISTOR, THICK FILM CHIP, SMD, 560 OHM, 0.063W, 5%, 0402, AEC-Q200 compliant	560	5%	SM_2_RES_0402_30H	Panasonic	ERJ2GEJ561X	Yes	Yes
R26	1	RESISTOR, METAL THIN FILM CHIP, SMD, 20K, 0.063W, 0.1%, 0402, AEC-Q200 compliant	20K	0%	SM_2_RES_0402_30H	Panasonic	ERA2AEB203	Yes	Yes
R27 R28 R29 R31	4	RESISTOR, THICK FILM CHIP, SMD, 33 OHM, 0.063W, 5%, 0402, AEC-Q200 compliant	33	5%	SM_2_RES_0402_20H	Panasonic	ERJ2GEJ330X	Yes	Yes
R30	1	RESISTOR, THICK FILM CHIP, SMD, 100K, 0.063W, 5%, 0402	100K	5%	SM_2_RES_0402_30H	Panasonic	ERJ2GEJ104X	Yes	Yes
R49	1	RESISTOR, PRECISION THICK FILM CHIP, SMD, 2.49K, 0.1W, 1%, 0603	2.49K	1%	SM_2_RES_0603_30H	Panasonic	ERJ3EKF2491V	Yes	Yes
SW1	1	SWITCH, PUSH BUTTON, TACTILE, MOM, 2 PIN, SPST-NO, 0.05A @ 24VDC, SMD	PB-SPST	NA	SM_2_SW_236X137_190LS_170H	TE Connectivity	147873-2	Yes	Yes
SW3	1	IC, ANALOG SWITCH, DUAL SPDT, 500 mOHM, VOLTAGE SUPPLY 1.8V TO 5.5V, CURRENT SUPPLY 200nA, MICRO10, AUTOMOTIVE TEMPERATURE	NLAS4684M	NA	SM_10_MSOP_19P68_173LS_50H	onsemi	NLAS4684MR2G	No	Yes
TP6 TP7	2	CONN, TERMINAL, TEST POINT COMPACT, .015 THICK, SMT	TSTPT-5016	NA	con-1-tstpt-s1	Keystone Electronics	5016	Yes	Yes
U1	1	IC, SENSOR, ACTIVE-PIXEL DIGITAL IMAGE, CMOS, AR0822, DEMO HDBD, mPBG75	AR0822-DEMO_mPBG75	NA	SM75mPBG75_1XP4_BS14X9P5_2P25H	onsemi	AR0822_mPBG75	No	Yes

U2 U3 U4 U5	4	IC, CONFIGURABLE MULTIFUNCTION GATE, SCHMITT-TRIGGER, 100mA, 1.65V TO 5.5V, SC70-6, AEC?Q101	NLV75Z97D	NA	SM_6_SC70_25P59_79LS_50H	onsemi	NLV75Z97DFT2G	No	Yes
U6	1	IC, SUPERVISOR, MICROPROCESSOR POWER SUPPLY, 2.93V, ACTIVE LOW RESET, SC70-4	ADM6711	NA	SM_4_SC70_53X87_90LS_50H	Analog Devices	ADM6711SAKSZ-REEL7	Yes	Yes
U7	1	IC, LEVEL TRANSLATOR, DUAL, LOW VOLTAGE, 20MBPS, 1.5V TO 5.5V, Micro8, AEC-Q100	NLSX4373DMR2G	NA	SM_8_MSOP_25P59_175LS_50H	onsemi	NLSX4373DMR2G	No	Yes
U8	1	IC, SERIAL EEPROM, I2C, 64Kbit, 1.8V, 1 MHz, US8, Automotive Grade-1	N24C64UVTG	NA	SM_8_US8_19P69_126LS_40H	onsemi	N24C64UVTG	No	Yes
U9	1	IC, BIAS RAIL VOLTAGE REGULATOR, LDO, NON ACTIVE DISCHARGE, FIXED 0.4V, 500mA, 0.4V TO 5.5V INPUT, WDFN6	NCP135BMT040TBG	NA	SM_6T_WDFN_25P59_86LS_40H	onsemi	NCP135BMT040TBG	No	Yes
U10 U12 U13	3	IC, VOLTAGE REGULATOR, LDO, LINEAR, ADJ, 1.5A, 0.8 TO 5.5V INPUT, 2.7V TO 5.5V Bias 0.8V TO 3.6V OUTPUT, DFN10	NCP59748MN1	NA	SM_10T_DFN_19P69_114LS_40H	onsemi	NCP59748MN1ADJTBG	No	Yes
U11	1	IC, VOLTAGE REGULATOR, 500kHz SYNCHRONOUS BUCK CONVERTER, 4.5 TO 18V IN, ADJUSTABLE OUT, 3A, SO8	NCP3170	NA	SM_8_SO_157BW_205LS_70H	onsemi	NCP3170ADR2G	No	Yes
Y1	1	OSC, CRYSTAL CLOCK, SMD, CMOS, 1.7V TO 3.6V, 5mA, 27.0000MHz, 2.5MM x 2.0MM	27MHz	NA	SM_4_OSC_DSC1001D_98X79_40H	MICREL	DSC1001DL5-027.0000T	Yes	Yes