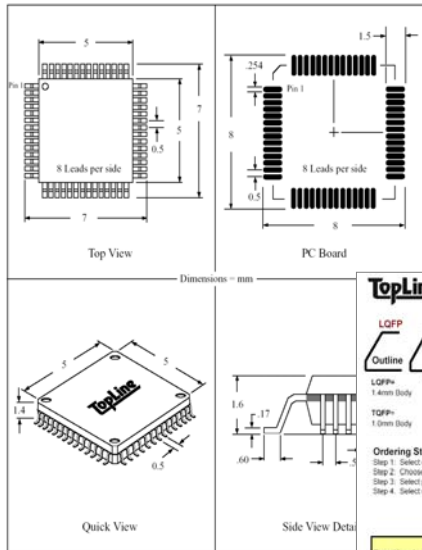


Outline Drawings
 PC Board Land Patterns
 Daisy Chain Net List
 Part Number - Ordering Instructions

Table of Contents			
Part Series	Pitch	Size	Page
TQFP32T19.7	0.5mm	5mm	2
TQFP32T30	0.8mm	7mm	5
TQFP44T30	0.8mm	10mm	8
TQFP44T40	1.0mm	14mm	11
TQFP48T19.7	0.5mm	7mm	14
TQFP52T25	0.65mm	10mm	17
TQFP52T40	1.0mm	14mm	20
TQFP64T15.7	0.4mm	7mm	23
TQFP64T19.7	0.5mm	10mm	26

Table of Contents			
Part Series	Pitch	Size	Page
TQFP64T30	0.8mm	14mm	29
TQFP80T15.7	0.4mm	10mm	32
TQFP80T19.7	0.5mm	12mm	35
TQFP80T25	0.65mm	14mm	38
TQFP100T19.7	0.5mm	14mm	41
TQFP120T15.7	0.4mm	14mm	44
TQFP128T15.7	0.4mm	14mm	47
TQFP144T19.7	0.5mm	20mm	50



Outline Drawing

Part Number

TopLine® How to Order LQFP32 www.TopLine.tv email: info@TopLine.tv

LQFP 32 T 19.7 T DE D

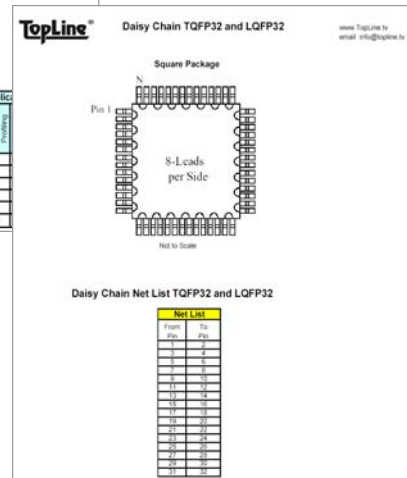
Outline Pins Packaging Pitch Plating Daisy Chain Die

LQFP: 1.4mm Body, E = Tape, E13A-VF Pin, 15.7 = 0.4mm, 19.7 = 0.5mm, 25 = 0.65mm, 30 = 0.8mm, 40 = 1.0mm, T = No Matte Tin, T = Six Matte Tin, ISO = Isolated, Blank = Underlined, DE = Daisy Chain, D = Daisy Die

Ordering Steps:
 Step 1: Select outline body thickness: TQFP (1.0mm) or LQFP (1.4mm)
 Step 2: Choose packaging. Tray is standard. Tape and Pin is available.
 Step 3: Select plating requirements. Au/Ni/Pb-Free or Sn/Pb.
 Step 4: Select options according to your application. See chart below.

Part Number Packaged in Tray (Standard)	Options				Applic:			
	Plating	Daisy Chain	Querry Die	Isolated	Mounting	Thermal	High Power	High Speed
LQFP32T19.7T	Sn/Pb	No	No	No	x	x	x	x
LQFP32T19.7T	Pb-Free	No	No	No	x	x	x	x
LQFP32T19.7T-DE-D	Sn/Pb	Yes	Yes	No	x	x	x	x
LQFP32T19.7T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x
LQFP32T19.7-4SD	Sn/Pb	No	No	Yes	x	x	x	x
LQFP32T19.7-4SD	Pb-Free	No	No	Yes	x	x	x	x

Daisy Chain

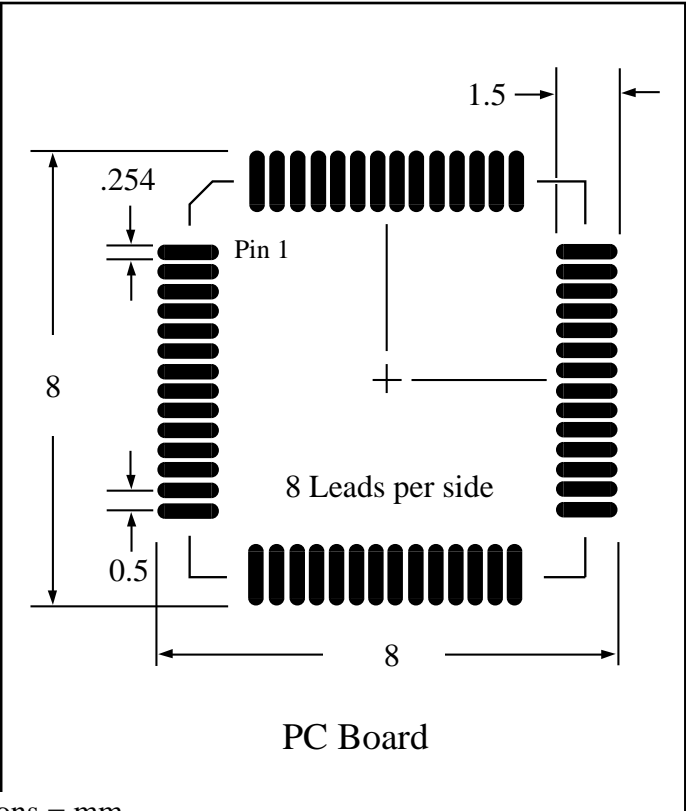
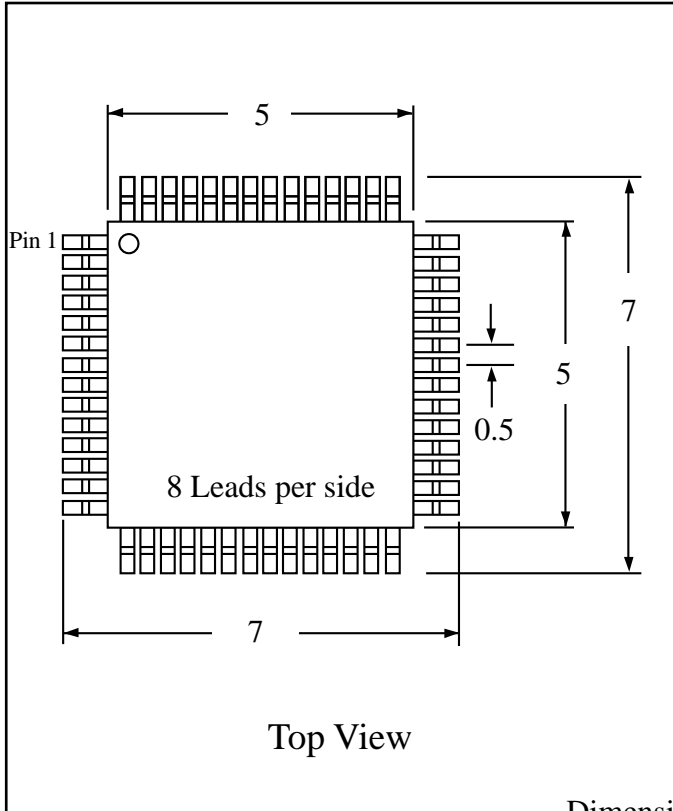


Part # **TQFP32T19.7**
 Leads **32** Pitch **0.5mm**
 Body Size **5mm SQ**

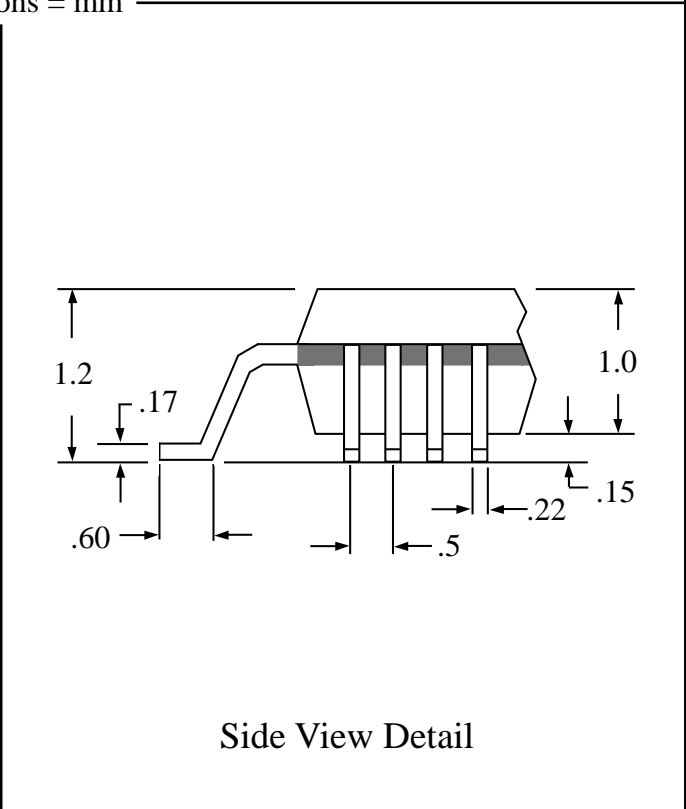
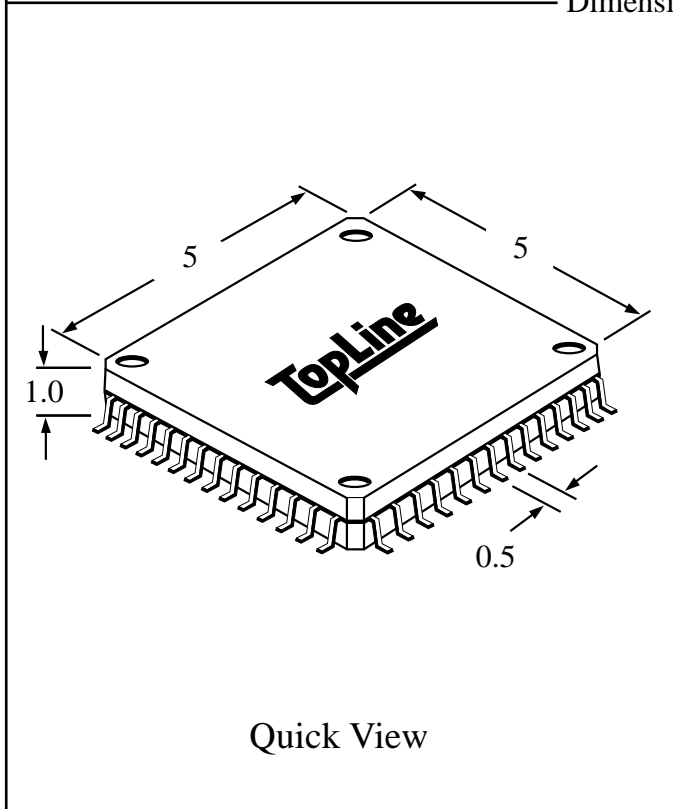
Available RoHS Pb-Free

