

MITSUI LEAD FRAMES

*TOOL LOCATION

JPN(MJA)	.....	Mitsui High-tec Inc.
S'PORE(MSA)	.....	Mitsui High-tec(Singapore)Pte.Ltd.
M'SIA(MMA)	.....	Mitsui High-tec(Malaysia)Sdn.Bhd.
TWN(MKA)	.....	Mitsui High-tec(Taiwan)Co.,Ltd.
Shanghai(MCA)	.....	Mitsui High-tec(Shanghai)Co.,Ltd.
Guangdong(MGA)	.....	Mitsui High-tec Electronics(Guangdong)Co.,Ltd.
TJN(MTA)	.....	Mitsui High-tec(Tianjin)Co.,Ltd.

*LOCATION SYMBOLS

☆	STAMPING TOOL AND PLATING TOOL LOCATION (CAN SUPPLY BOTH BARE FRAME AND PLATED FRAME)	
○	STAMPING TOOL LOCATION (CAN SUPPLY BARE FRAME AND PLATED FRAME THROUGH OUTSIDE PLATER)	
△	PLATING TOOL LOCATION (CAN SUPPLY PLATED FRAME ONLY)	

PLEASE CONTACT STAMPING TOOL LOCATION TO DISCUSS THE SPECIFICATION.

REVISION	DATE	APPROVED	MADE BY
AB	May.13.2011	 渡邊 2011.05.13 誠二	 湯之原 2011.05.13 周二

S. Watanabe

S. Yunohara

PIN	PACKAGE SIZE	PADSIZE	WIDTH	PITCH	LOCATION					DRAWINGNO.&NOTES	
					JPN	S'PORE	M'SIA	Shanghai	TWN		
<QFP/TQFP/LQFP>											
256	28x28	8.0x8.0mm	78.0mm	41.67mm	☆(Etched frame)					MLF-1491-OO	Dual
256	28x28	8.13x8.13mm	78.0mm	41.67mm	☆(Etched frame)					MLF-1469-OO	Dual
216	24x24	7.26x7.26mm	70.0mm	35.71mm	☆(Etched frame)					MLF-1515-OO	Dual
216	24x24	7.37x7.37mm	70.0mm	35.71mm	☆					022-6112A	Dual
208	28x28	11.0x11.0mm	61.4mm	50.0mm	☆					022-2667C	
208	28x28	10.5x10.5mm	61.4mm	50.0mm	☆					022-2667C	
208	28x28	9.0x9.0mm	61.4mm	50.0mm	☆					022-5189A	
208	28x28	8.0x8.0mm	61.4mm	50.0mm	☆					022-5189A	
208	28x28	8.0x8.0mm	78.0mm	41.67mm	☆					022-6018-1A	Dual
176	24X24	7.87x7.11mm	70.0mm	31.25mm	☆(Etched frame)					MLF-1534-OO	Dual
160	28x28	7.5x7.5mm	61.4mm	50.0mm					☆	022-5662O	ILP0.168
160	28x28	7.0x7.0mm	61.4mm	50.0mm					☆	022-5662O	ILP0.168
160	28x28	9.0x9.0mm	61.4mm	50.0mm	☆					022-3930A	
128	14x20	6.0x6.0mm	34.8mm	26.42mm					☆	022-6695O	
128	14x20	6.858x6.858	67.9mm	28mm					☆	MLF-2408O	Dual
128	14x20	8.0x8.0mm	34.8mm	26.42mm					☆	022-6478O	
128	14x20	6.0x6.0mm	67.9mm	28.0mm					☆	022-7238O	Dual
128	14x20	8.0x8.0mm	67.9mm	28.0mm					☆	022-6694O	Dual
128	14x14	6.0x6.0mm	45.7mm	27.0mm					☆	022-5596O	Dual
128	14x14	5.0x5.0mm	45.7mm	27.0mm					☆	022-7070O	Dual/ILP0.148mm
128	14x14	10.0x10.0mm	30.734mm	20.40mm	☆					022-4148A	
128	14x14	4.83x4.83mm	70mm	25mm	☆					022-7015O	3rows
100	14x14	6.0x6.0mm	27.7mm	26.42mm		☆				022-3053B	
100	14x14	4.572x4.572mm	45.7mm	27.0mm					☆	022-6776O	Dual
100	14x14	6.1x6.1mm	45.7mm	27.0mm					☆	022-6776O	Dual
80	14x20	6.1x6.1mm	34.8mm	26.42mm	☆					022-5795O	
80	14x20	7.2x7.2mm	34.8mm	26.42mm	△				☆	022-6074O	
80	14x20	8.0x8.0mm	34.8mm	26.42mm	△				☆	022-6074O	
80	12x12	4.3x4.3mm	78.0mm	25mm					☆	022-6831O	4rows
64	14x14	5.8x5.8mm	45.7mm	27.0mm					☆	022-6781O	Dual
64	10x10	5.3x5.3mm	45.7mm	21.6mm				☆	☆	022-6902O	Dual
64	10x10	6.5x6.5mm	34.8mm	26.42mm			☆			022-2580A	
64	10x10	6.6x6.6mm	45.7mm	21.6mm				☆		022-6034O	Dual
64	7x7	3.302x3.302mm	45.7mm	18.0mm					☆	022-7211O	3rows
48	7x7	.205x.205	45.7mm	18.0mm					☆	022-5497O	3Rows
48	7x7	.181x.181	45.7mm	18.0mm					☆	022-5932O	3Rows
48	7x7	.160x.160	45.7mm	18.0mm				△	☆	022-7236O	3Rows
48	7x7	.120x.120	45.7mm	18.0mm					☆	022-7184O	3Rows
44	10x10	5.2x5.2mm	24.7mm	21.4mm			☆			022-2585O	
44	10x10	5.21x5.21mm	45.7mm	21.6mm				☆		022-5240O	Dual
44	10x10	5.208x5.208mm	45.7mm	21.6mm					☆	022-6899O	Dual
32	7x7	.205x.205	45.7mm	18mm					☆	022-7450O	3rows
<PLCC>											
44		.250x.250	1.230	1.080			☆			022-2840A	CLD-BAR
44		.270x.270	1.230	1.080			☆			022-2840A	CLD-BAR
20		.160x.160	0.970	0.780	☆					022-2598A	
20		.180x.180	0.970	0.780	☆					022-2598A	
<TSOP>											
48		330x260	78.0mm	20.867mm					○	022-6164O	3rows

