

TAPE AND REEL INFORMATION

QUADRANT ASSIGNMENTS FOR PIN 1 ORIENTATION IN TAPE

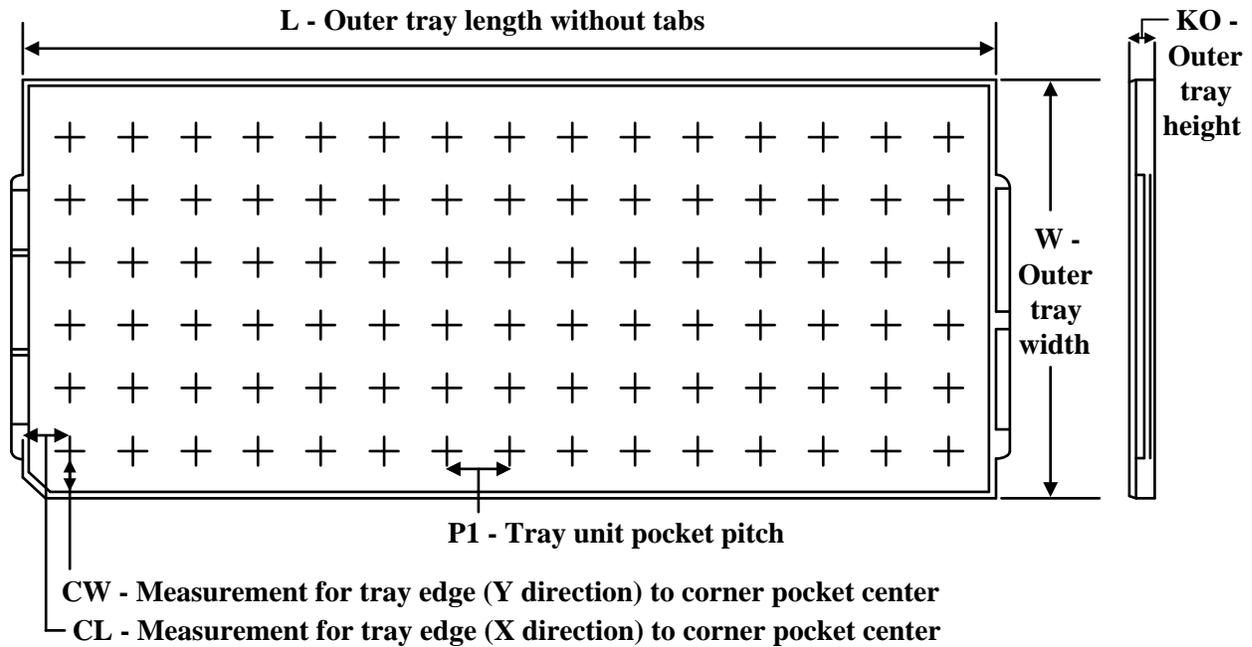

*All dimensions are nominal

Device	Package Type	Package Drawing	Pins	SPQ	Reel Diameter (mm)	Reel Width W1 (mm)	A0 (mm)	B0 (mm)	K0 (mm)	P1 (mm)	W (mm)	Pin1 Quadrant
MSP430FG437IPNR	LQFP	PN	80	1000	330.0	24.4	15.0	15.0	2.1	20.0	24.0	Q2
MSP430FG437IZCAR	NFBGA	ZCA	113	2500	330.0	16.4	7.3	7.3	1.5	12.0	16.0	Q1
MSP430FG437IZCAT	NFBGA	ZCA	113	250	330.0	16.4	7.3	7.3	1.5	12.0	16.0	Q1
MSP430FG438IPNR	LQFP	PN	80	1000	330.0	24.4	15.0	15.0	2.1	20.0	24.0	Q2
MSP430FG438IZCAR	NFBGA	ZCA	113	2500	330.0	16.4	7.3	7.3	1.5	12.0	16.0	Q1
MSP430FG438IZCAT	NFBGA	ZCA	113	250	330.0	16.4	7.3	7.3	1.5	12.0	16.0	Q1
MSP430FG439IPNR	LQFP	PN	80	1000	330.0	24.4	15.0	15.0	2.1	20.0	24.0	Q2
MSP430FG439IZCAT	NFBGA	ZCA	113	250	330.0	16.4	7.3	7.3	1.5	12.0	16.0	Q1