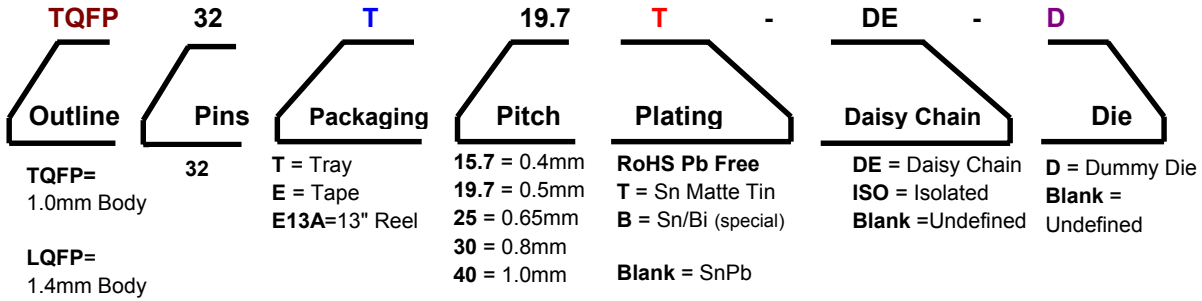


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Dimensions = mm





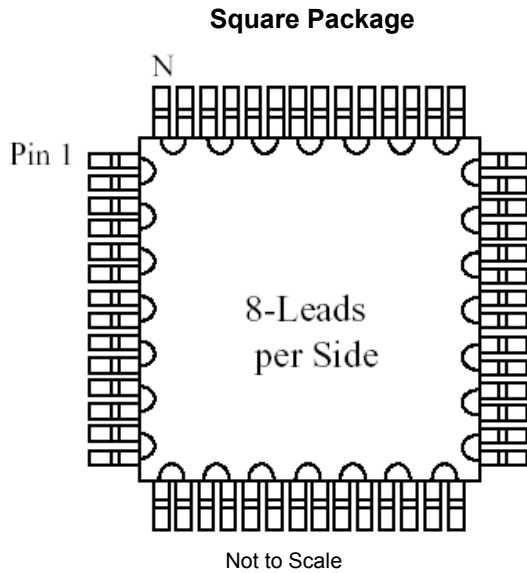
Ordering Steps:

- Step 1: Select outline body thickness TQFP (1.0mm) or LQFP (1.4mm).
- Step 2: Choose packaging. Tray is standard. Tape and Reel is available.
- Step 3: Select plating requirements. RoHS Pb-Free or SnPb
- Step 4: Select options according to your application. See chart below.

Part Number Packaged in Tray (Standard)	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP32T19.7	SnPb	No	No	No	x	x				
TQFP32T19.7T	Pb-Free	No	No	No	x	x				
TQFP32T19.7-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP32T19.7T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP32T19.7-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP32T19.7T-ISO	Pb-Free	No	No	Yes	x	x	x			x

Part Number Packaged in Tape and Reel	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP32E13A19.7	SnPb	No	No	No	x	x				
TQFP32E13A19.7T	Pb-Free	No	No	No	x	x				
TQFP32E13A19.7-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP32E13A19.7T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP32E13A19.7-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP32E13A19.7T-ISO	Pb-Free	No	No	Yes	x	x	x			x

Visit www.TopLine.tv or email info@TopLine.tv for applications assistance.



Daisy Chain Net List TQFP32 and LQFP32

Net List	
From Pin	To Pin
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24
25	26
27	28
29	30
31	32

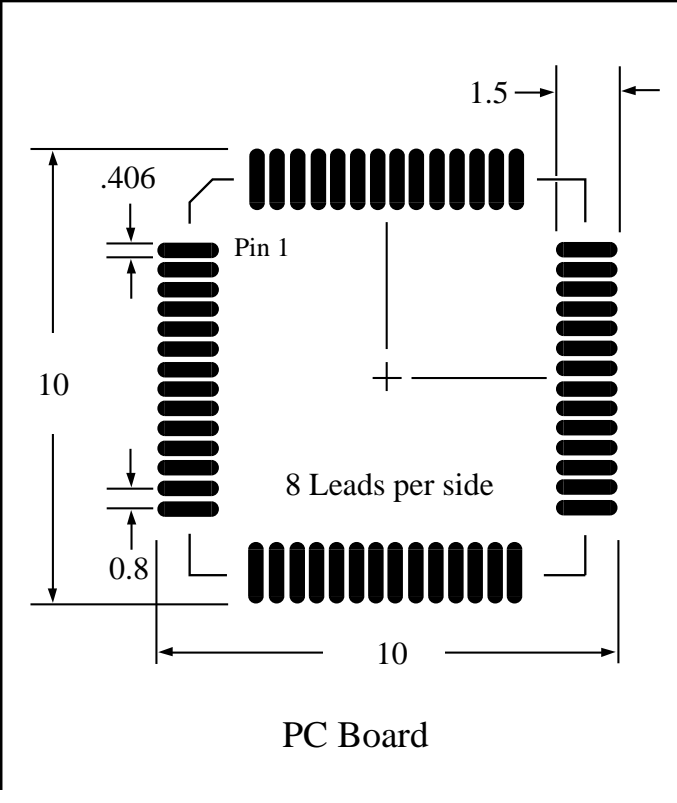
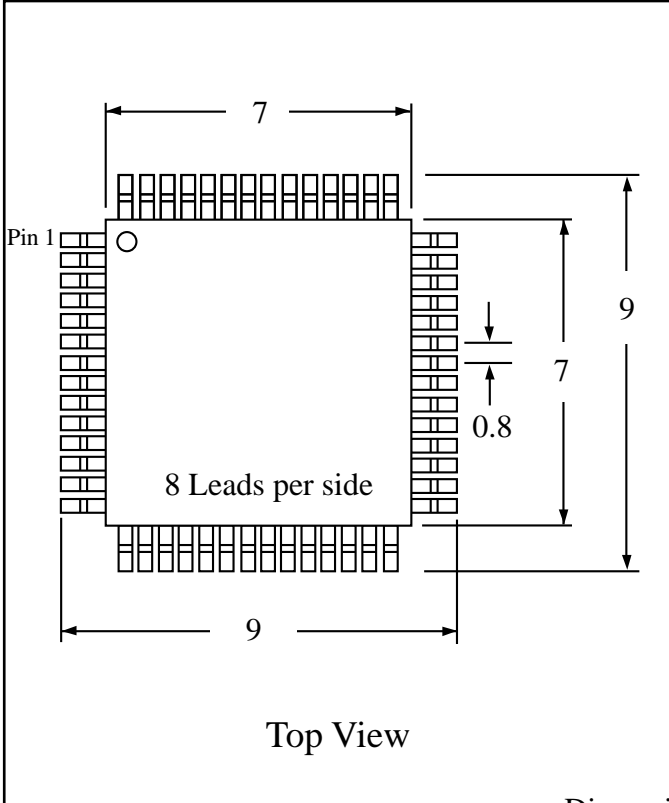
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Part # **TQFP32T30**
 Leads **32** Pitch **0.8mm**
 Body Size **7mm SQ**

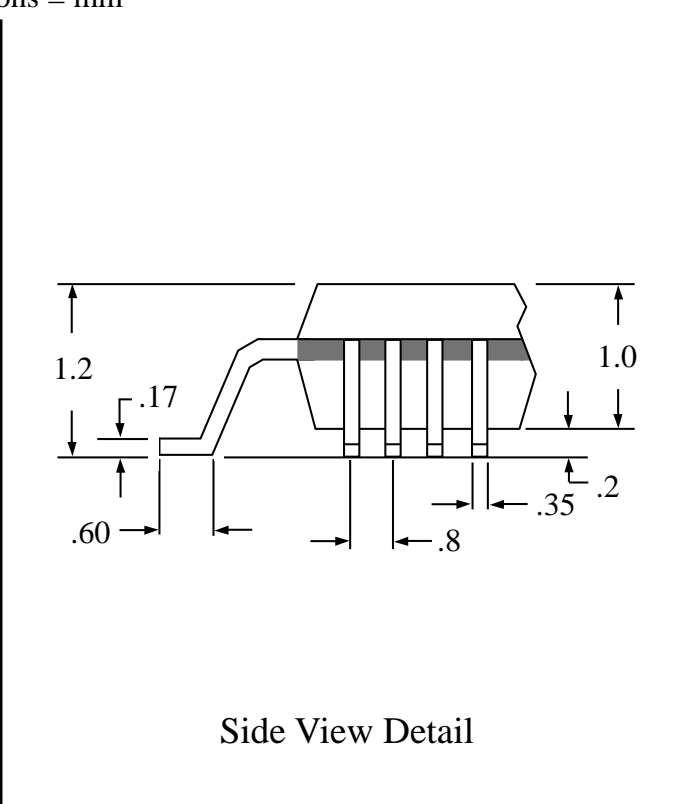
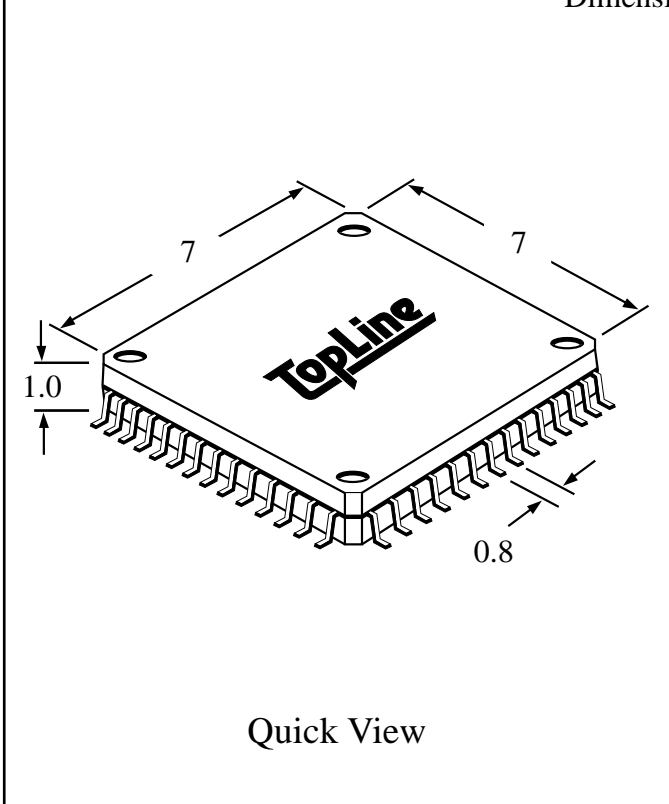
Available RoHS Pb-Free

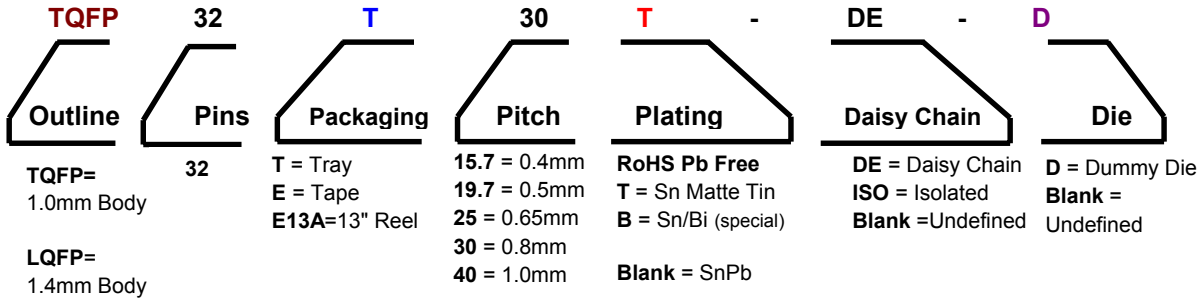
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Dimensions = mm





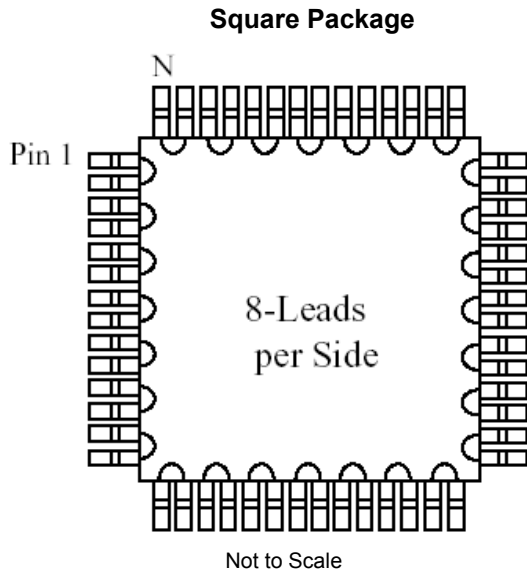
Ordering Steps:

- Step 1: Select outline body thickness TQFP (1.0mm) or LQFP (1.4mm).
- Step 2: Choose packaging. Tray is standard. Tape and Reel is available.
- Step 3: Select plating requirements. RoHS Pb-Free or SnPb
- Step 4: Select options according to your application. See chart below.