PIN	PACKAGE	PADSIZE	WIDTH	PITCH	LOCATION					DRAWINGNO.&NOTES	
					JPN	M'SIA	Shanghai	Guangdong	TWN		
<SSOP>											
24	5.3x8.2	4.3x3.68mm	50.80mm	15.24mm			☆			022-5148A	4Rows
<SOP>											
14		90x100	50.8mm	18.000mm					☆	MLF-2004B	5rows
7	150mil	90x90	50.8mm	16.307mm					☆	022-6622O	5rows
8	150mil	90x90	50.8mm	16.307mm					☆	022-6622O	5rows
8	208mil	140x160	50.8mm	16.916mm					☆	022-6626O	4rows
8	208mil	186x142	50.8mm	16.916mm					☆	022-6038O	4rows
8	150mil	95x130	50.80mm	16.307mm					☆	022-6732O	5rows
8		68x94	50.80mm	16.307mm					☆	MLF-2227-1O	5rows
<SO>											
20	300mil	.110x.150	58.42mm	17.78mm		☆				022-5221O	4Rows
20	300mil	.150x.150	58.42mm	17.78mm		☆				022-5221O	4Rows
20	300mil	.160x.200	58.42mm	17.78mm		☆				022-5222O	4Rows
20	300mil	.200x.200	58.42mm	17.78mm		☆				022-5222O	4Rows
14		090x110	27.178mm	9.144mm					☆	022-3538C	Dual
14		098x148	27.178mm	9.144mm					☆	022-6942O	Dual
<IDF>											
20		.090x.110	1.240	0.540		☆				022-3955B	
20		.110x.120	1.240	0.540		☆				022-3955B	
20		.140x.160	1.240	0.540		☆				022-2544A	
20		.150x.190	1.240	0.540		☆				022-2562O	
20		.160x.230	1.240	0.540		☆				022-2563O	
16		.110x.140	0.970	0.540		☆				022-1975O	
16		.080x.110	0.970	0.540		☆				022-1469O	
16		.110x.140	0.970	0.540		☆				022-1975O	
16		.140x.150	0.970	0.540		☆				022-2255O	
16		.150x.200	0.970	0.540		☆				002-685C	
14		.080x.080	0.970	0.540		☆				022-2865O	
14		.080x.150	0.970	0.540		☆				002-734-	
14		.080x.150	0.970	0.540		☆				022-2865O	
14		.110x.140	0.970	0.540		☆				002-703-	
14		.080x.150	0.970	0.540		☆				022-2865O	
14		.110x.140	0.970	0.540		☆				002-703-	
<PDIP>											
48		.200x.200	2.600	1.160	☆					022-1031O	
48		.250x.250	2.600	1.160	☆					022-1031O	
40		.180x.180	2.270	1.040					☆	022-5405O	
40		.200x.200	2.270	1.040					☆	022-5405O	
16		.080x.080	0.970	0.720			☆			022-5117O	
16		.110x.140	0.970	0.720			☆			022-5103O	
16		.110x.140	0.970	0.720					☆	022-5176O	
<SOT-23>											
3			28.08mm	4.5mm			☆			022-4601F	4Rows
3			26.8mm	5.0mm			△	○		022-4664C	4Rows
<SOT-223>											
2			50.80mm	22.83mm					☆	MLF-2161O	4Rows

