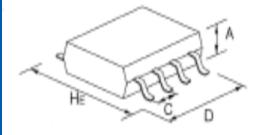
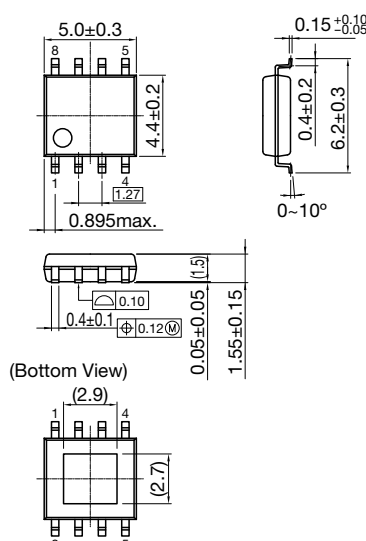
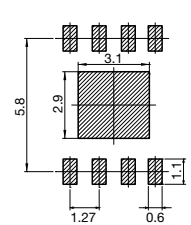
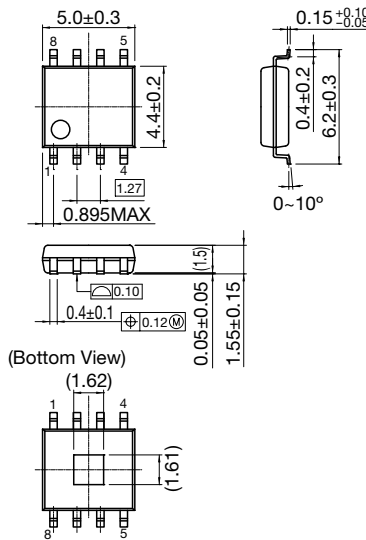
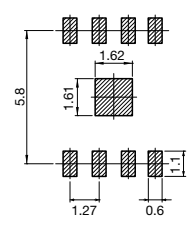


Package Line-up



Package Type	Pin Count	Package Name	Package Size (mm)			Pin Pitch (mm)	
			He	D	A	C	
Lead-through Type	3	TO-92A	5.40	3.80	7.50	2.50	
Flat Lead Type	6	SON-6A	3.00	1.60	0.80	0.50	
	6	SON-6B	3.00	1.60	0.80	0.50	
	6	SON-6C	2.00	1.60	0.55	0.50	
	6	SON-6D	3.00	2.90	0.80	0.95	
	5	SOT89-5A	4.25	4.50	1.50	1.50	
Gullwing Type	4	SC-82ABA	2.10	2.00	0.95	1.30	
	4	SC-82ABB	2.10	2.00	0.90	1.30	
	6	SC-88A	2.10	2.00	0.90	0.65	
	3	SOT-23A	2.80	2.90	1.15	1.90	
	5	SOT-25A	2.80	2.90	1.15	0.95	
	6	SOT-26A	2.80	2.90	1.15	0.95	
	6	SOT-26B	2.80	2.90	1.15	0.95	
	7	SOP-7B	6.20	5.00	1.55	1.27	
	8	SOP-8C	6.20	5.20	1.55	1.27	
	8	SOP-8D	6.20	5.00	1.55	1.27	
	10	SOP-10A	6.20	5.00	1.55	1.00	
	16	SOP-16B	6.20	10.20	1.55	1.27	
	28	SOP-28B	9.90	17.60	1.85	1.27	
	8	SSOP-8A	3.10	2.00	0.75	0.50	
	24	SSOP-24B	7.80	10.20	1.90	0.80	
	34	SSOP-34A	9.90	17.60	1.85	1.00	
	36	SSOP-36A	7.80	15.00	1.90	0.80	
	42	SSOP-42A	9.90	17.60	1.85	0.80	
	16	TSOP-16A	6.40	5.00	1.10	0.65	
	16	TSOP-16B	6.40	5.00	1.10	0.65	
	16	TSOP-16D	6.40	5.00	1.10	0.65	
	20	TSOP-20A	6.40	6.50	1.10	0.65	
	20	TSOP-20B	6.40	6.50	1.10	0.65	
	20	TSOP-20D	6.40	6.50	1.10	0.65	
	20	TSOP-20E	6.40	6.50	1.10	0.65	
	20	TSOP-20F	6.40	6.50	1.20	0.65	
	8	VSOP-8B	4.00	2.90	1.30	0.65	
	8	VSOP-8C	4.00	2.95	1.30	0.65	
	8	VSOP-8D	4.00	2.80	1.30	0.65	
	8	HSOP-8A	6.20	5.00	1.55	1.27	
	8	HSOP-8C	6.20	5.00	1.55	1.27	
	28	HSOP-28A	9.90	18.60	2.30	0.80	
	28	HSOP-28C	9.90	17.60	1.90	0.80	
	36	HSOP-36A	9.90	17.60	1.90	0.80	
	64	QFP-64E	16.00	16.00	1.20	0.80	
	80	QFP-80D	17.20	23.20	3.22	0.80	
	100	QFP-100A	17.20	23.20	3.22	0.65	
	3	TO-252C	9.90	6.60	2.30	2.30	
	5	TO-252-5A	9.90	6.60	2.30	1.27	
	Non-Lead Type	4	PLP-4A	1.00	1.00	0.60	0.65
4		PLP-4B	1.60	1.20	0.60	0.60	
6		PLP-6A	2.00	1.80	0.60	0.50	
10		PLP-10A	2.50	2.70	0.60	0.50	
16		SQFN-16A	3.00	3.00	0.75	0.50	
32		SQFN-32A	5.00	5.00	0.75	0.50	
4		SSON-4B	1.40	1.10	0.55	0.50	
6		SSON-6A	2.00	1.80	0.75	0.50	
6		SSON-6E	1.60	1.80	0.55	0.50	
6		SSON-6J	1.40	1.40	0.55	0.50	
6		SSON-6L	2.00	2.00	0.75	0.65	
8		SSON-8B	2.30	2.30	0.75	0.5	
8		SSON-8C	3.00	3.00	0.55	0.65	
10		SSON-10A	2.50	2.70	0.60	0.50	
20		WLCSP-20A	1.936	1.936	0.345	0.40	
25		WLCSP-25A	1.936	1.936	0.345	0.40	
48		WLCSP-48A	3.47	3.47	0.40	0.50	

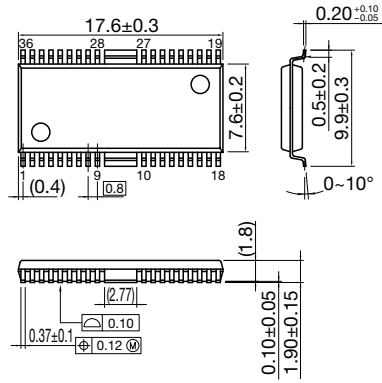
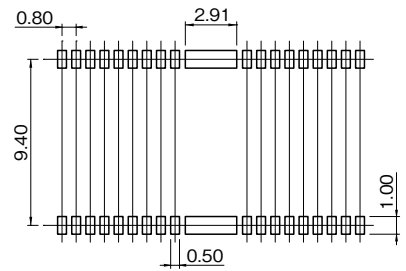
Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>HSOP-8A</p>	 <p>Top View: 5.0 ± 0.3, 4.4 ± 0.2, 0.895max., 1.27, 0.4, $0.15^{+0.10}_{-0.05}$, 0.4 ± 0.2, 6.2 ± 0.3, $0 \sim 10^\circ$</p> <p>Side View: $0.15^{+0.10}_{-0.05}$, 0.4 ± 0.2, 6.2 ± 0.3, $0 \sim 10^\circ$</p> <p>Bottom View: 0.4 ± 0.1, $\phi 0.12$, 0.05 ± 0.05, 1.55 ± 0.15, 0.10, 1.5, 2.9, 2.7</p>	 <p>Land Pattern Dimensions: 5.8, 2.9, 3.1, 1.27, 0.6, 1.1</p>
<p>HSOP-8C</p>	 <p>Top View: 5.0 ± 0.3, 4.4 ± 0.2, 0.895MAX, 1.27, 0.4, $0.15^{+0.10}_{-0.05}$, 0.4 ± 0.2, 6.2 ± 0.3, $0 \sim 10^\circ$</p> <p>Side View: $0.15^{+0.10}_{-0.05}$, 0.4 ± 0.2, 6.2 ± 0.3, $0 \sim 10^\circ$</p> <p>Bottom View: 0.4 ± 0.1, $\phi 0.12$, 0.05 ± 0.05, 1.55 ± 0.15, 0.10, 1.5, 1.62, 1.61</p>	 <p>Land Pattern Dimensions: 5.8, 1.62, 1.61, 1.27, 0.6, 1.1</p>

Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>HSOP-28A</p>		
<p>HSOP-28C</p>		

Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>HSOP-36A</p>	 <p>Top view dimensions: 17.6±0.3, 7.6±0.2, 0.4, 0.8, 1, 9, 10, 18, 27, 28, 36.</p> <p>Side view dimensions: 0.20^{+0.10}/_{-0.05}, 0.5±0.2, 9.9±0.3, 0-10°.</p> <p>Detail view dimensions: 1.8, 0.10±0.05, 1.90±0.15, 0.37±0.1, 0.10, 0.12, 2.77.</p>	 <p>Land pattern dimensions: 0.80, 2.91, 9.40, 1.00, 0.50.</p>

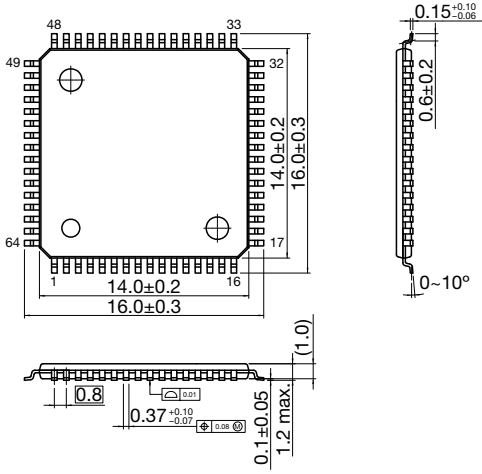
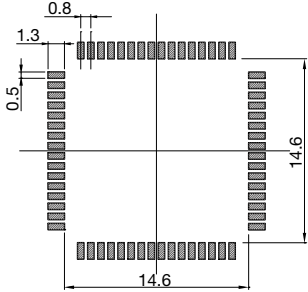
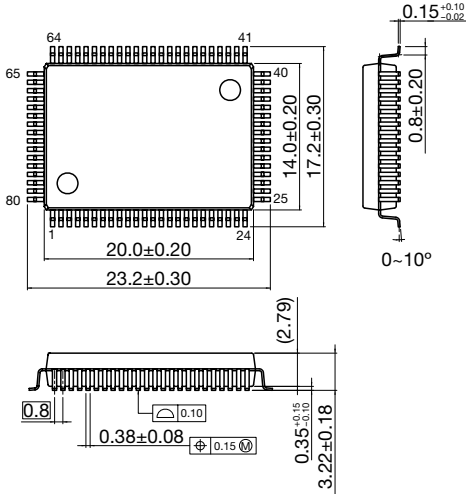
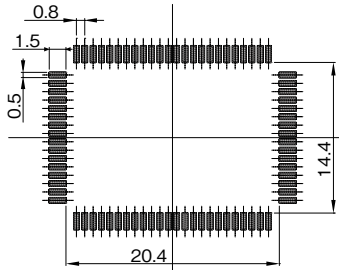
Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>PLP-4A</p>	<p>Top View: 1.00±0.05 (width), 1.00±0.05 (height), pins 1, 2, 3, 4.</p> <p>Side View: 0.60MAX (height), 0.07MAX (thickness), 0.05 (lead height).</p> <p>Bottom View: 0.25±0.05 (width), 0.65 (width), 0.48±0.05 (width), 45° (angle), 0.32±0.05 (width), 0.07±0.05 (width), 0.25±0.05 (width), hole diameter 0.05.</p>	<p>Land Pattern Dimensions: 0.44, 0.25, 0.18, 0.25, 0.32, 0.25, 0.65, 0.55, 0.57, 1.46.</p>
<p>PLP-4B</p>	<p>Top View: 1.20±0.05 (width), 1.60±0.05 (height), pins 1, 2, 3, 4.</p> <p>Side View: 0.6MAX (height), (0.07) (thickness), 0.05 (lead height).</p> <p>Bottom View: 0.60 (width), (1.0) (width), (0.7) (width), 0.20±0.05 (width), 0.30±0.05 (width), hole diameter 0.05.</p>	<p>Land Pattern Dimensions: 0.45, 0.60, 0.70, 1.00, 2.10, 0.30.</p>

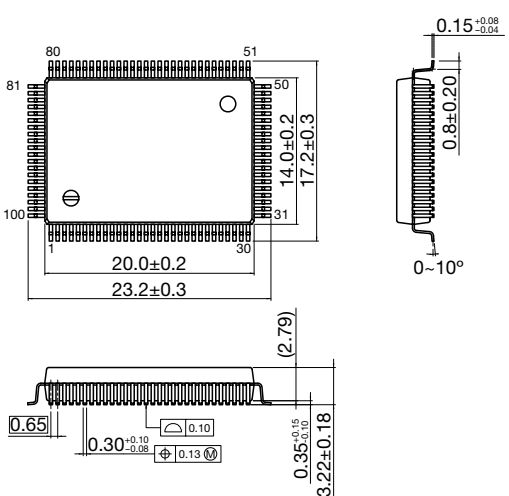
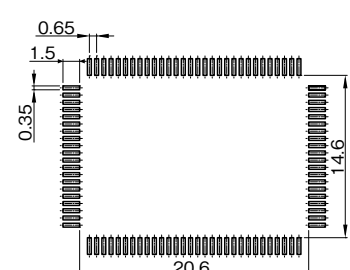
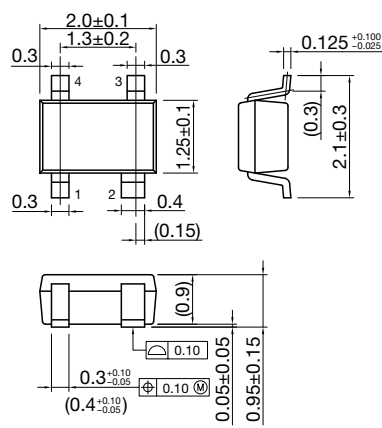
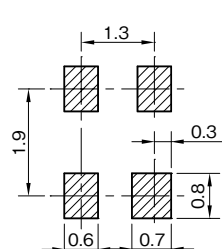
Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>PLP-6A</p>		
<p>PLP-10A</p>		