Part Number Packaged in Tray (Standard)	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP32T30	SnPb	No	No	No	x	x				
TQFP32T30T	Pb-Free	No	No	No	x	x				
TQFP32T30-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP32T30T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP32T30-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP32T30T-ISO	Pb-Free	No	No	Yes	x	x	x			x

Part Number Packaged in Tape and Reel	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP32E13A30	SnPb	No	No	No	x	x				
TQFP32E13A30T	Pb-Free	No	No	No	x	x				
TQFP32E13A30-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP32E13A30T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP32E13A30-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP32E13A30T-ISO	Pb-Free	No	No	Yes	x	x	x			x

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Daisy Chain Net List TQFP32 and LQFP32

Net List	
From Pin	To Pin
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24
25	26
27	28
29	30
31	32

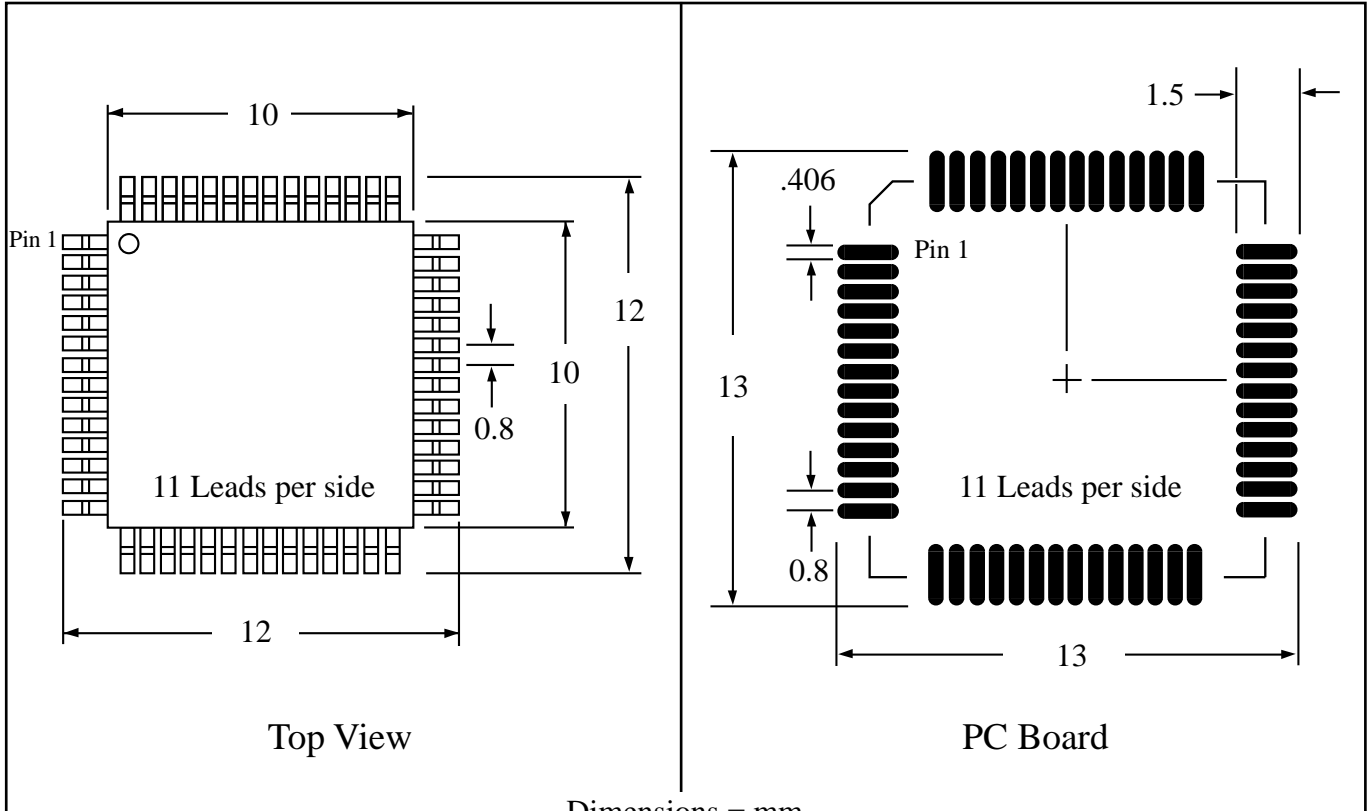
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Part # **TQFP44T30**
 Leads **44** Pitch **0.8mm**
 Body Size **10mm SQ**

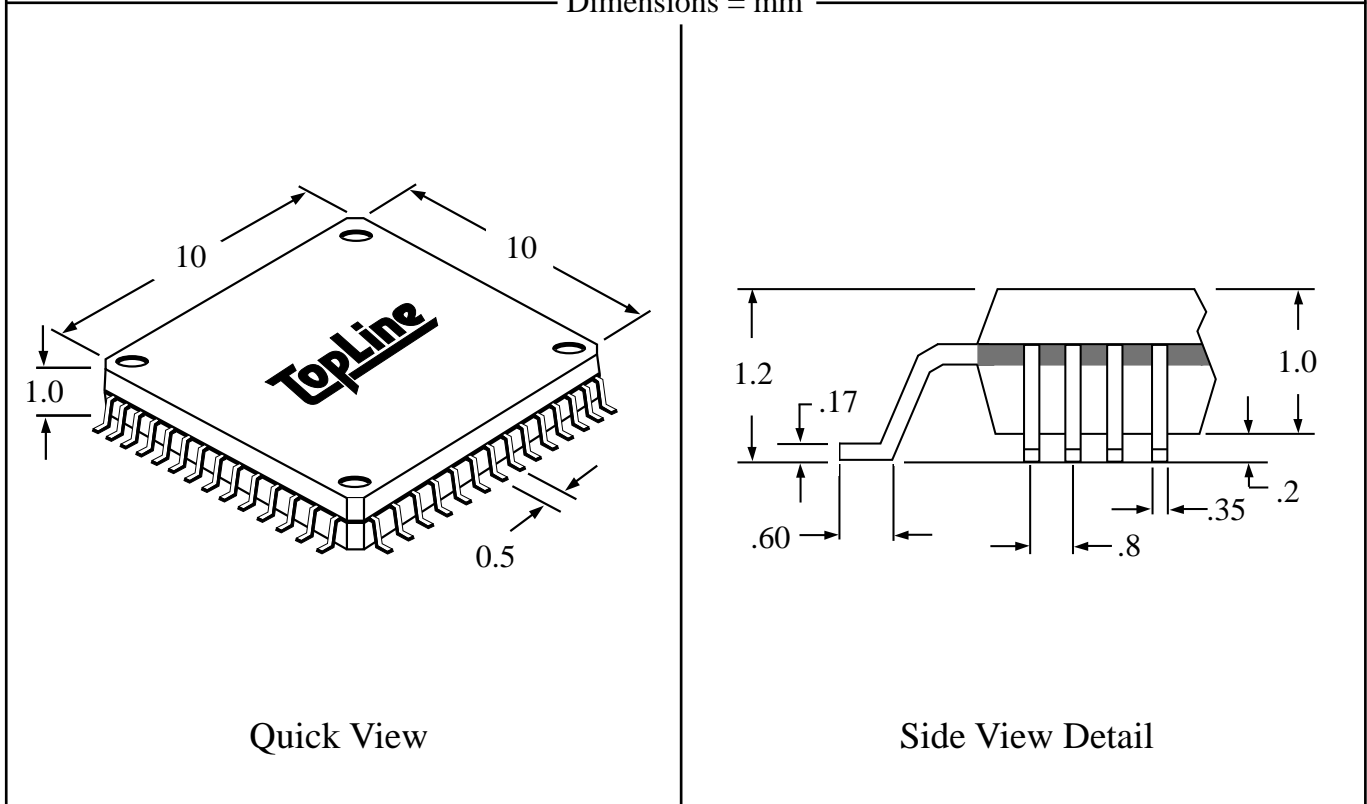
Available RoHS Pb-Free

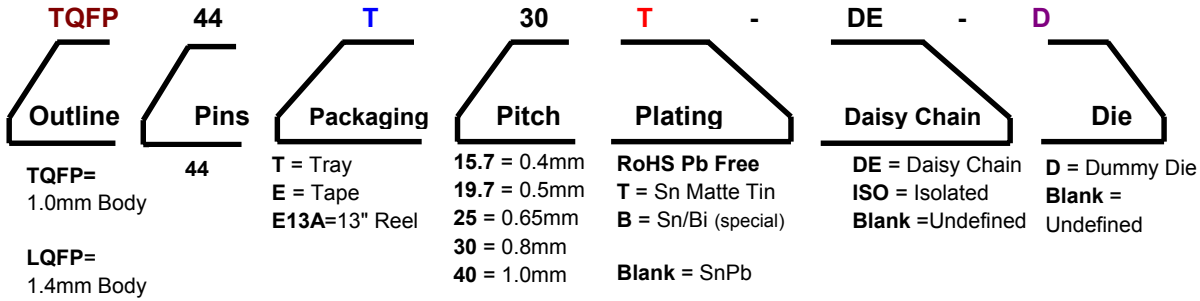
TopLineTM

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Dimensions = mm





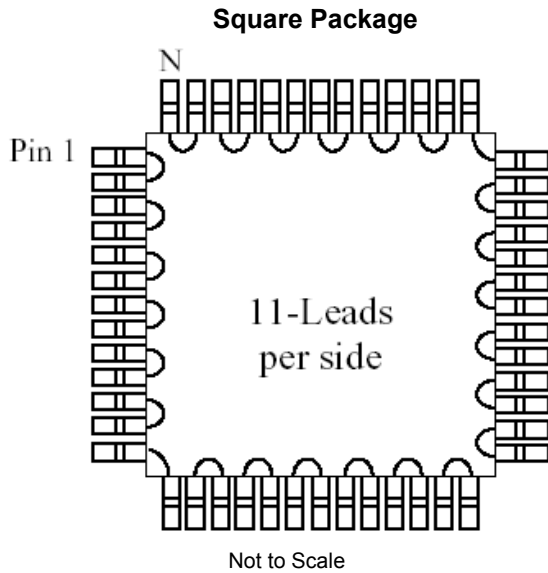
Ordering Steps:

- Step 1: Select outline body thickness TQFP (1.0mm) or LQFP (1.4mm).
- Step 2: Choose packaging. Tray is standard. Tape and Reel is available.
- Step 3: Select plating requirements. RoHS Pb-Free or SnPb
- Step 4: Select options according to your application. See chart below.