MITSUI LEAD FRAMES

REVISION HISTORY

REV.	DESCRIPTION OF CHANGE	TYPE	PIN	DRAWING NO.	NOTES
	Deleted revision history from "U" to "X"				
Y	Deleted	QFP/TQFP/LQFP	80	022-4151A	
	Deleted	PLCC	32	022-3247O	
	Deleted	SO	16	022-3338O	
	Deleted	TO-92	3	022-1640B	
	Deleted	TO-92	3	022-2190A	
Z	Deleted	QFP/TQFP/LQFP	240	022-2820D	
	Drawing Rev. changed	QFP/TQFP/LQFP	216	022-6112O → A	
	Drawing No. changed	QFP/TQFP/LQFP	208	MLF-1298-O → 022-6018-1A	
	Deleted	QFP/TQFP/LQFP	176	S021-1012E	
	Added	QFP/TQFP/LQFP	128	MLF-2247O	
	Added	QFP/TQFP/LQFP	80	MLF-2069O	
	Added	QFP/TQFP/LQFP	64	MLF-2016O	
	Added	QFP/TQFP/LQFP	44	MLF-2039O	
	Added	TSOP	48	022-6164O	
	Added	TSOP	48	022-5819O	
	Deleted	TO-220	5/3	022-2741&022-3605	
AA	Deleted	QFP/TQFP/LQFP	144	S021-1017B	
	Deleted	QFP/TQFP/LQFP	144	022-2979O	
	Deleted	QFP/TQFP/LQFP	208	022-3855-B	
	Deleted	QFP/TQFP/LQFP	208	022-3123-A	
	Deleted	TSOP	44	022-3970A	
	Deleted	TSOP	44	022-3970A	
	Deleted	TSOP	44	022-4110O	
	Deleted	IDF	8	022-2972-O	
	Deleted	HSIP	8/15	022-5173/5174-O	
	Deleted	PLCC	68	022-2858-A	
	Deleted	SO	16	022-5689O	
	Deleted	SO	16	022-5689O	
	Added	QFP/TQFP/LQFP	128	022-7015O	
AB	Deleted	QFP/TQFP/LQFP	208	022-4261O	
	Deleted	QFP/TQFP/LQFP	208	022-4260O	
	Location changed	QFP/TQFP/LQFP	160	022-5662O	From HKG to TWN
	Location changed	QFP/TQFP/LQFP	160	022-5662O	From HKG to TWN
	Drawing No. & Location changed	QFP/TQFP/LQFP	128	022-6695O	Replaced from 022-5020O & From HKG to TWN
	Added	QFP/TQFP/LQFP	128	MLF-2408O	
	Location changed	QFP/TQFP/LQFP	128	022-6478O	From HKG to TWN
	Drawing No. & Location changed	QFP/TQFP/LQFP	128	022-7238O	Replaced from 022-6039-5O & From HKG to TWN
	Drawing No. & Location changed	QFP/TQFP/LQFP	128	022-6694O	Replaced from 022-5187O & From HKG to TWN
	Location changed	QFP/TQFP/LQFP	128	022-5596O	From HKG to TWN
	Drawing No. & Location changed	QFP/TQFP/LQFP	128	022-7070O	Replaced from MLF-2247O & From HKG to TWN
	Deleted	QFP/TQFP/LQFP	100	022-4315O	
	Deleted	QFP/TQFP/LQFP	100	022-2626F	
	Deleted	QFP/TQFP/LQFP	100	022-2626F	
	Drawing No. & Location changed	QFP/TQFP/LQFP	100	022-6776O	Replaced from 022-6006O & From HKG to TWN
	Drawing No. & Location changed	QFP/TQFP/LQFP	100	022-6776O	Replaced from 022-6006O & From HKG to TWN
	Deleted	QFP/TQFP/LQFP	84	022-1610E	
	Deleted	QFP/TQFP/LQFP	84	022-1611B	
	Location changed	QFP/TQFP/LQFP	80	022-6074O	From HKG to TWN
	Location changed	QFP/TQFP/LQFP	80	022-6074O	From HKG to TWN