TAPE AND REEL BOX DIMENSIONS


*All dimensions are nominal

Device	Package Type	Package Drawing	Pins	SPQ	Length (mm)	Width (mm)	Height (mm)
MSP430FG437IPNR	LQFP	PN	80	1000	367.0	367.0	45.0
MSP430FG437IZCAR	NFBGA	ZCA	113	2500	341.0	336.6	31.8
MSP430FG437IZCAT	NFBGA	ZCA	113	250	341.0	336.6	31.8
MSP430FG438IPNR	LQFP	PN	80	1000	367.0	367.0	45.0
MSP430FG438IZCAR	NFBGA	ZCA	113	2500	341.0	336.6	31.8
MSP430FG438IZCAT	NFBGA	ZCA	113	250	341.0	336.6	31.8
MSP430FG439IPNR	LQFP	PN	80	1000	367.0	367.0	45.0
MSP430FG439IZCAT	NFBGA	ZCA	113	250	341.0	336.6	31.8

TRAY


Chamfer on Tray corner indicates Pin 1 orientation of packed units.

*All dimensions are nominal

Device	Package Name	Package Type	Pins	SPQ	Unit array matrix	Max temperature (°C)	L (mm)	W (mm)	K0 (µm)	P1 (mm)	CL (mm)	CW (mm)
MSP430FG437IPN	PN	LQFP	80	119	7x17	180	315	135.9	7620	17.9	14.3	13.95
MSP430FG437IPN.A	PN	LQFP	80	119	7x17	180	315	135.9	7620	17.9	14.3	13.95
MSP430FG437IPN.B	PN	LQFP	80	119	7x17	180	315	135.9	7620	17.9	14.3	13.95
MSP430FG437IZCAR	ZCA	NFBGA	113	2500	10 x 26	150	315	135.9	7620	11.8	10	10.35
MSP430FG437IZCAR	ZCA	NFBGA	113	2500	10 x 26	150	315	135.9	7620	11.8	10	10.35
MSP430FG437IZCAR.A	ZCA	NFBGA	113	2500	10 x 26	150	315	135.9	7620	11.8	10	10.35
MSP430FG437IZCAR.A	ZCA	NFBGA	113	2500	10 x 26	150	315	135.9	7620	11.8	10	10.35
MSP430FG437IZCAR.B	ZCA	NFBGA	113	2500	10 x 26	150	315	135.9	7620	11.8	10	10.35
MSP430FG437IZCAR.B	ZCA	NFBGA	113	2500	10 x 26	150	315	135.9	7620	11.8	10	10.35
MSP430FG437IZCAT	ZCA	NFBGA	113	250	10 x 26	150	315	135.9	7620	11.8	10	10.35
MSP430FG437IZCAT.A	ZCA	NFBGA	113	250	10 x 26	150	315	135.9	7620	11.8	10	10.35
MSP430FG437IZCAT.B	ZCA	NFBGA	113	250	10 x 26	150	315	135.9	7620	11.8	10	10.35
MSP430FG438IPN	PN	LQFP	80	119	7x17	180	315	135.9	7620	17.9	14.3	13.95
MSP430FG438IPN.A	PN	LQFP	80	119	7x17	180	315	135.9	7620	17.9	14.3	13.95
MSP430FG438IPN.B	PN	LQFP	80	119	7x17	180	315	135.9	7620	17.9	14.3	13.95
MSP430FG438IZCAR	ZCA	NFBGA	113	2500	10 x 26	150	315	135.9	7620	11.8	10	10.35
MSP430FG438IZCAR.A	ZCA	NFBGA	113	2500	10 x 26	150	315	135.9	7620	11.8	10	10.35

Device	Package Name	Package Type	Pins	SPQ	Unit array matrix	Max temperature (°C)	L (mm)	W (mm)	K0 (µm)	P1 (mm)	CL (mm)	CW (mm)
MSP430FG438IZCAR.B	ZCA	NFBGA	113	2500	10 x 26	150	315	135.9	7620	11.8	10	10.35
MSP430FG438IZCAT	ZCA	NFBGA	113	250	10 x 26	150	315	135.9	7620	11.8	10	10.35
MSP430FG438IZCAT.A	ZCA	NFBGA	113	250	10 x 26	150	315	135.9	7620	11.8	10	10.35
MSP430FG438IZCAT.B	ZCA	NFBGA	113	250	10 x 26	150	315	135.9	7620	11.8	10	10.35
MSP430FG439IPN	PN	LQFP	80	119	7x17	180	315	135.9	7620	17.9	14.3	13.95
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