Part Number Packaged in Tray (Standard)	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP44T30	SnPb	No	No	No	x	x				
TQFP44T30T	Pb-Free	No	No	No	x	x				
TQFP44T30-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP44T30T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP44T30-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP44T30T-ISO	Pb-Free	No	No	Yes	x	x	x			x

Part Number Packaged in Tape and Reel	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP44E13A30	SnPb	No	No	No	x	x				
TQFP44E13A30T	Pb-Free	No	No	No	x	x				
TQFP44E13A30-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP44E13A30T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP44E13A30-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP44E13A30T-ISO	Pb-Free	No	No	Yes	x	x	x			x

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Daisy Chain Net List TQFP44, LQFP44 and QFP44

Net List	
From Pin	To Pin
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24
25	26
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31	32
33	34
35	36
37	38
39	40
41	42
43	44

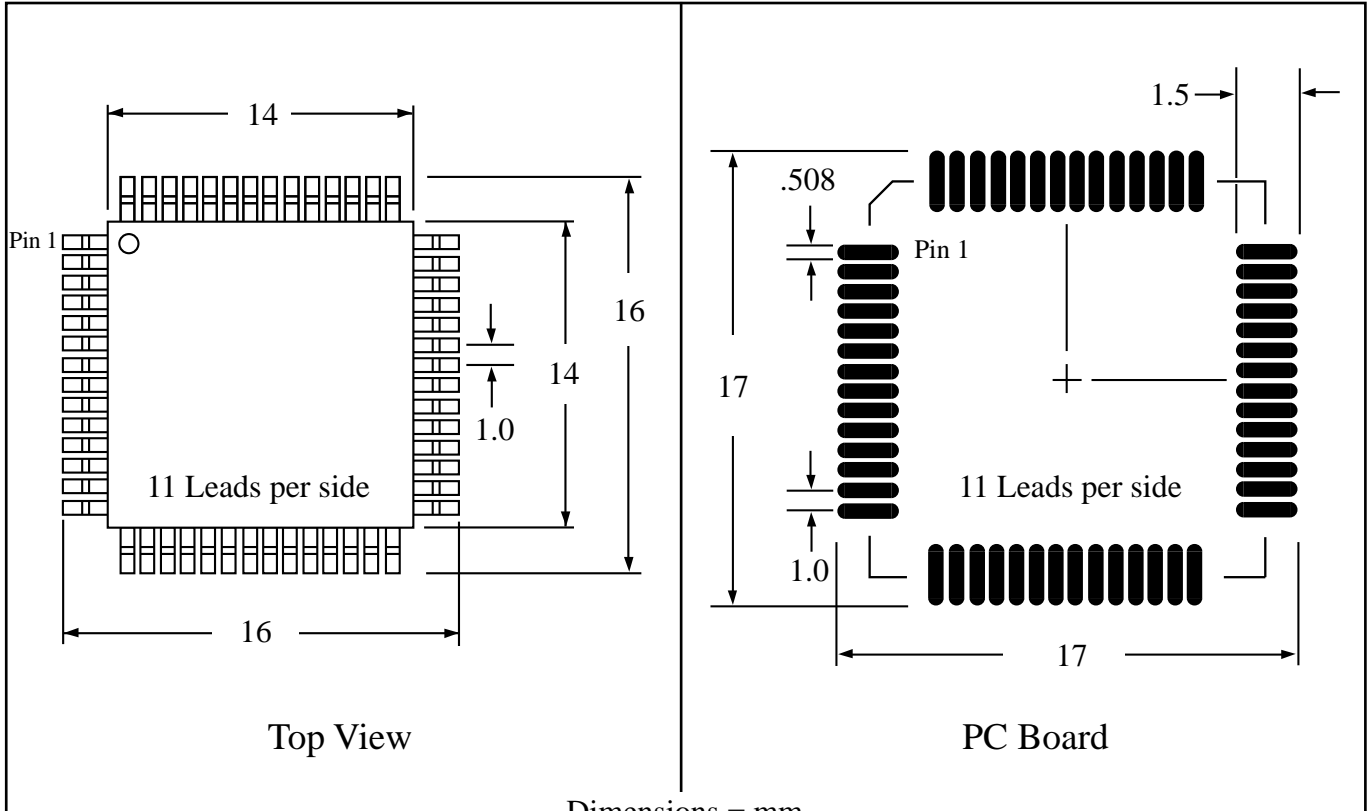
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Part # **TQFP44T40**
 Leads **44** Pitch **1.0mm**
 Body Size **14mm SQ**

Available RoHS Pb-Free



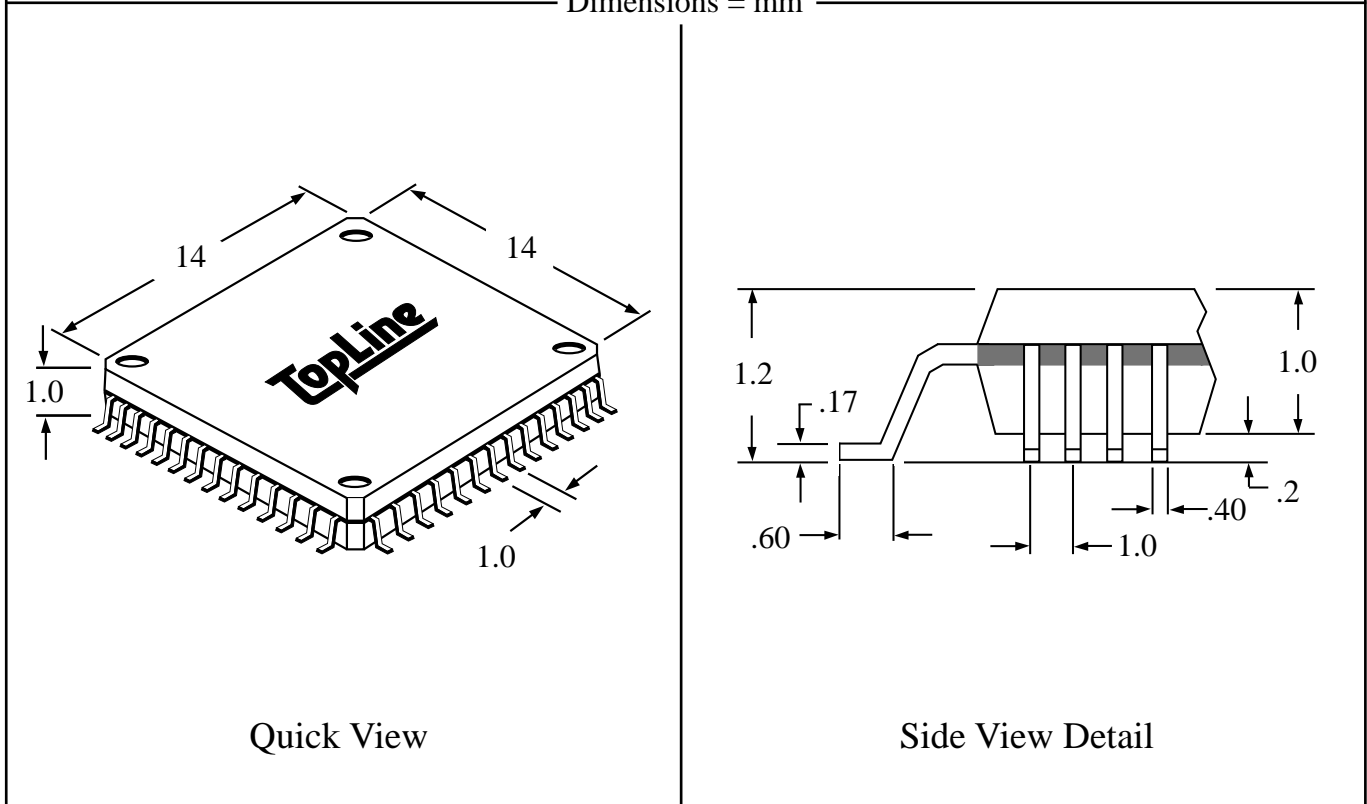
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Top View

PC Board

Dimensions = mm



Quick View

Side View Detail

TQFP 	44 	T 	40 	T - 	DE - 	D
Outline TQFP= 1.0mm Body LQFP= 1.4mm Body	Pins 44	Packaging T = Tray E = Tape E13A=13" Reel	Pitch 15.7 = 0.4mm 19.7 = 0.5mm 25 = 0.65mm 30 = 0.8mm 40 = 1.0mm	Plating RoHS Pb Free T = Sn Matte Tin B = Sn/Bi (special) Blank = SnPb	Daisy Chain DE = Daisy Chain ISO = Isolated Blank = Undefined	Die D = Dummy Die Blank = Undefined

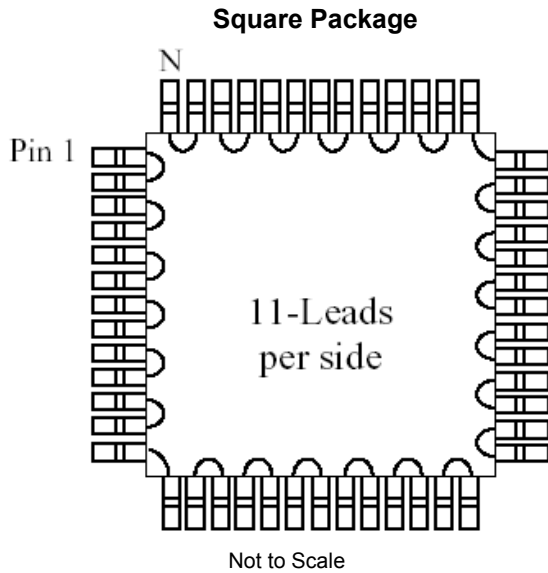
Ordering Steps:

- Step 1: Select outline body thickness TQFP (1.0mm) or LQFP (1.4mm).
- Step 2: Choose packaging. Tray is standard. Tape and Reel is available.
- Step 3: Select plating requirements. RoHS Pb-Free or SnPb
- Step 4: Select options according to your application. See chart below.

Part Number Packaged in Tray (Standard)	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP44T40	SnPb	No	No	No	x	x				
TQFP44T40T	Pb-Free	No	No	No	x	x				
TQFP44T40-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP44T40T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP44T40-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP44T40T-ISO	Pb-Free	No	No	Yes	x	x	x			x

Part Number Packaged in Tape and Reel	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP44E13A40	SnPb	No	No	No	x	x				
TQFP44E13A40T	Pb-Free	No	No	No	x	x				
TQFP44E13A40-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP44E13A40T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP44E13A40-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP44E13A40T-ISO	Pb-Free	No	No	Yes	x	x	x			x

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Daisy Chain Net List TQFP44, LQFP44 and QFP44

Net List	
From Pin	To Pin
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
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43	44

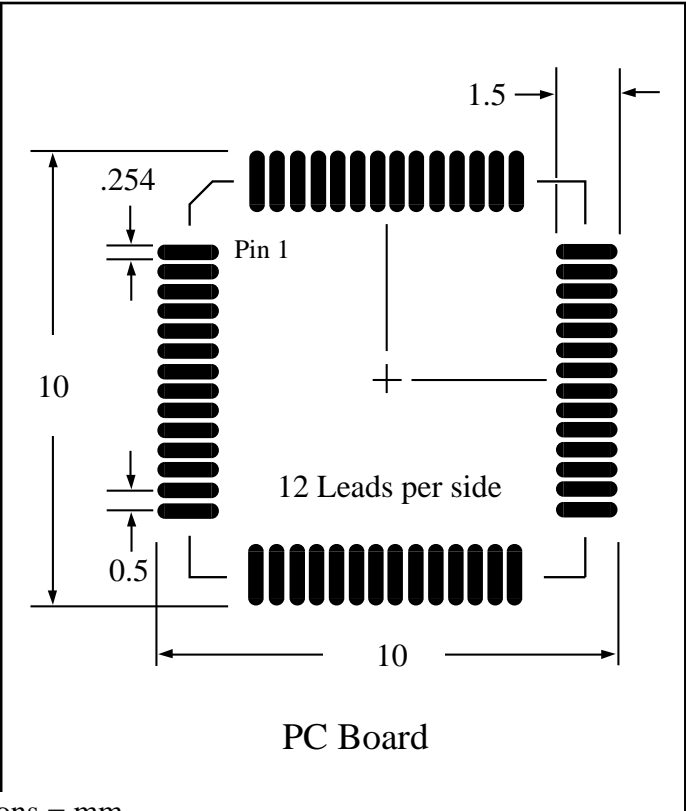
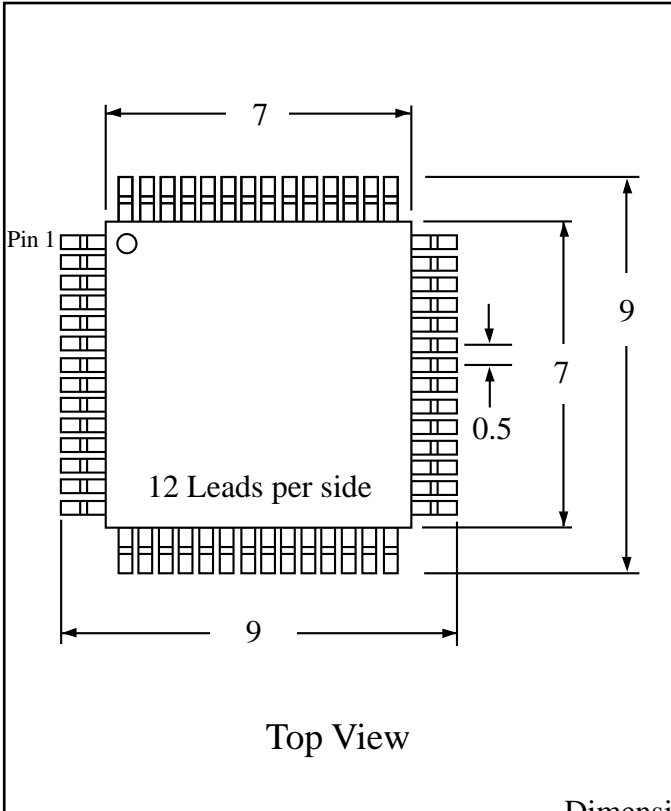
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Part # **TQFP48T19.7**
 Leads **48** Pitch **0.5mm**
 Body Size **7 mm SQ**