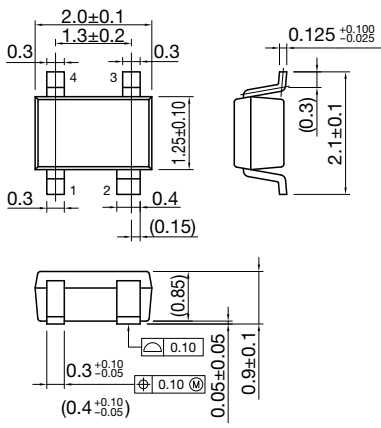
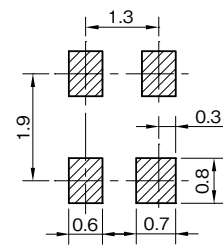
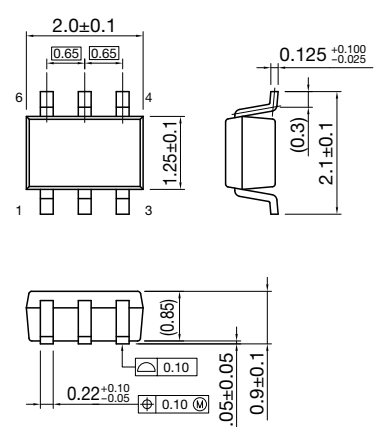
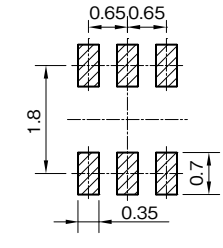
Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>QFP-64E</p>	 <p>Top view dimensions: 14.0±0.2, 16.0±0.3, 14.0±0.2, 16.0±0.3. Pin 1 location: 0.8. Lead height: 0.1±0.05. Lead thickness: 0.37^{+0.10}/_{-0.07}. Lead width: 0.15^{+0.10}/_{-0.06}. Lead angle: 0~10°. Pin 1 diameter: 0.15. Pin 1 position: 0.08.</p>	 <p>Land pattern dimensions: 14.6, 14.6, 0.8, 1.3, 0.5.</p>
<p>QFP-80D</p>	 <p>Top view dimensions: 20.0±0.20, 23.2±0.30, 14.0±0.20, 17.2±0.30. Pin 1 location: 0.8. Lead height: 0.15±0.10. Lead thickness: 0.38±0.08. Lead width: 0.15. Lead angle: 0~10°. Pin 1 diameter: 0.15. Pin 1 position: 0.08. Pin 1 diameter: 0.15. Pin 1 position: 0.08.</p>	 <p>Land pattern dimensions: 20.4, 14.4, 0.8, 1.5, 0.5.</p>

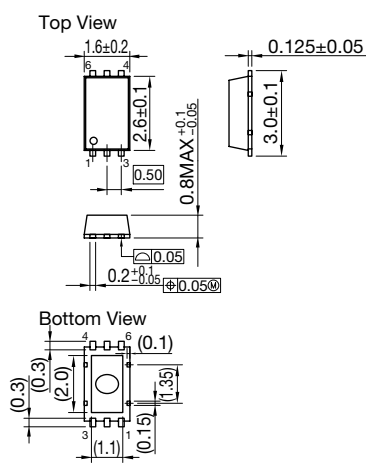
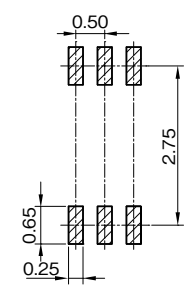
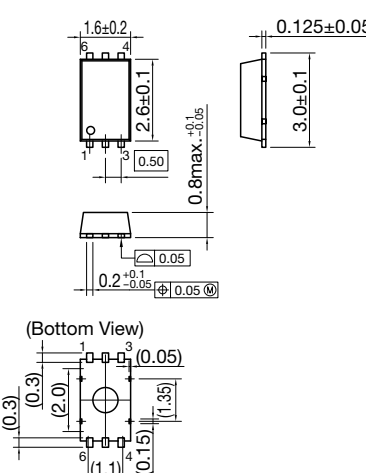
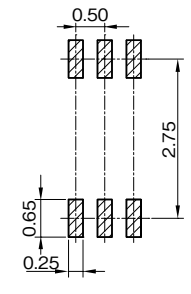
Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>QFP-100A</p>	 <p>Top view dimensions: 20.0±0.2, 23.2±0.3, 14.0±0.2, 17.2±0.3, 80, 51, 81, 100, 1, 30, 31, 50.</p> <p>Lead dimensions: 0.15^{+0.08}/_{-0.04}, 0.8±0.20, 0-10°.</p> <p>Bottom view dimensions: 0.65, 0.30^{+0.10}/_{-0.08}, 0.10, 0.13, 0.35^{+0.15}/_{-0.10}, 3.22±0.18, (2.79).</p>	 <p>Land pattern dimensions: 0.65, 1.5, 0.35, 20.6, 14.6.</p>
<p>SC-82ABA</p>	 <p>Top view dimensions: 2.0±0.1, 1.3±0.2, 0.3, 0.3, 0.3, 0.3, 1.25±0.1, 0.4, (0.15), 4, 3, 1, 2.</p> <p>Side view dimensions: 0.125^{+0.100}/_{-0.025}, (0.3), 2.1±0.3.</p> <p>Bottom view dimensions: (0.9), 0.10, 0.05±0.05, 0.95±0.15, 0.3^{+0.10}/_{-0.05}, (0.4^{+0.10}/_{-0.05}), 0.10.</p>	 <p>Land pattern dimensions: 1.3, 0.3, 1.9, 0.8, 0.6, 0.7.</p>

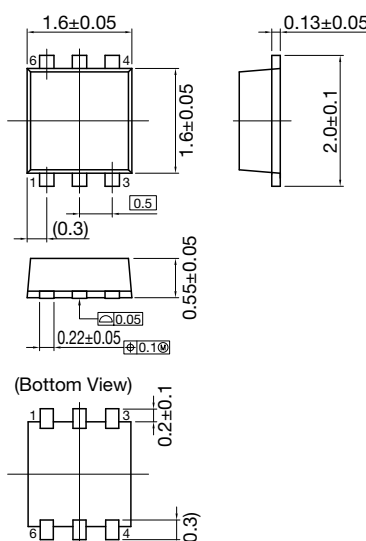
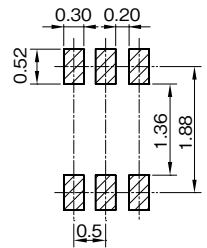
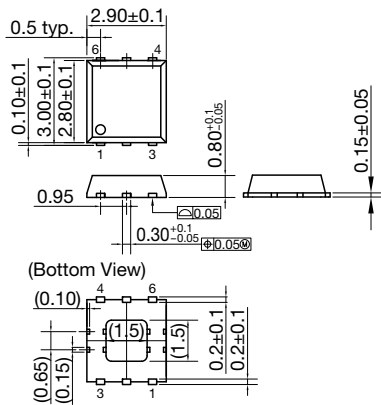
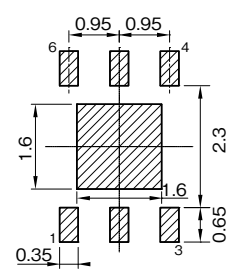
Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>SC-82ABB</p>	 <p>Top view dimensions: 2.0 ± 0.1, 1.3 ± 0.2, 0.3, 0.3, 0.3, 0.3, 1.25 ± 0.10, 0.4, (0.15).</p> <p>Side view dimensions: $0.125^{+0.100}_{-0.025}$, (0.3), 2.1 ± 0.1.</p> <p>Bottom view dimensions: $0.3^{+0.10}_{-0.05}$, $(0.4^{+0.10}_{-0.05})$, 0.05 ± 0.05, 0.9 ± 0.1, (0.85), 0.10, $\phi 0.10$.</p>	 <p>Land pattern dimensions: 1.3, 1.9, 0.3, 0.8, 0.6, 0.7.</p>
<p>SC-88A</p>	 <p>Top view dimensions: 2.0 ± 0.1, 0.65, 0.65, 0.65, 0.65, 1.25 ± 0.1, 0.3, 0.3, 0.3.</p> <p>Side view dimensions: $0.125^{+0.100}_{-0.025}$, (0.3), 2.1 ± 0.1.</p> <p>Bottom view dimensions: $0.22^{+0.10}_{-0.05}$, (0.85), 0.05 ± 0.05, 0.9 ± 0.1, 0.10, $\phi 0.10$.</p>	 <p>Land pattern dimensions: 1.8, 0.65, 0.65, 0.7, 0.35.</p>

Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p style="text-align: center;">SON-6A</p>	 <p>Top View</p> <p>Bottom View</p>	
<p style="text-align: center;">SON-6B</p>	 <p>Top View</p> <p>(Bottom View)</p>	

Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p style="text-align: center;">SON-6C</p>	 <p>Top View: 1.6 ± 0.05 (width), 1.6 ± 0.05 (height), 0.5 (pitch), (0.3) (lead width), 0.13 ± 0.05 (lead height), 2.0 ± 0.1 (total height).</p> <p>Side View: 0.55 ± 0.05 (height), 0.22 ± 0.05 (lead length), $\phi 0.10$ (lead diameter).</p> <p>Bottom View: 0.2 ± 0.1 (lead width), (0.3) (pitch).</p>	 <p>Land Pattern: 0.30 (pad width), 0.20 (pad length), 0.52 (pitch), 1.36 (total width), 1.88 (total length), 0.5 (pitch).</p>
<p style="text-align: center;">SON-6D</p>	 <p>Top View: 0.5 typ. (lead length), 2.90 ± 0.1 (width), 0.10 ± 0.1 (lead width), 3.00 ± 0.1 (pitch), 2.80 ± 0.1 (pitch), 0.80 (lead length), 0.15 ± 0.05 (lead height).</p> <p>Side View: 0.95 (height), 0.30 (lead length), $\phi 0.05$ (lead diameter).</p> <p>Bottom View: (0.10) (pitch), (0.65) (pitch), (0.15) (pitch), (1.5) (pitch), (1.5) (pitch), 0.2 ± 0.1 (lead width), 0.2 ± 0.1 (lead width).</p>	 <p>Land Pattern: 0.95 (pad width), 0.95 (pad length), 1.6 (total width), 2.3 (total length), 0.65 (pitch), 0.35 (pitch), 1.6 (pitch), 0.35 (pitch).</p>

Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p style="text-align: center;">SOP-7B</p>		
<p style="text-align: center;">SOP-8C</p>		

Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>SOP-8D</p>		
<p>SOP-10A</p>		

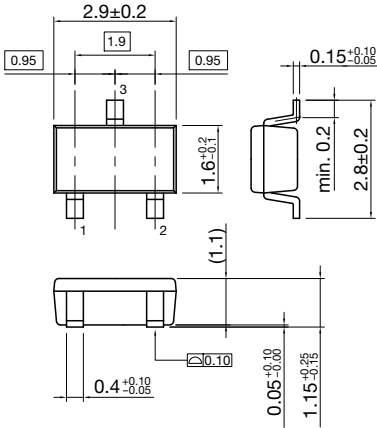
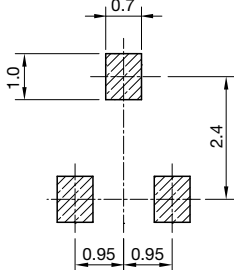
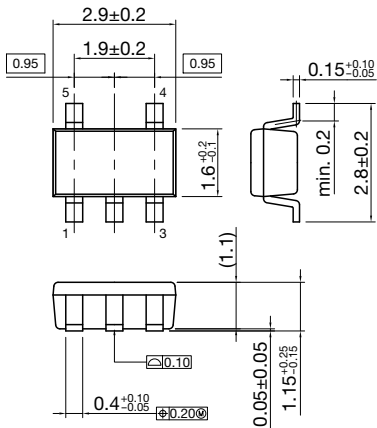
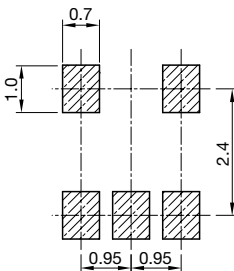
Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>SOP-16B</p>		
<p>SOP-28B</p>		

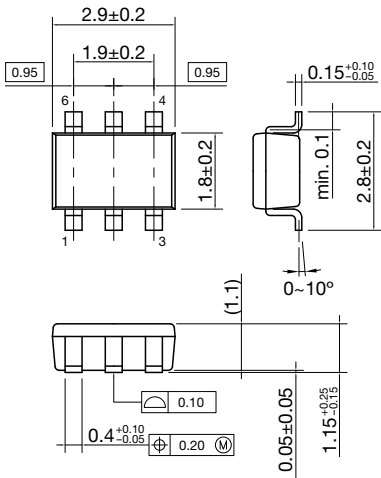
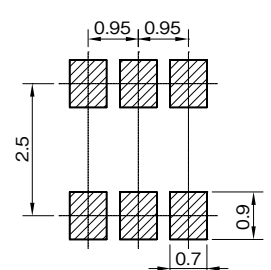
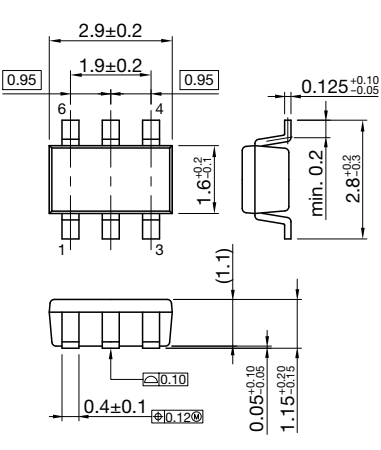
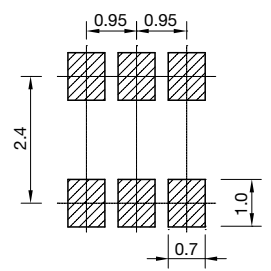
for package

Package

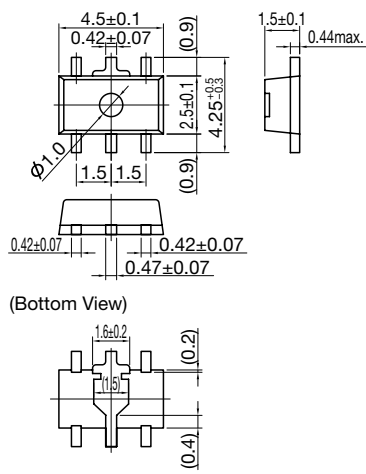
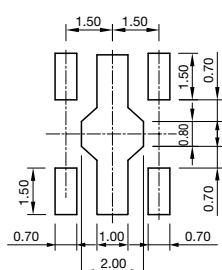
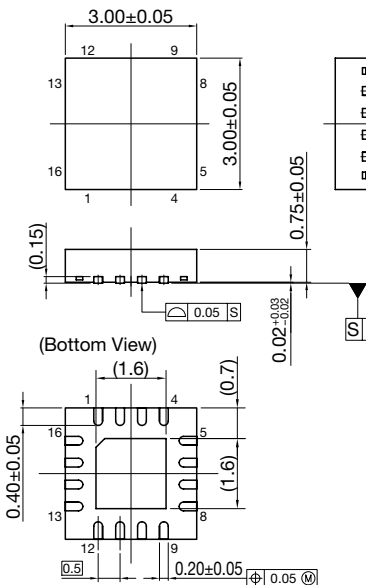
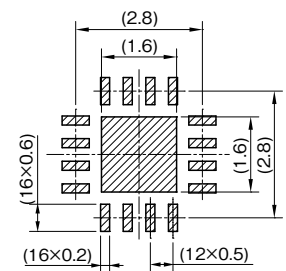
Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>SOT-23A</p>		
<p>SOT-25A</p>		