MITSUI LEAD FRAMES

REVISION HISTORY

REV.	DESCRIPTION OF CHANGE	TYPE	PIN	DRAWING NO.	NOTES
AB	DrawingNo.&pitch&Locationchanged	QFP/TQFP/LQFP	80	022-68310	ReplacedfromMLF-2069Qandchangepitchfrom2.16mmandFromHK ToTWN
	Deleted	QFP/TQFP/LQFP	64	022-2378A	
	DrawingNo.&Locationchanged	QFP/TQFP/LQFP	64	022-67810	ReplacedfromMLF-2016O&FromHKGtoTWN
	DrawingNo.&Locationchanged	QFP/TQFP/LQFP	64	022-6902O	Replacedfrom022-6035O&FromHKGtoTWN
	Added	QFP/TQFP/LQFP	64	022-7211O	
	Deleted	QFP/TQFP/LQFP	52	022-2274O	
	Deleted	QFP/TQFP/LQFP	52	022-2571A	
	Locationchanged	QFP/TQFP/LQFP	48	022-5497O	FromHKGtoTWN
	Locationchanged	QFP/TQFP/LQFP	48	022-5932O	FromHKGtoTWN
	DrawingNo.&Locationchanged	QFP/TQFP/LQFP	48	022-7236O	Replacedfrom022-5498O&FromHKGtoTWN
	DrawingNo.&Locationchanged	QFP/TQFP/LQFP	48	022-7184O	Replacedfrom022-6554O&FromHKGtoTWN
	DrawingNo.&Locationchanged	QFP/TQFP/LQFP	44	022-6899O	ReplacedfromMLF-2039O&FromHKGtoTWN
	Deleted	QFP/TQFP/LQFP	44	022-2887A	
	Deleted	QFP/TQFP/LQFP	44	022-2887A	
	DrawingNo.&Locationchanged	QFP/TQFP/LQFP	32	022-7450O	Replacedfrom022-6218O&FromHKGtoTWN
	Deleted	PLCC	84	022-3787O	
	Deleted	PLCC	84	022-2917E	
	Deleted	PLCC	84	022-2917E	
	Deleted	PLCC	84	022-2917E	
	Deleted	PLCC	84	022-1068E	
	Deleted	PLCC	84	022-1068E	
	Deleted	PLCC	84	022-1068E	
	Deleted	PLCC	68	022-2916B	
	Deleted	PLCC	52	022-2377B	
	Deleted	PLCC	52	022-2377B	
	Deleted	PLCC	44	022-3293O	
	Deleted	PLCC	44	022-2087B	
	Deleted	PLCC	4	022-2087B	
	Deleted	PLCC	44	022-2694A	
	Deleted	PLCC	44	022-2694A	
	Deleted	PLCC	44	022-6426O	
	Deleted	PLCC	44	022-6426O	
	Deleted	PLCC	44	022-6426O	
	Deleted	PLCC	32	022-5242O	
	Deleted	PLCC	32	022-4567C	
	Deleted	PLCC	28	022-2086O	
	Deleted	PLCC	28	022-2086O	
	Deleted	PLCC	28	022-2086O	
	Deleted	PLCC	28	002-364C	
	Deleted	PLCC	28	022-2091A	
	Deleted	PLCC	28	022-2091A	
	Deleted	PLCC	28	022-2398O	
	Deleted	TSOP	50	022-4197O	
	Deleted	TSOP	50	022-5178A	
	Locationchanged	TSOP	48	022-6164O	FromHKGtoTWN
	Deleted	TSOP	48	022-5819O	
	Deleted	TSOP	32	022-3785B	
	Deleted	TSOP	32	022-2845B	
	Deleted	TSOP	28	022-2844B	
	Deleted	SSOP	56	022-4935-1O	
Added	SOP	14	MLF-2004B		
Added	SOP	7	022-6622O		
Locationchanged	SOP	8	022-6622O	FromHKGtoTWN	
Locationchanged	SOP	8	022-6626O	FromHKGtoTWN	