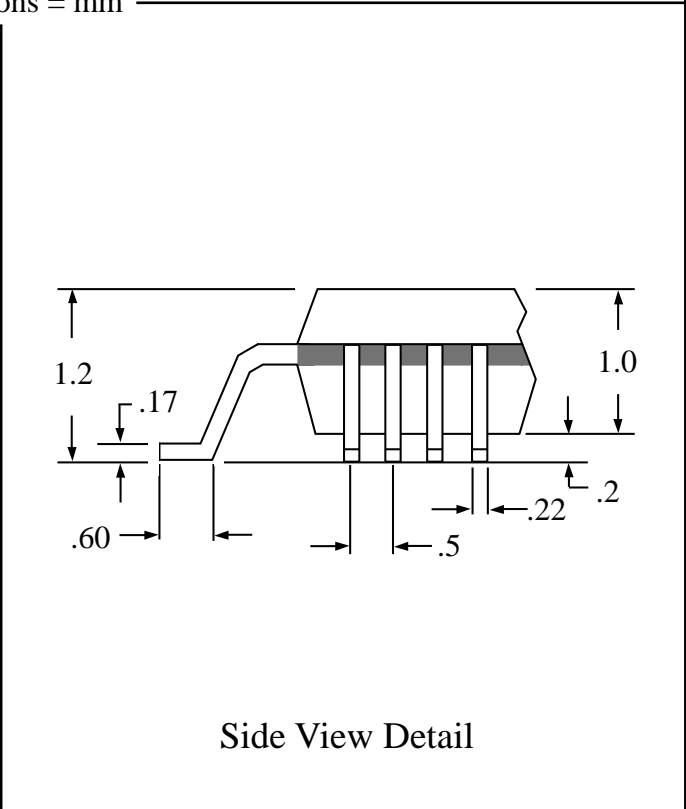
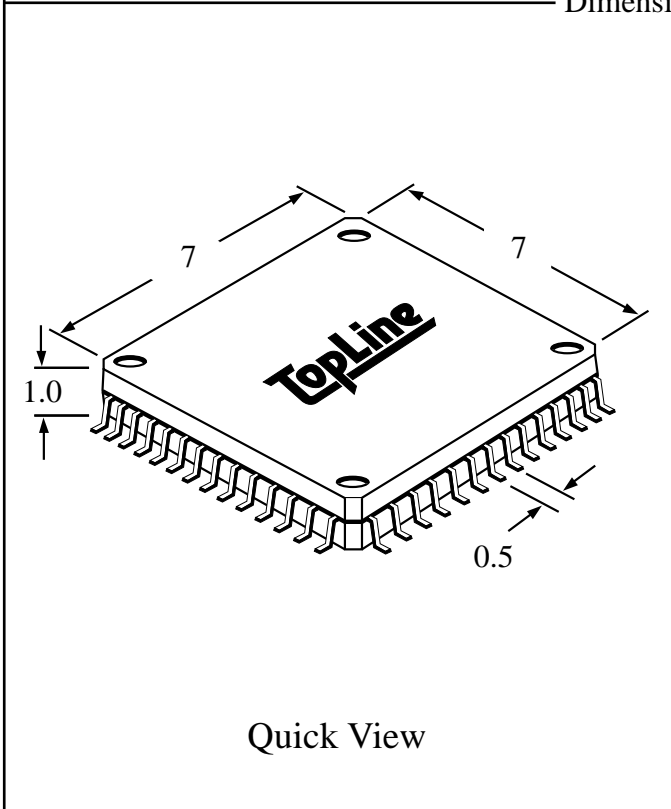
Available RoHS Pb-Free

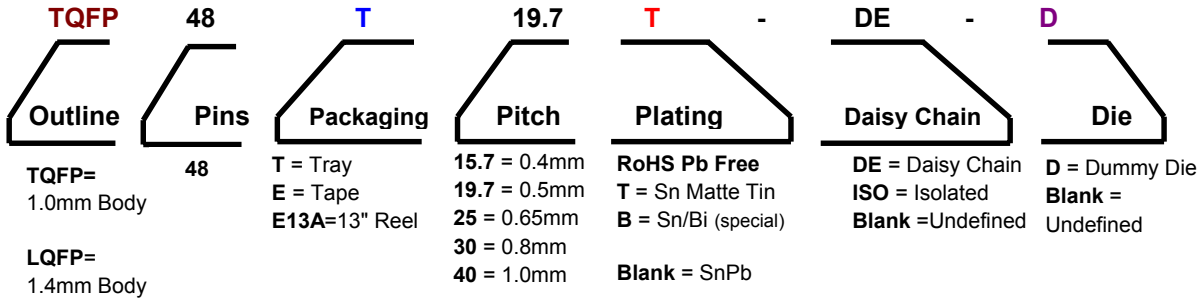


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Dimensions = mm





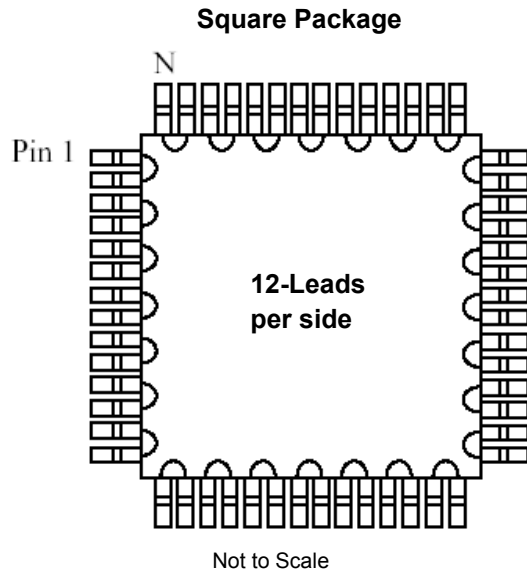
Ordering Steps:

- Step 1: Select outline body thickness TQFP (1.0mm) or LQFP (1.4mm).
- Step 2: Choose packaging. Tray is standard. Tape and Reel is available.
- Step 3: Select plating requirements. RoHS Pb-Free or SnPb
- Step 4: Select options according to your application. See chart below.

Part Number Packaged in Tray (Standard)	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP48T19.7	SnPb	No	No	No	x	x				
TQFP48T19.7T	Pb-Free	No	No	No	x	x				
TQFP48T19.7-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP48T19.7T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP48T19.7-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP48T19.7T-ISO	Pb-Free	No	No	Yes	x	x	x			x

Part Number Packaged in Tape and Reel	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP48E13A19.7	SnPb	No	No	No	x	x				
TQFP48E13A19.7T	Pb-Free	No	No	No	x	x				
TQFP48E13A19.7-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP48E13A19.7T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP48E13A19.7-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP48E13A19.7T-ISO	Pb-Free	No	No	Yes	x	x	x			x

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Daisy Chain Net List TQFP48 and LQFP48

Net List	
From Pin	To Pin
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24
25	26
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35	36
37	38
39	40
41	42
43	44
45	46
47	48

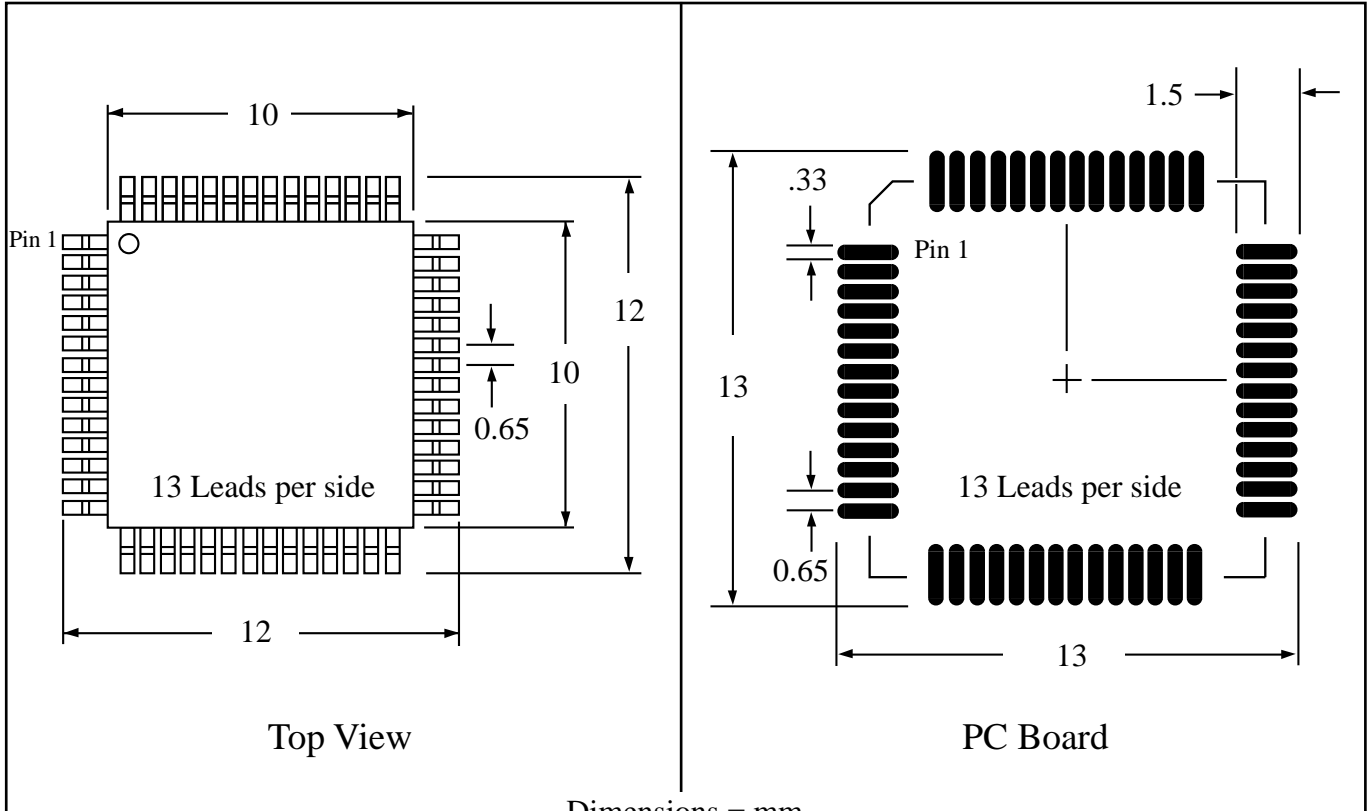
Visit www.TopLine.tv or email info@TopLine.tv for applications assistance.

