Welcome to E-XFL.COM

Understanding Embedded - DSP (Digital Signal Processors)

Embedded - DSP (Digital Signal Processors) are specialized microprocessors designed to perform complex mathematical computations on digital signals in real-time. Unlike general-purpose processors, DSPs are optimized for high-speed numeric processing tasks, making them ideal for applications that require efficient and precise manipulation of digital data. These processors are fundamental in converting and processing signals in various forms, including audio, video, and communication signals, ensuring that data is accurately interpreted and utilized in embedded systems.

Applications of Embedded - DSP (Digital Signal Processors)

Details	
Product Status	Obsolete
Type	Floating Point
Interface	Host Interface, Link Port, Serial Port
Clock Rate	40MHz
Non-Volatile Memory	External
On-Chip RAM	512kB
Voltage - I/O	5.00V
Voltage - Core	5.00V
Operating Temperature	0°C ~ 85°C (TC)
Mounting Type	Surface Mount
Package / Case	225-BBGA
Supplier Device Package	225-PBGA (23x23)
Purchase URL	https://www.e-xfl.com/product-detail/analog-devices/adsp-21060kb-160

Table 42. ADSP-21060CW/21060LCW CQFP Pin Assignments (QS-240-1A, QS-240-1B)

Pin Name	Pin No.	Pin Name	Pin No.	Pin Name	Pin No.	Pin Name	Pin No.	Pin Name	Pin No.	Pin Name	Pin No.
GND	1	DATA29	41	DMAG2	81	ADDR28	121	ADDR5	161	GND	201
DATA0	2	GND	42	ACK	82	BMS	122	GND	162	V_{DD}	202
DATA1	3	DATA30	43	CLKIN	83	SW	123	ADDR4	163	L4ACK	203
DATA2	4	DATA31	44	GND	84	MS0	124	ADDR3	164	L4CLK	204
V_{DD}	5	DATA32	45	V_{DD}	85	MS1	125	ADDR2	165	L4DAT0	205
DATA3	6	GND	46	GND	86	MS2	126	V_{DD}	166	L4DAT1	206
DATA4	7	V_{DD}	47	WR	87	MS3	127	ADDR1	167	L4DAT2	207
DATA5	8	V_{DD}	48	RD	88	GND	128	ADDR0	168	L4DAT3	208
GND	9	DATA33	49	CS	89	ADDR27	129	GND	169	GND	209
DATA6	10	DATA34	50	HBG	90	ADDR26	130	FLAG0	170	L3ACK	210
DATA7	11	DATA35	51	REDY	91	ADDR25	131	FLAG1	171	L3CLK	211
DATA8	12	NC	52	ADRCLK	92	V_{DD}	132	FLAG2	172	L3DAT0	212
V_{DD}	13	GND	53	GND	93	GND	133	FLAG3	173	L3DAT1	213
DATA9	14	DATA36	54	V_{DD}	94	V_{DD}	134	ICSA	174	L3DAT2	214
DATA10	15	DATA37	55	V_{DD}	95	ADDR24	135	EMU	175	L3DAT3	215
DATA11	16	DATA38	56	RFS0	96	ADDR23	136	TIMEXP	176	V_{DD}	216
GND	17	V_{DD}	57	RCLK0	97	ADDR22	137	TDO	177	NC	217
DATA12	18	DATA39	58	DR0	98	GND	138	V_{DD}	178	L2ACK	218
DATA13	19	DATA40	59	TFS0	99	ADDR21	139	TRST	179	L2CLK	219
DATA14	20	DATA41	60	TCLK0	100	ADDR20	140	TDI	180	L2DAT0	220
V_{DD}	21	GND	61	DT0	101	ADDR19	141	TMS	181	L2DAT1	221
DATA15	22	DATA42	62	CPA	102	V_{DD}	142	TCK	182	L2DAT2	222
DATA16	23	DATA43	63	GND	103	V_{DD}	143	IRQ0	183	L2DAT3	223
DATA17	24	DATA44	64	RFS1	104	ADDR18	144	IRQ1	184	V_{DD}	224
GND	25	V_{DD}	65	RCLK1	105	ADDR17	145	IRQ2	185	GND	225
DATA18	26	DATA45	66	DR1	106	ADDR16	146	EBOOT	186	GND	226
DATA19	27	DATA46	67	TFS1	107	GND	147	RESET	187	L1ACK	227
DATA20	28	DATA47	68	TCLK1	108	ADDR15	148	RPBA	188	L1CLK	228
V_{DD}	29	GND	69	DT1	109	ADDR14	149	LBOOT	189	L1DAT0	229
DATA21	30	V_{DD}	70	HBR	110	V_{DD}	150	ID0	190	L1DAT1	230
DATA22	31	GND	71	DMAR1	111	ADDR13	151	ID1	191	L1DAT2	231
DATA23	32	BR1	72	DMAR2	112	ADDR12	152	ID2	192	L1DAT3	232
GND	33	BR2	73	SBTS	113	ADDR11	153	GND	193	V_{DD}	233
DATA24	34	BR3	74	GND	114	GND	154	L5ACK	194	L0ACK	234
DATA25	35	BR4	75	ADDR31	115	ADDR10	155	L5CLK	195	L0CLK	235
DATA26	36	BR5	76	ADDR30	116	ADDR9	156	L5DAT0	196	L0DAT0	236
V_{DD}	37	BR6	77	ADDR29	117	ADDR8	157	L5DAT1	197	L0DAT1	237
V_{DD}	38	V_{DD}	78	V_{DD}	118	V_{DD}	158	L5DAT2	198	L0DAT2	238
DATA27	39	PAGE	79	V_{DD}	119	ADDR7	159	L5DAT3	199	L0DAT3	239
DATA28	40	DMAG1	80	GND	120	ADDR6	160	V_{DD}	200	GND	240