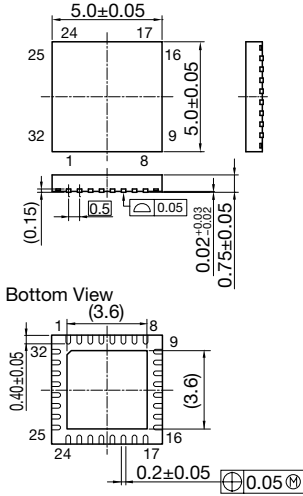
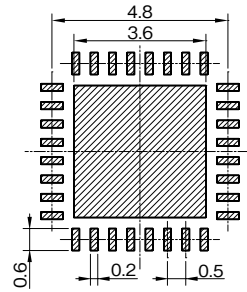
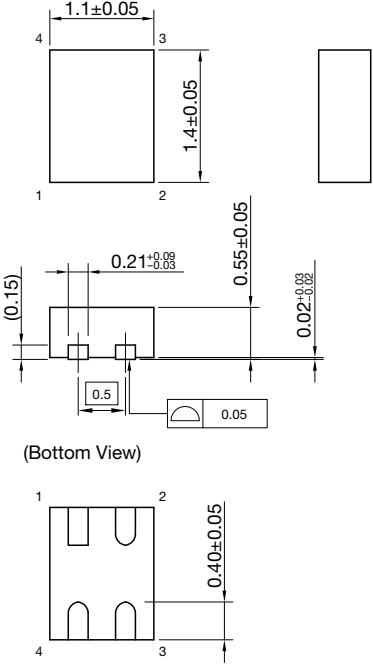
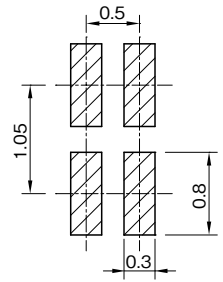
Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>SOT-26A</p>		
<p>SOT-26B</p>		

Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>SOT89-5A</p>	 <p>Top View: 4.5 ± 0.1, 0.42 ± 0.07 (0.9), 2.5 ± 0.1, $4.25^{+0.3}_{-0.3}$, $\phi 1.0$, 1.5, 1.5 (0.9)</p> <p>Side View: 1.5 ± 0.1, 0.44max.</p> <p>Bottom View: 0.42 ± 0.07, 0.42 ± 0.07, 0.47 ± 0.07</p> <p>(Bottom View): 1.6 ± 0.2 (0.2), 0.4</p>	 <p>Land Pattern Dimensions: 1.50, 1.50, 1.50, 0.70, 0.80, 0.70, 1.00, 2.00, 0.70</p>
<p>SQFN-16A</p>	 <p>Top View: 3.00 ± 0.05, 12, 9, 13, 8, 3.00 ± 0.05, 16, 5, 1, 4</p> <p>Side View: 0.15, 0.75 ± 0.05, 0.05 S, $0.02^{+0.02}_{-0.02}$, S</p> <p>(Bottom View): 0.40 ± 0.05, 16, 13, 12, 9, 1.6, 4, 5, 8, 1.6, 0.20 ± 0.05, $\phi 0.05$ (M)</p>	 <p>Land Pattern Dimensions: (2.8), (1.6), (16×0.6), (16×0.2), (12×0.5), (1.6), (2.8)</p>

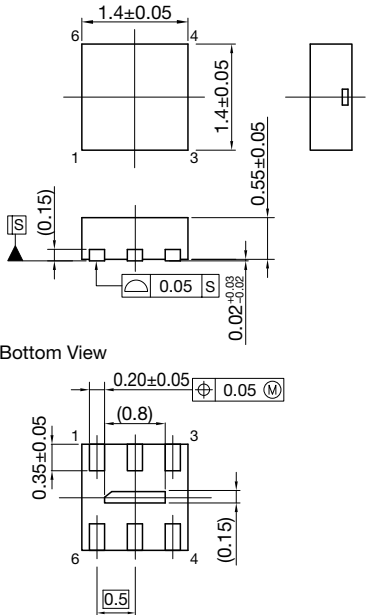
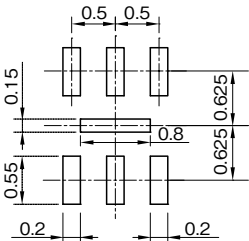
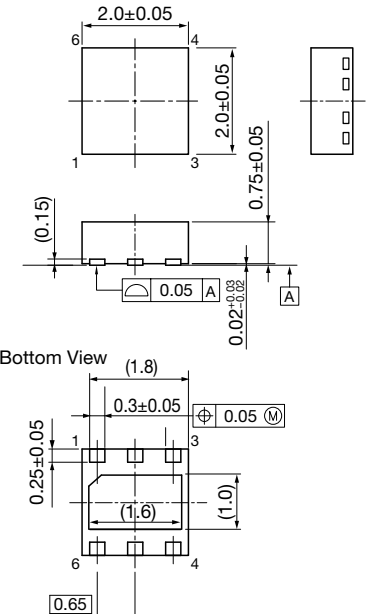
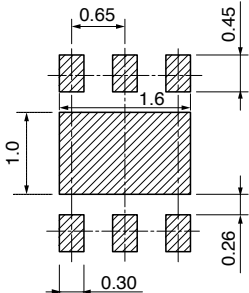
Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>SQFN-32A</p>	 <p>Top View: 5.0±0.05, 24, 17, 25, 16, 32, 9, 5.0±0.05, 1, 8</p> <p>Side View: (0.15), 0.5, 0.05, 0.02±0.03, 0.75±0.05</p> <p>Bottom View: (3.6), 1, 8, 9, 0.40±0.05, 32, 25, 24, 17, 16, 0.2±0.05, 0.05</p>	 <p>Dimensions: 4.8, 3.6, 0.6, 0.2, 0.5</p>
<p>SSON-4B</p>	 <p>Top View: 1.1±0.05, 4, 3, 1, 2, 1.4±0.05</p> <p>Side View: (0.15), 0.21±0.03, 0.55±0.05, 0.02±0.03, 0.5, 0.05</p> <p>Bottom View: 1, 2, 4, 3, 0.40±0.05</p>	 <p>Dimensions: 0.5, 1.05, 0.8, 0.3</p>

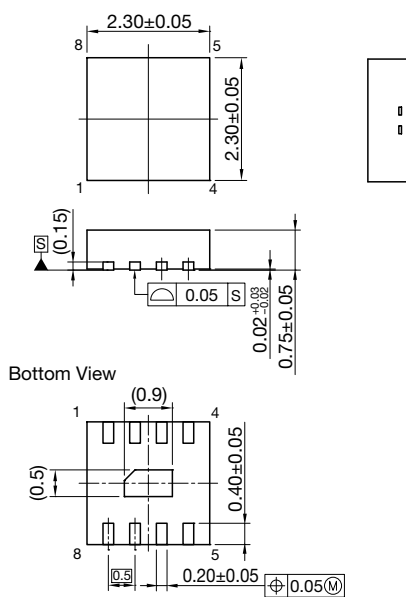
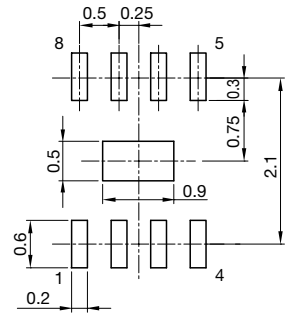
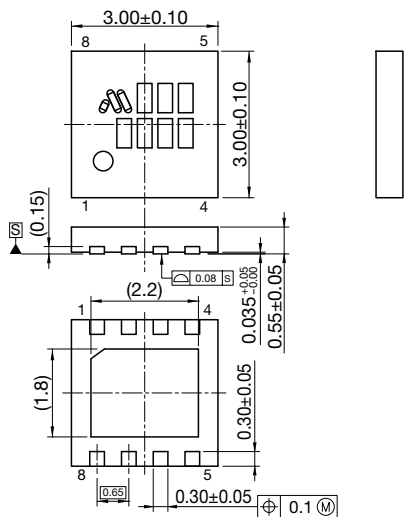
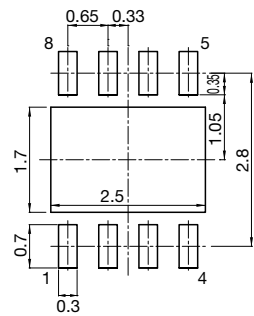
Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>SSON-6A</p>		
<p>SSON-6E</p>		

Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>SSON-6J</p>	 <p>Top View: 1.4±0.05 (width), 1.4±0.05 (height), pins 1, 3, 4, 6.</p> <p>Side View: 0.55±0.05 (height), 0.02^{+0.02}_{-0.02} (lead thickness), 0.05 (lead width), 0.15 (pitch).</p> <p>Bottom View: 0.20±0.05 (pin width), 0.05 (pin pitch), 0.35±0.05 (pin height), 0.8 (pin spacing), 0.15 (pin offset), 0.5 (pin width).</p>	 <p>Land Pattern: 0.5 (pad width), 0.5 (pad spacing), 0.15 (pad height), 0.8 (pad length), 0.625 (pad offset), 0.2 (pad width offset).</p>
<p>SSON-6L</p>	 <p>Top View: 2.0±0.05 (width), 2.0±0.05 (height), pins 1, 3, 4, 6.</p> <p>Side View: 0.75±0.05 (height), 0.02^{+0.02}_{-0.02} (lead thickness), 0.05 (lead width), 0.15 (pitch), A (lead angle).</p> <p>Bottom View: 1.8 (pin width), 0.3±0.05 (pin width), 0.05 (pin pitch), 0.25±0.05 (pin height), 1.6 (pin spacing), 1.0 (pin offset), 0.65 (pin width).</p>	 <p>Land Pattern: 0.65 (pad width), 0.45 (pad height), 1.6 (pad length), 1.0 (pad offset), 0.30 (pad width offset), 0.26 (pad width offset).</p>

Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>SSON-8B</p>	 <p>Top View: 2.30±0.05, 8, 5, 2.30±0.05, 1, 4</p> <p>Side View: (0.15), 0.05, 0.02±0.002, 0.75±0.05</p> <p>Bottom View: (0.9), 1, 4, (0.5), 0.40±0.05, 8, 5, 0.20±0.05, 0.05 (M)</p>	 <p>Dimensions: 0.5, 0.25, 8, 5, 0.3, 0.75, 2.1, 0.5, 0.9, 0.6, 1, 0.2, 4</p>
<p>SSON-8C</p>	 <p>Top View: 3.00±0.10, 8, 5, 3.00±0.10, 1, 4</p> <p>Side View: (0.15), 0.08, 0.035±0.005, 0.55±0.05</p> <p>Bottom View: (2.2), 1, 4, (1.8), 0.30±0.05, 8, 5, 0.30±0.05, 0.65, 0.1 (M)</p>	 <p>Dimensions: 0.65, 0.33, 8, 5, 0.3, 1.7, 2.5, 1.05, 2.8, 0.7, 0.3, 4</p>

Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>SSON-10A</p>	<p>Top View: Overall width 2.7, pin pitch 0.5, pin width 0.15, pin length 0.55. Pin positions 1, 5, 6, 10 are marked.</p> <p>Bottom View: Pin pitch 0.5, pin width 0.2, pin length 0.25. Pin positions 1, 5, 6, 10 are marked. A central area of 2.3 is indicated.</p> <p>Side View: Pin height 0.05, pin thickness 0.02. A note 'A' is present.</p>	<p>Land Pattern: Pin pitch 0.5, pad width 0.45, pad length 1.50. Total width 2.30. Pad offset 0.20. Pad length 0.30.</p>
<p>SSOP-8A</p>	<p>Top View: Pin pitch 0.5, pin width 0.25, pin length 0.7. Pin positions 1, 4, 5, 8 are marked. Overall width 2.0±0.3, overall height 2.3±0.2.</p> <p>Bottom View: Pin pitch 0.5, pin width 0.25±0.05, pin length 0.75±0.15. Pin positions 1, 4, 5, 8 are marked. A note 'A' is present.</p> <p>Side View: Pin height 0.13, pin thickness MIN0.1, pin length 3.1±0.3. Lead angle 0-10°.</p>	<p>Land Pattern: Pin pitch 0.5, pad width 0.55, pad length 3.05. Pad offset 0.25.</p>

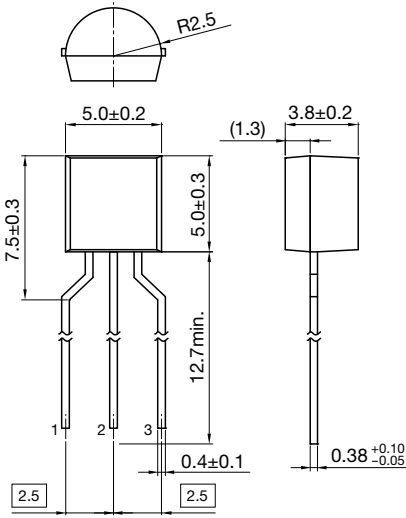
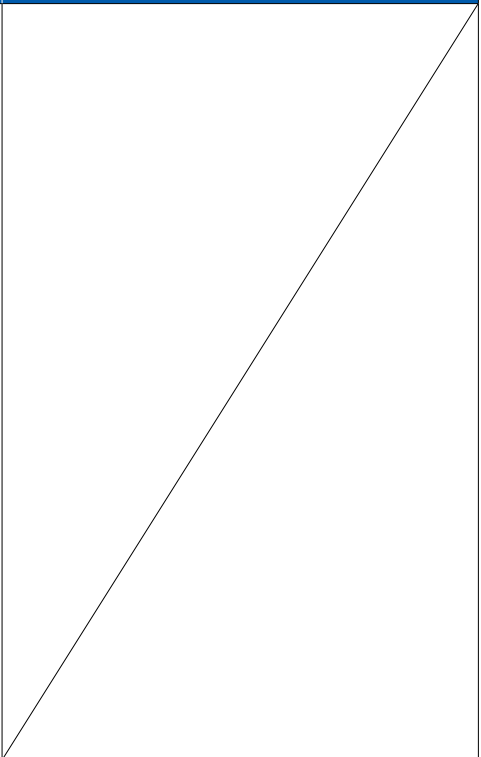
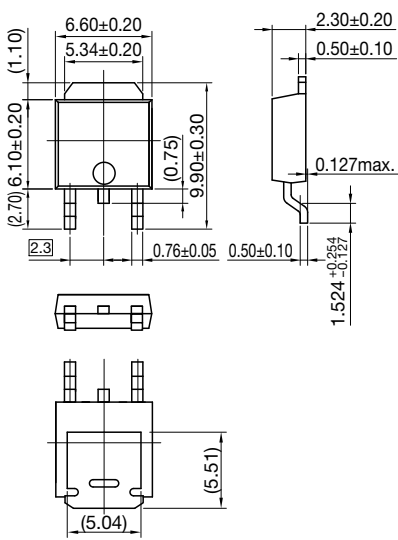
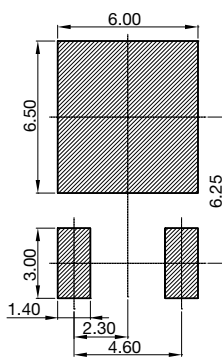
Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>SSOP-24B</p>		
<p>SSOP-34A</p>		