Part # **TQFP52T25**
 Leads **52** Pitch **0.65mm**
 Body Size **10mm SQ**

Available RoHS Pb-Free



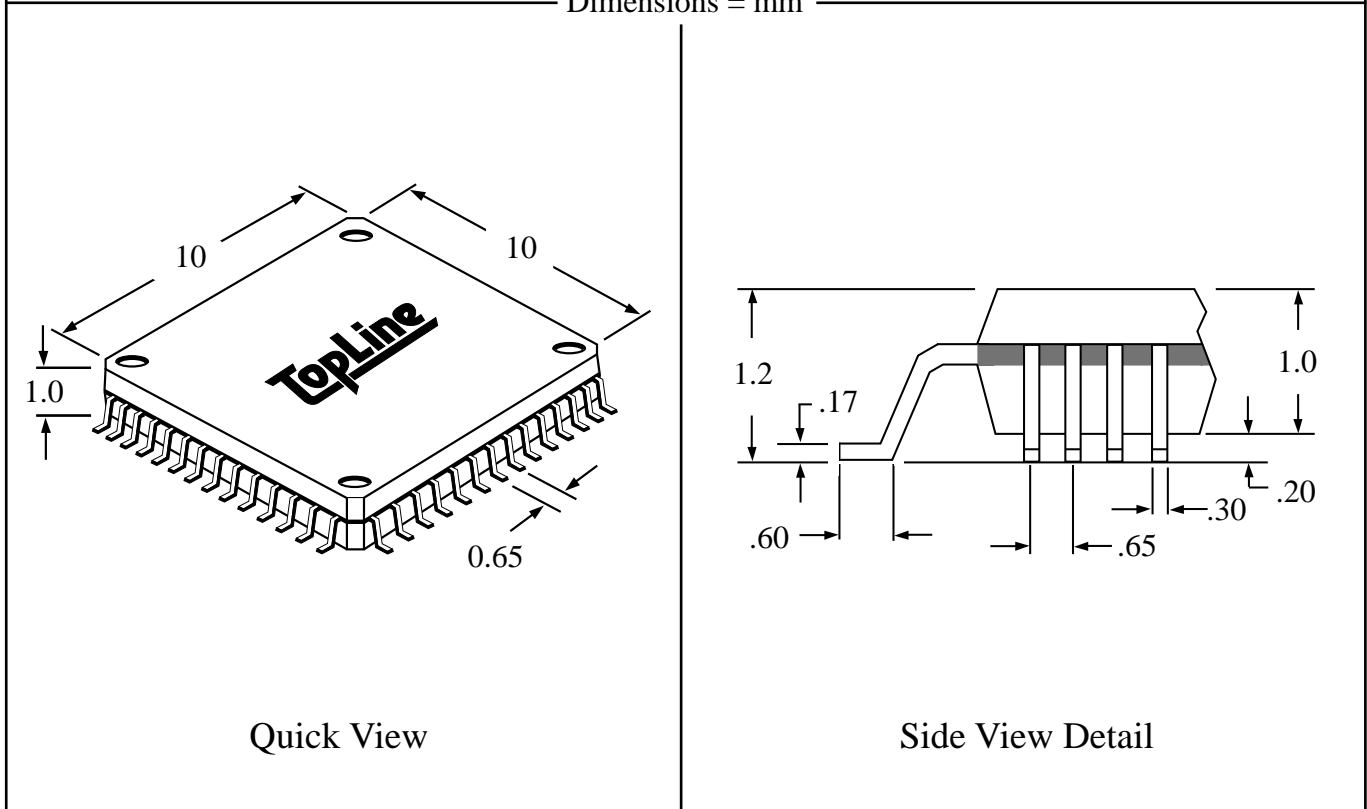
Tel 1-800-776-9888
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Top View

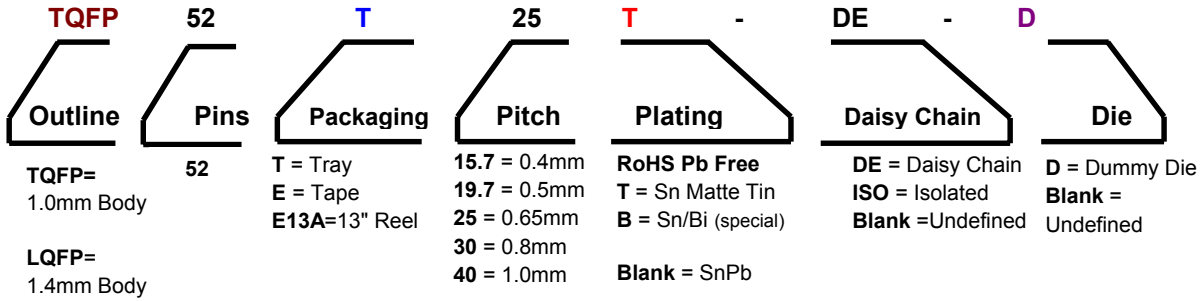
PC Board

Dimensions = mm



Quick View

Side View Detail



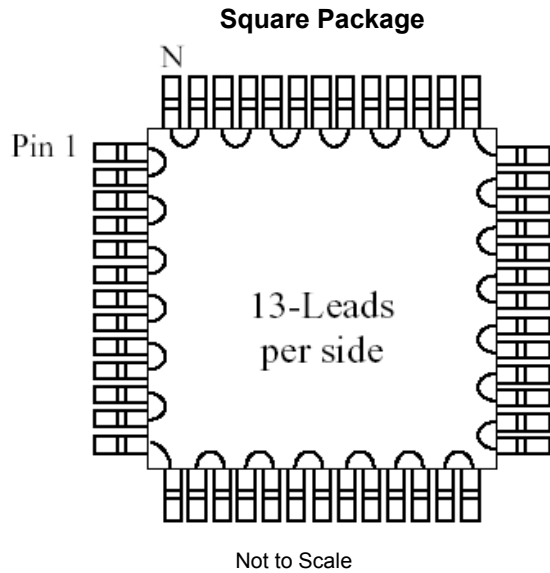
Ordering Steps:

- Step 1: Select outline body thickness TQFP (1.0mm) or LQFP (1.4mm).
- Step 2: Choose packaging. Tray is standard. Tape and Reel is available.
- Step 3: Select plating requirements. RoHS Pb-Free or SnPb
- Step 4: Select options according to your application. See chart below.

Part Number Packaged in Tray (Standard)	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP52T25	SnPb	No	No	No	x	x				
TQFP52T25T	Pb-Free	No	No	No	x	x				
TQFP52T25-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP52T25T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP52T25-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP52T25T-ISO	Pb-Free	No	No	Yes	x	x	x			x

Part Number Packaged in Tape and Reel	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP52E13A25	SnPb	No	No	No	x	x				
TQFP52E13A25T	Pb-Free	No	No	No	x	x				
TQFP52E13A25-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP52E13A25T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP52E13A25-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP52E13A25T-ISO	Pb-Free	No	No	Yes	x	x	x			x

Visit www.TopLine.tv or email info@TopLine.tv for applications assistance.



Daisy Chain Net List TQFP52, LQFP52 and QFP52

Net List	
From Pin	To Pin
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24
25	26
27	28
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39	40
41	42
43	44
45	46
47	48
49	50
51	52

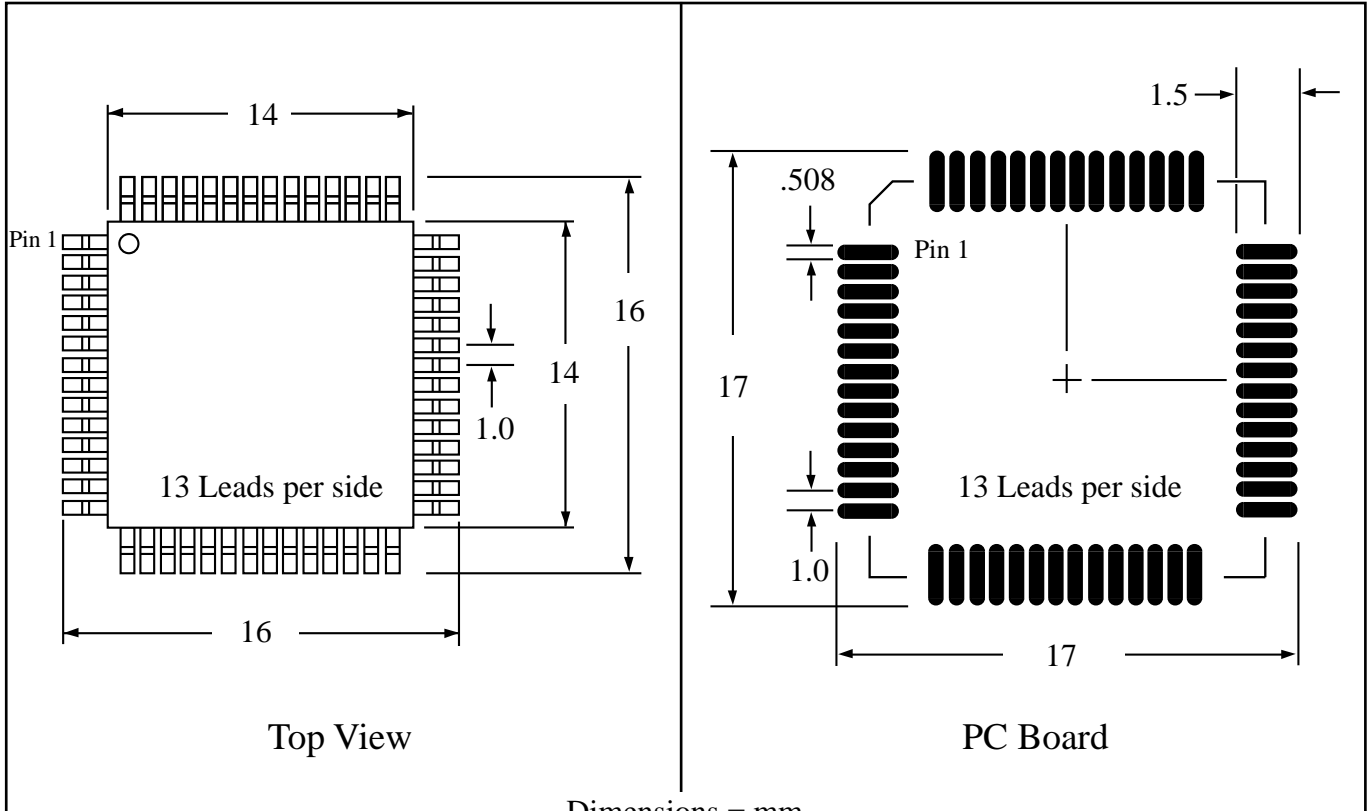
Visit www.TopLine.tv or email info@TopLine.tv for applications assistance.