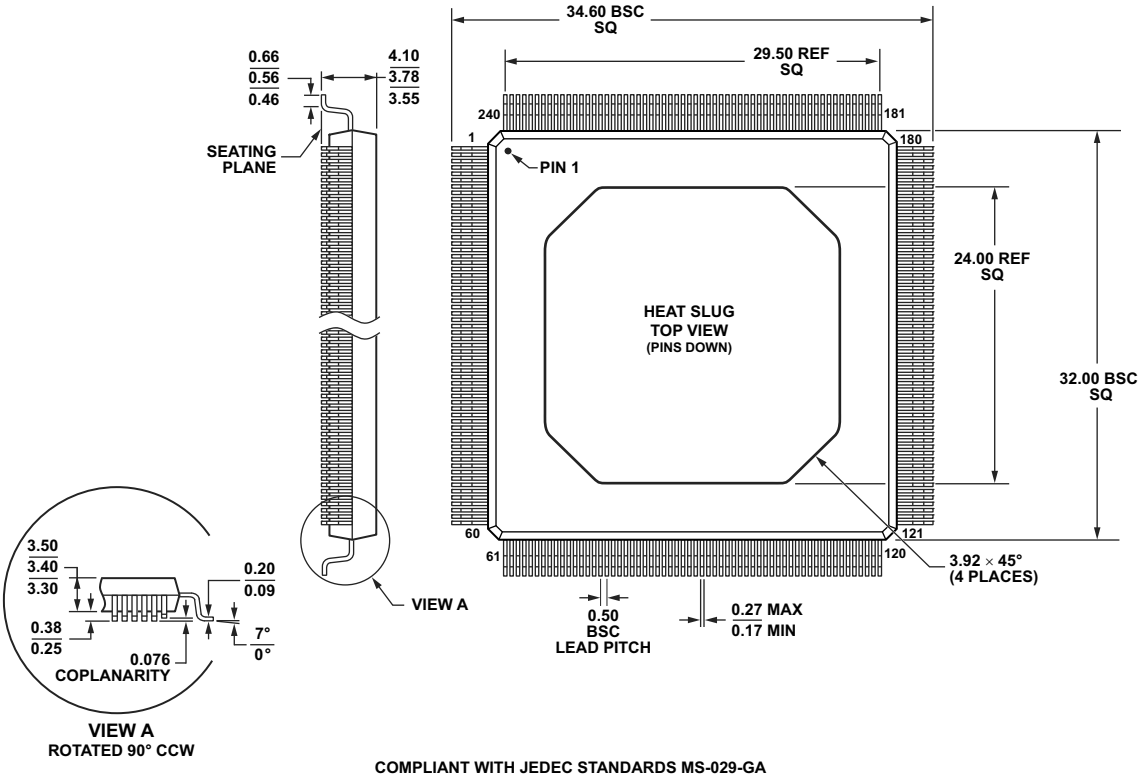

Figure 41. 240-Lead Metric Quad Flat Package, Thermally Enhanced PowerQuad (MQFP_PQ4)
(SP-240-2)
Dimensions shown in millimeters