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REVISION HISTORY

REV.	DESCRIPTION OF CHANGE	TYPE	PIN	DRAWING NO.	NOTES	
AB	Added	SOP	8	022-60380		
	Added	SOP	8	022-67320		
	Added	SOP	8	MLF-2227-10		
	Deleted	SO	28/24	022-3589A		
	Deleted	SO	20/16	022-2697A		
	Deleted	SO	20/16	022-2477D		
	Deleted	SO	18	022-51880		
	Deleted	SO	14	022-27010		
	Deleted	SO	14	022-27020		
	Location changed	SO	14	022-3538C		From Guangdong to TWN
	Added	SO	14	022-69420		
	Deleted	SO	8	022-3023B		
	Deleted	SO	8	022-5116A		
	Deleted	IDF	40	022-52950		
	Deleted	IDF	40	022-52950		
	Deleted	IDF	16	022-2737A		
	Deleted	IDF	16	022-1328B		
	Deleted	IDF	14	022-1746A		
	Deleted	IDF	14	002-6390		
	Deleted	PDIP	42	022-21910		
	Drawing No. & Location changed	PDIP	40	022-54050		Replaced from 022-40030 & From HKG to TWN
	Drawing No. & Location changed	PDIP	40	022-54050		Replaced from 022-40030 & From HKG to TWN
	Deleted	PDIP	28	022-21510		
	Deleted	PDIP	28	022-21510		
	Deleted	PDIP	28	022-21510		
	Deleted	PDIP	28	022-2115B		
	Deleted	PDIP	28	022-2857B		
	Deleted	PDIP	28	022-38240		
	Deleted	PDIP	28	022-12160		
	Deleted	PDIP	28	022-12160		
	Deleted	PDIP	28	022-3039A		
	Deleted	PDIP	28	022-3039A		
	Deleted	PDIP	24	022-21730		
	Deleted	PDIP	24	022-21730		
	Deleted	PDIP	24	022-24900		
	Deleted	PDIP	24	022-24900		
	Deleted	PDIP	24	022-24900		
	Deleted	PDIP	22	022-3103C		
	Deleted	PDIP	22	022-2428A		
	Deleted	PDIP	20	022-3568A		
Deleted	PDIP	20	022-3568A			
Deleted	PDIP	20	022-3539A			
Deleted	PDIP	18	022-3829A			
Deleted	PDIP	18	022-32520			
Deleted	PDIP	18	022-32520			
Drawing No. & Location changed	PDIP	16	022-51760	Replaced from 022-2843C & From HKG to TWN		
Deleted	PDIP	14	022-3337B			
Deleted	PDIP	8	002-3360			
Deleted	PDIP	8	022-32710			
Added	SOT-223	2	MLF-21610			