Part # **TQFP52T40**
 Leads **52** Pitch **1.0mm**
 Body Size **14mm SQ**

Available RoHS Pb-Free



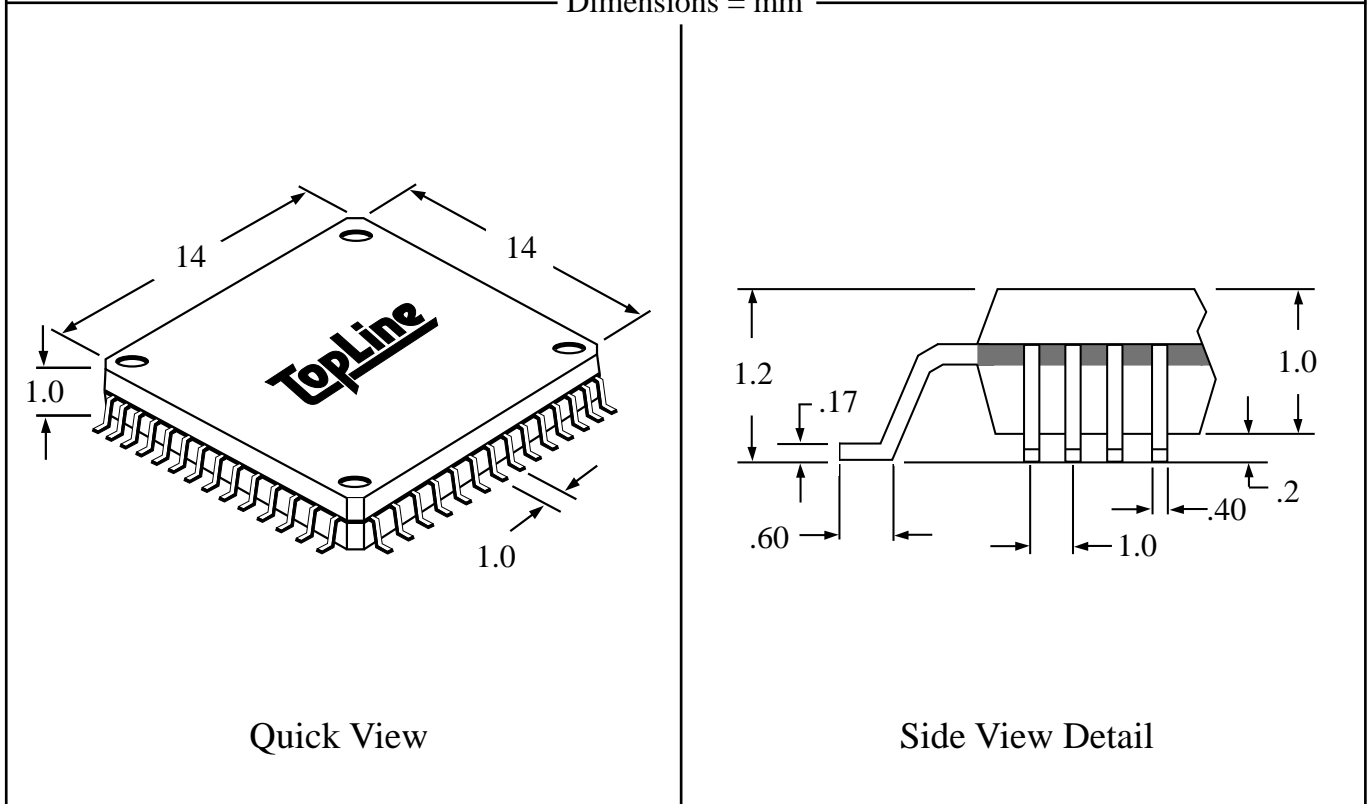
Tel 1-800-776-9888
 info@topline.tv



Top View

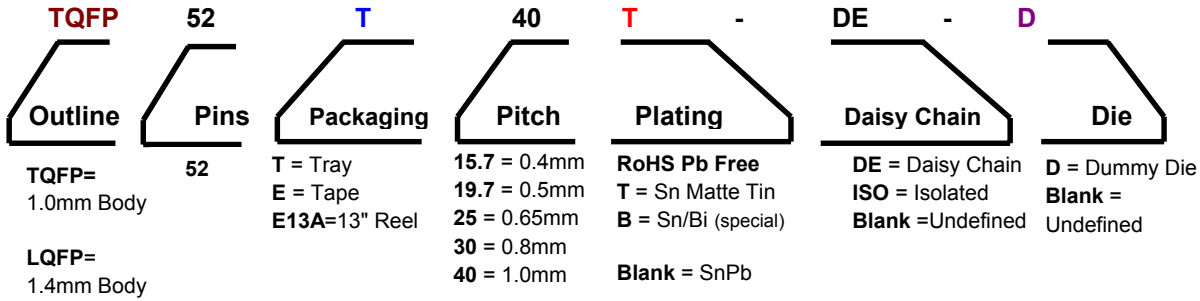
PC Board

Dimensions = mm



Quick View

Side View Detail



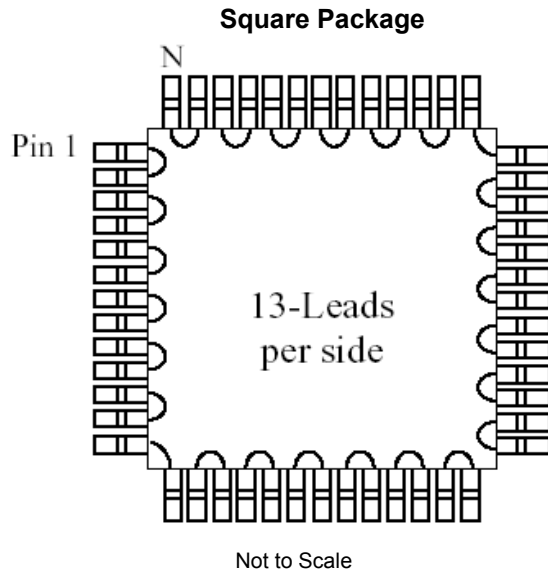
Ordering Steps:

- Step 1: Select outline body thickness TQFP (1.0mm) or LQFP (1.4mm).
- Step 2: Choose packaging. Tray is standard. Tape and Reel is available.
- Step 3: Select plating requirements. RoHS Pb-Free or SnPb
- Step 4: Select options according to your application. See chart below.

Part Number Packaged in Tray (Standard)	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP52T40	SnPb	No	No	No	x	x				
TQFP52T40T	Pb-Free	No	No	No	x	x				
TQFP52T40-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP52T40T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP52T40-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP52T40T-ISO	Pb-Free	No	No	Yes	x	x	x			x

Part Number Packaged in Tape and Reel	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP52E13A40	SnPb	No	No	No	x	x				
TQFP52E13A40T	Pb-Free	No	No	No	x	x				
TQFP52E13A40-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP52E13A40T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP52E13A40-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP52E13A40T-ISO	Pb-Free	No	No	Yes	x	x	x			x

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Daisy Chain Net List TQFP52, LQFP52 and QFP52

Net List	
From Pin	To Pin
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24
25	26
27	28
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39	40
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43	44
45	46
47	48
49	50
51	52

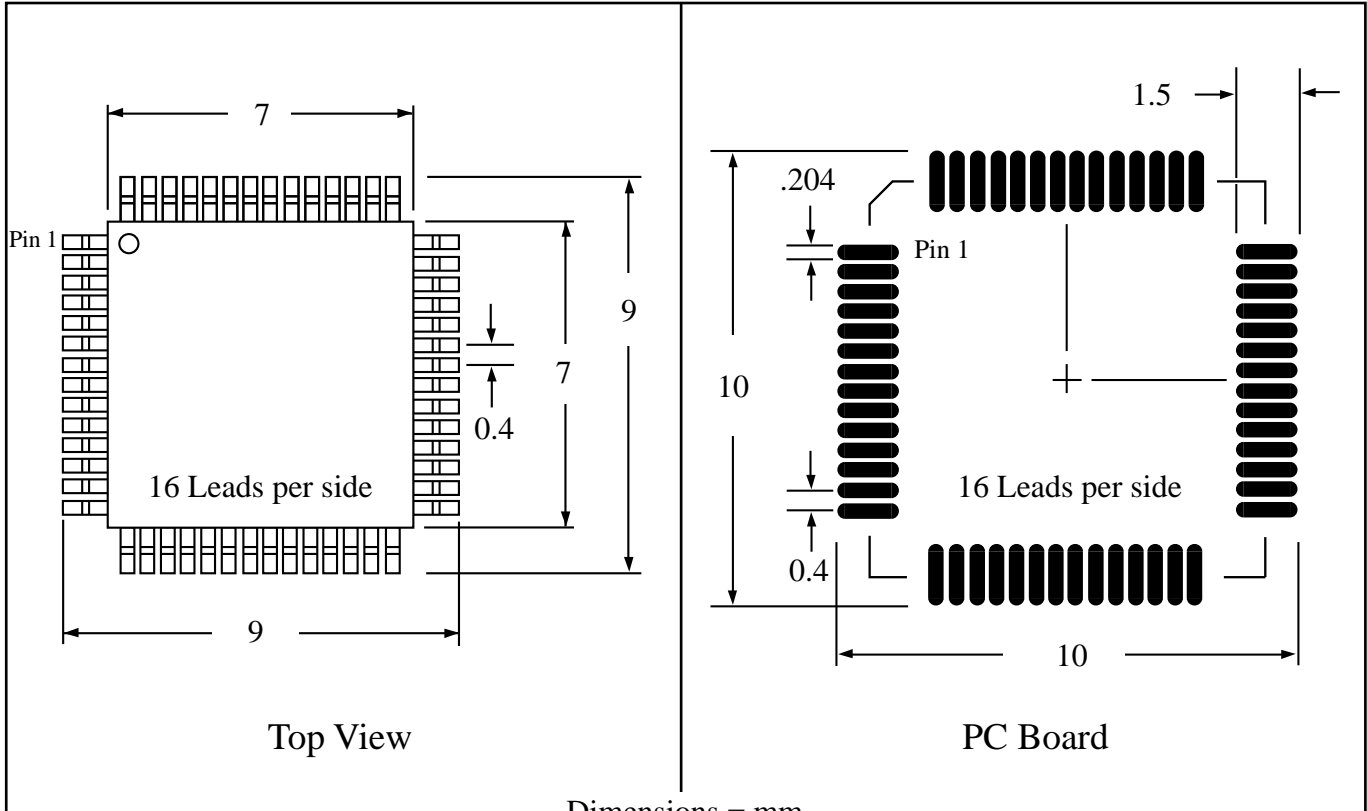
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Part # **TQFP64T15.7**
 Leads **64** Pitch **0.4mm**
 Body Size **7mm SQ**