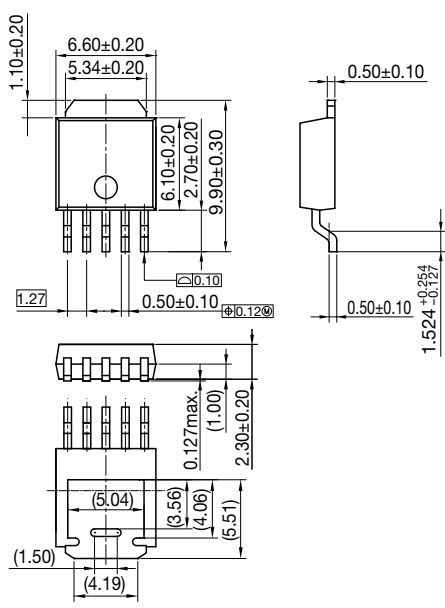
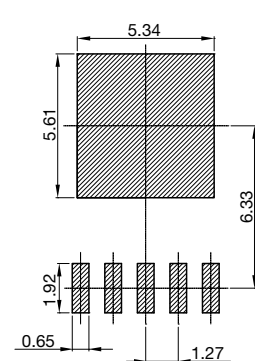
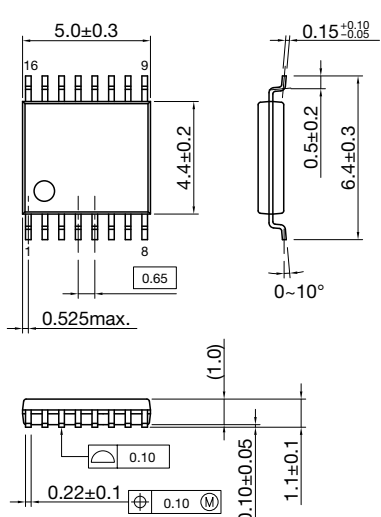
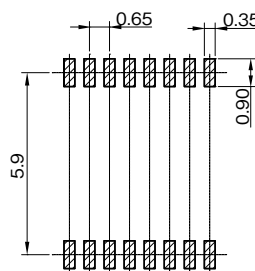
Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>SSOP-36A</p>		
<p>SSOP-42A</p>		

Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>TO-92A</p>	 <p>Dimensional drawing of TO-92A package showing top, side, and detail views. Dimensions include: top width 5.0 ± 0.2, top height 7.5 ± 0.3, side width 5.0 ± 0.3, lead length 12.7 min., lead thickness 0.4 ± 0.1, lead spacing 2.5, lead diameter $0.38^{+0.10}_{-0.05}$, and a detail view showing a diameter of 3.8 ± 0.2 and a height of 1.3. A top view shows a radius of $R2.5$.</p>	 <p>Blank recommended land pattern for TO-92A package, indicated by a diagonal line across the cell.</p>
<p>TO-252C</p>	 <p>Dimensional drawing of TO-252C package showing top, side, and bottom views. Dimensions include: top width 6.60 ± 0.20, top inner width 5.34 ± 0.20, top height 1.10, side height 6.10 ± 0.20, lead length 9.90 ± 0.30, lead thickness 0.76 ± 0.05, lead spacing 0.50 ± 0.10, lead diameter $1.524^{+0.254}_{-0.127}$, and a detail view showing a diameter of 2.30 ± 0.20 and a height of 0.50 ± 0.10. A bottom view shows a width of 5.04 and a height of 5.51.</p>	 <p>Recommended land pattern for TO-252C package showing a square pad with dimensions 6.00 by 6.50, and two rectangular pads with dimensions 3.00 by 1.40 and 2.30 by 4.60.</p>

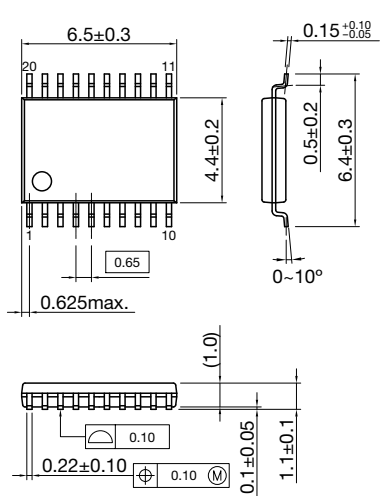
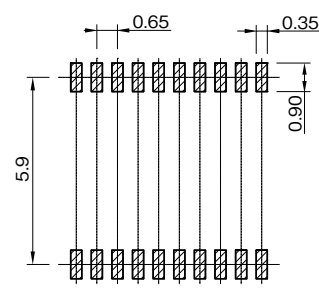
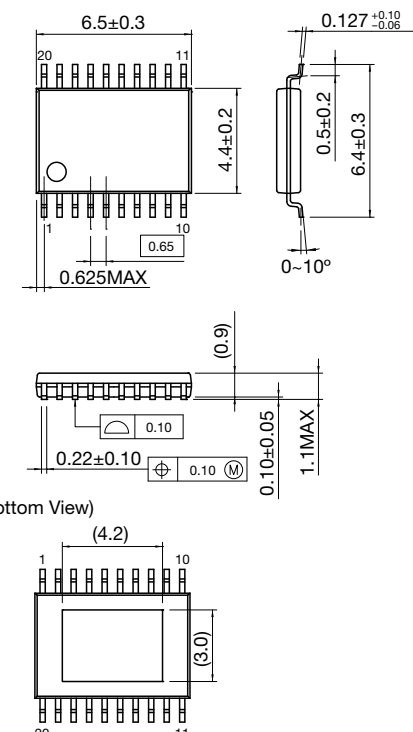
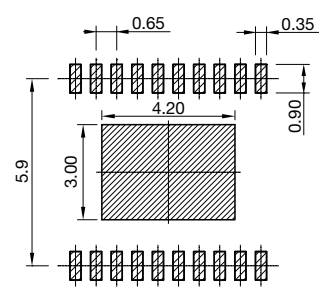
Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>TO-252-5A</p>	 <p>Top view dimensions: 6.60±0.20, 5.34±0.20, 6.10±0.20, 2.70±0.20, 9.90±0.30, 1.10±0.20, 1.27, 0.50±0.10, 0.10, 0.127, 0.50±0.10, 1.524^{+0.254}/_{-0.127}.</p> <p>Side view dimensions: 0.50±0.10, 1.524^{+0.254}/_{-0.127}.</p> <p>Detail view dimensions: 0.127max., (1.00), 2.30±0.20, (6.04), (3.56), (4.06), (5.51), (1.50), (4.19).</p>	 <p>Land pattern dimensions: 5.34, 5.61, 6.33, 1.92, 0.65, 1.27.</p>
<p>TSOP-16A</p>	 <p>Top view dimensions: 5.0±0.3, 4.4±0.2, 0.65, 0.525max., 16, 9.</p> <p>Side view dimensions: 0.15^{+0.10}/_{-0.05}, 0.5±0.2, 6.4±0.3, 0~10°.</p> <p>Detail view dimensions: (1.0), 0.10, 0.22±0.1, 0.10, 0.10±0.05, 1.1±0.1.</p>	 <p>Land pattern dimensions: 0.65, 0.35, 5.9, 0.90.</p>

Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>TSOP-16B</p>		
<p>TSOP-16D</p>		

Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>TSOP-20A</p>	 <p>Dimensional drawing of TSOP-20A package showing top, side, and bottom views. Dimensions include: top width 6.5 ± 0.3, top lead pitch 0.65, top lead width 0.625 max., top lead height 4.4 ± 0.2, top lead thickness $0.15^{+0.10}_{-0.05}$, top lead length 0.5 ± 0.2, top lead angle $0 \sim 10^\circ$, top lead width at base 6.4 ± 0.3, bottom lead pitch 0.22 ± 0.10, bottom lead width 0.10, bottom lead thickness 0.1 ± 0.05, bottom lead length 1.1 ± 0.1, and bottom lead angle 1.0.</p>	 <p>Recommended land pattern for TSOP-20A showing a 20-pin layout with dimensions: total width 5.9, pin pitch 0.65, pin width 0.35, and pin height 0.90.</p>
<p>TSOP-20B</p>	 <p>Dimensional drawing of TSOP-20B package showing top, side, bottom, and bottom view. Dimensions include: top width 6.5 ± 0.3, top lead pitch 0.65, top lead width 0.625 MAX, top lead height 4.4 ± 0.2, top lead thickness $0.127^{+0.10}_{-0.06}$, top lead length 0.5 ± 0.2, top lead angle $0 \sim 10^\circ$, top lead width at base 6.4 ± 0.3, bottom lead pitch 0.22 ± 0.10, bottom lead width 0.10, bottom lead thickness 0.10 ± 0.05, bottom lead length 1.1 MAX, and bottom lead angle 0.9. The bottom view shows a central area with dimensions 4.2 and 3.0.</p>	 <p>Recommended land pattern for TSOP-20B showing a 20-pin layout with dimensions: total width 5.9, pin pitch 0.65, pin width 0.35, pin height 0.90, and a central shaded area with dimensions 4.20 and 3.00.</p>

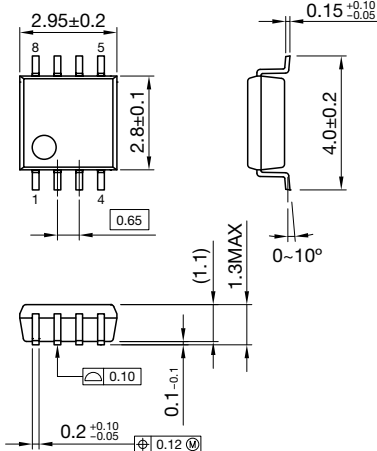
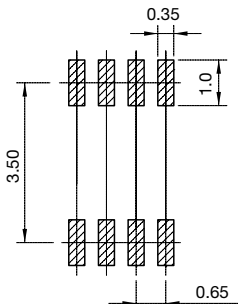
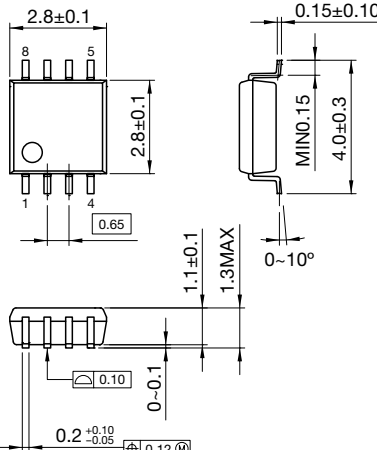
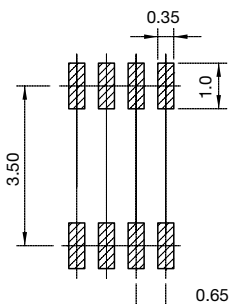
Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>TSOP-20D</p>		
<p>TSOP-20E</p>		

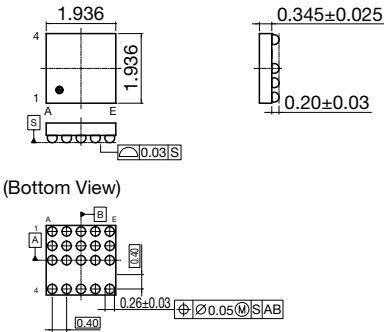
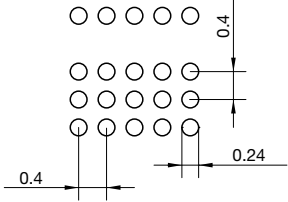
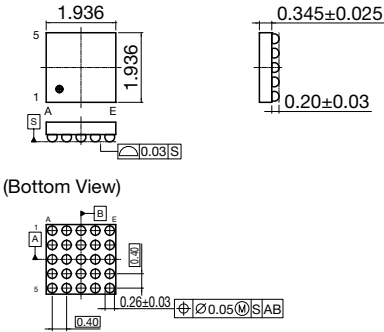
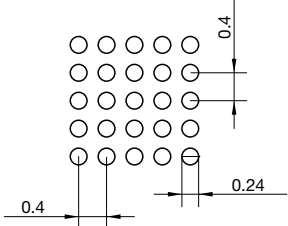
Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>TSOP-20F</p>	<p>Top View: 6.5 ± 0.3, 4.4 ± 0.2, 0.65, 0.127 ± 0.008, 0.6 ± 0.1, 6.4 ± 0.3, $0-8^\circ$</p> <p>Side View: 1.0, 0.1 ± 0.05, 1.20 MAX</p> <p>Bottom View: 0.24 ± 0.05, $\phi 0.10$, 0.1, 1.20 MAX, 1, 10, 20, 11, (3.99), (2.80)</p>	<p>Land Pattern Dimensions: 0.65, 0.40, 7.72, 5.94, 3.00, 4.16, 1.78, 3.19</p>
<p>VSOP-8B</p>	<p>Top View: 2.9 ± 0.1, 2.8 ± 0.2, 0.65, $0.125^{+0.10}_{-0.05}$, 0.45 ± 0.20, 4.0 ± 0.3, $0-10^\circ$</p> <p>Side View: 1.1, 1.3 max., 0.10 ± 0.05</p> <p>Bottom View: 0.2 ± 0.1, $\phi 0.10$, $\phi 0.12$, 1, 4, 8, 5</p>	<p>Land Pattern Dimensions: 0.65, 3.55, 0.95, 0.35</p>

Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>VSOP-8C</p>	 <p>Dimensional drawing of the VSOP-8C package. The top view shows a width of 2.95 ± 0.2 and a height of 2.8 ± 0.1. The lead pitch is 0.65. The side view shows a lead height of $0.15^{+0.10}_{-0.05}$ and a total height of 4.0 ± 0.2. The lead angle is $0 \sim 10^\circ$. The bottom view shows a lead length of 1.3 MAX and a distance of 1.1 from the lead tip to the package edge. The lead thickness is 0.1. The lead width is $0.2^{+0.10}_{-0.05}$ and the lead diameter is $\phi 0.12$.</p>	 <p>Recommended land pattern for the VSOP-8C package. The land width is 0.35 and the land length is 1.0. The pitch between lands is 0.65 and the total width of the land pattern is 3.50.</p>
<p>VSOP-8D</p>	 <p>Dimensional drawing of the VSOP-8D package. The top view shows a width of 2.8 ± 0.1 and a height of 2.8 ± 0.1. The lead pitch is 0.65. The side view shows a lead height of 0.15 ± 0.10 and a total height of 4.0 ± 0.3. The lead angle is $0 \sim 10^\circ$. The bottom view shows a lead length of 1.3 MAX and a distance of 1.1 ± 0.1 from the lead tip to the package edge. The lead thickness is 0.1. The lead width is $0.2^{+0.10}_{-0.05}$ and the lead diameter is $\phi 0.12$.</p>	 <p>Recommended land pattern for the VSOP-8D package. The land width is 0.35 and the land length is 1.0. The pitch between lands is 0.65 and the total width of the land pattern is 3.50.</p>

Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>WLCSP-20A</p>	 <p>(Bottom View)</p>	
<p>WLCSP-25A</p>	 <p>(Bottom View)</p>	

Package

Package Name	Dimensional Drawing	Recommended Land Pattern
<p>WLCSP-48A</p>	<p>3.47±0.03</p> <p>0.4±0.025</p> <p>0.24±0.03</p> <p>0.03</p> <p>(Bottom View)</p> <p>0.50</p> <p>0.32±0.05</p> <p>0.05</p>	<p>0.5</p> <p>0.25</p>