Available RoHS Pb-Free



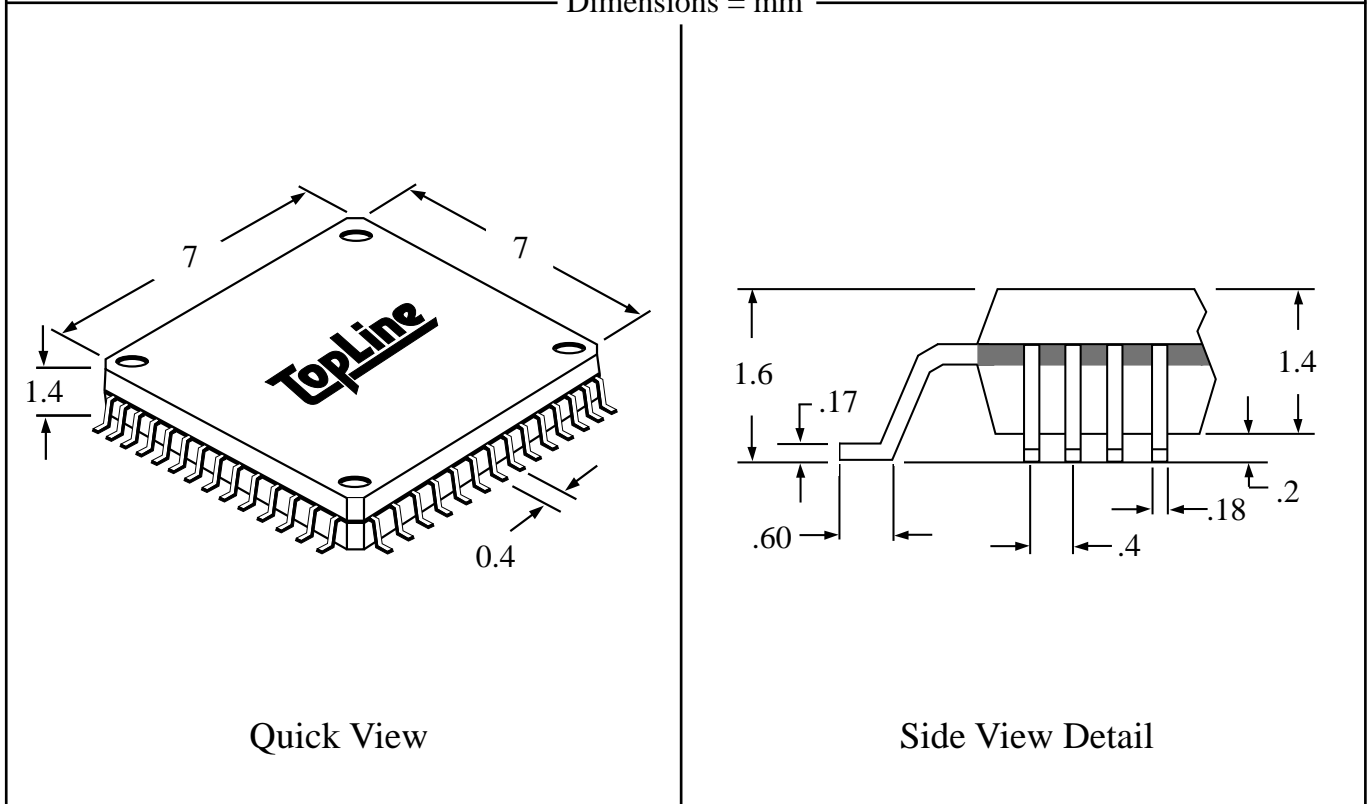
Tel 1-800-776-9888
 info@topline.tv



Top View

PC Board

Dimensions = mm



Quick View

Side View Detail

TQFP 	64 	T 	15.7 	T - 	DE - 	D
Outline	Pins	Packaging	Pitch	Plating	Daisy Chain	Die
TQFP= 1.0mm Body	64	T = Tray E = Tape E13A=13" Reel	15.7 = 0.4mm 19.7 = 0.5mm 25 = 0.65mm 30 = 0.8mm 40 = 1.0mm	RoHS Pb Free T = Sn Matte Tin B = Sn/Bi (special) Blank = SnPb	DE = Daisy Chain ISO = Isolated Blank = Undefined	D = Dummy Die Blank = Undefined
LQFP= 1.4mm Body						

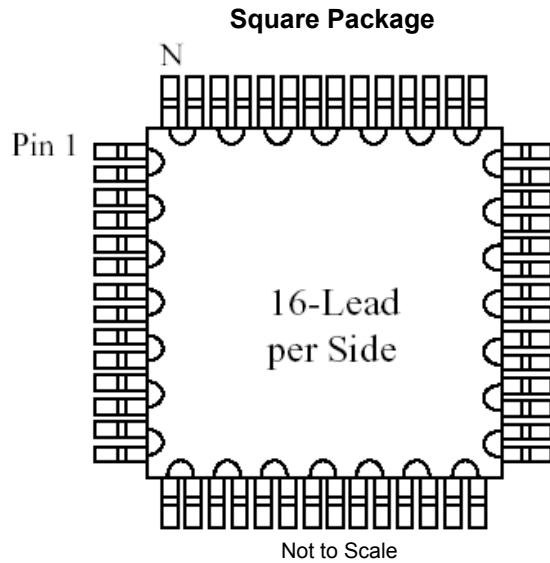
Ordering Steps:

- Step 1: Select outline body thickness TQFP (1.0mm) or LQFP (1.4mm).
- Step 2: Choose packaging. Tray is standard. Tape and Reel is available.
- Step 3: Select plating requirements. RoHS Pb-Free or SnPb
- Step 4: Select options according to your application. See chart below.

Part Number Packaged in Tray (Standard)	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP64T15.7	SnPb	No	No	No	x	x				
TQFP64T15.7T	Pb-Free	No	No	No	x	x				
TQFP64T15.7-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP64T15.7T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP64T15.7-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP64T15.7T-ISO	Pb-Free	No	No	Yes	x	x	x			x

Part Number Packaged in Tape and Reel	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP64E13A15.7	SnPb	No	No	No	x	x				
TQFP64E13A15.7T	Pb-Free	No	No	No	x	x				
TQFP64E13A15.7-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP64E13A15.7T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP64E13A15.7-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP64E13A15.7T-ISO	Pb-Free	No	No	Yes	x	x	x			x

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Daisy Chain Net List TQFP64, LQFP64 and QFP64

Net List		Net List	
From Pin	To Pin	From Pin	To Pin
1	2	33	34
3	4	35	36
5	6	37	38
7	8	39	40
9	10	41	42
11	12	43	44
13	14	45	46
15	16	47	48
17	18	49	50
19	20	51	52
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25	26	57	58
27	28	59	60
29	30	61	62
31	32	63	64

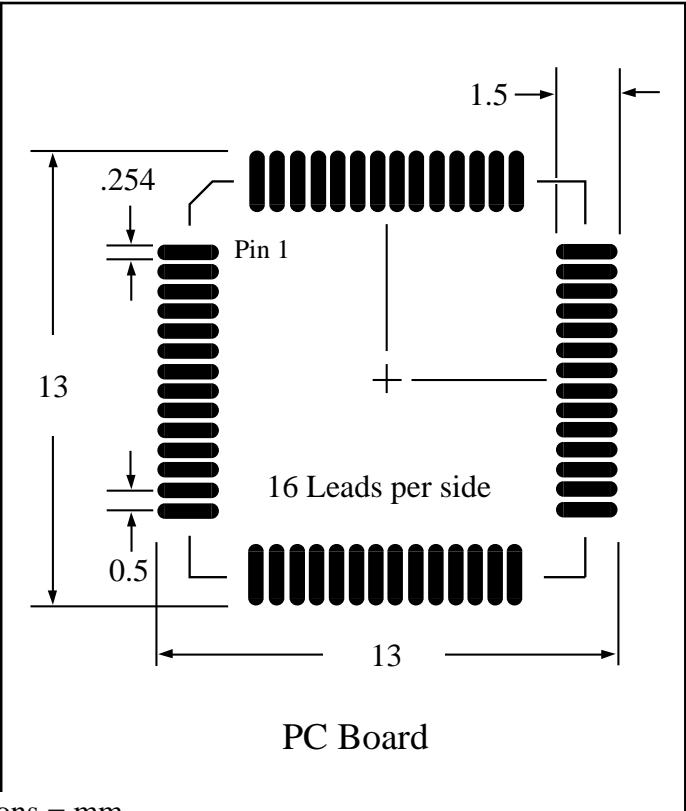
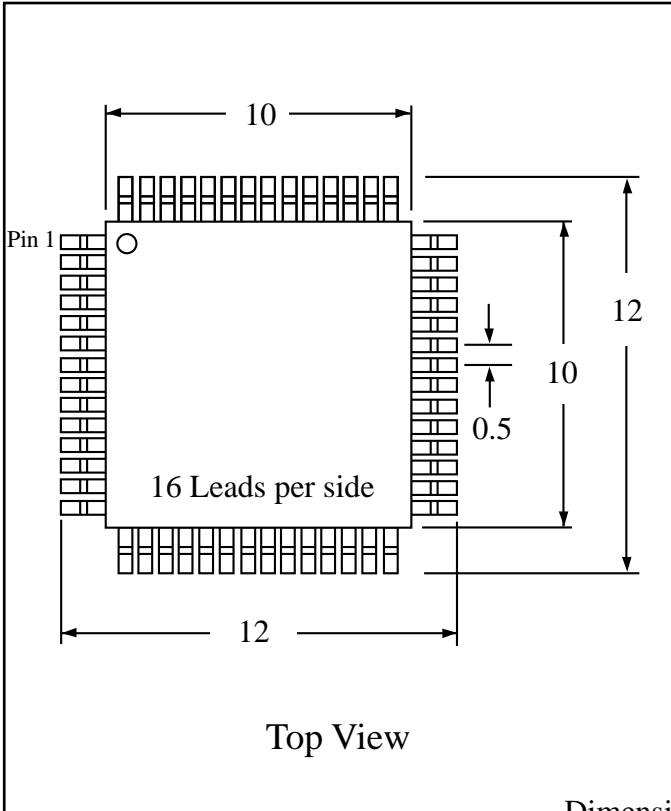
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Part # **TQFP64T19.7**
 Leads **64** Pitch **0.5mm**
 Body Size **10mm SQ**

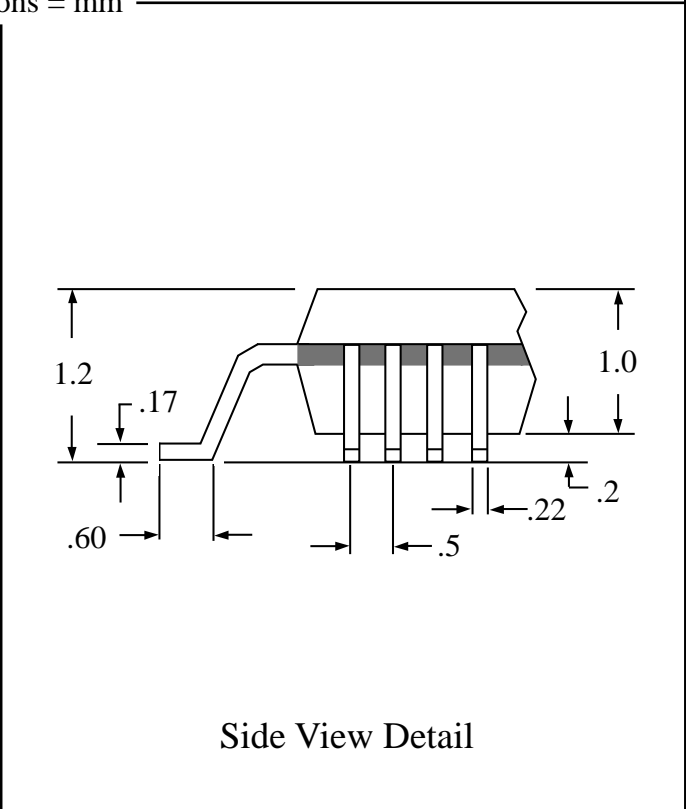
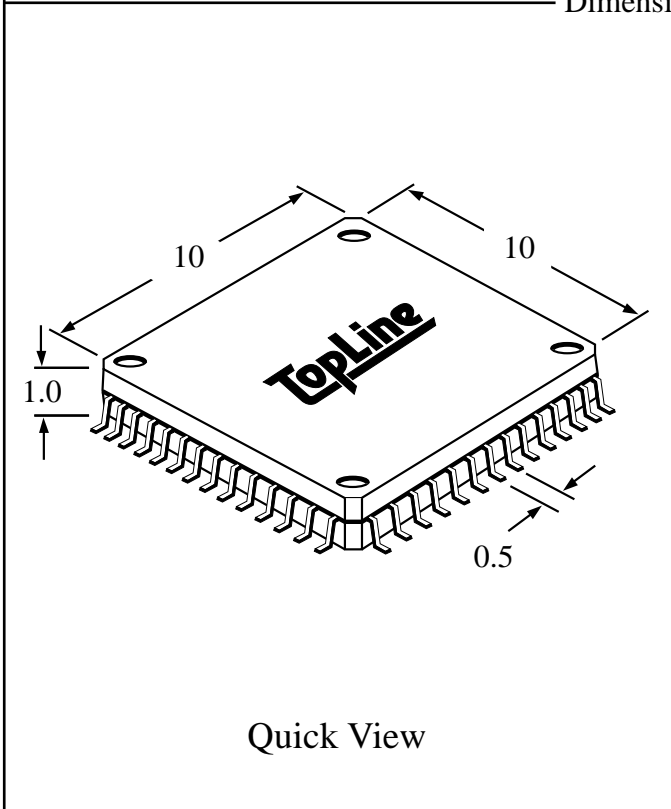
Available RoHS Pb-Free.

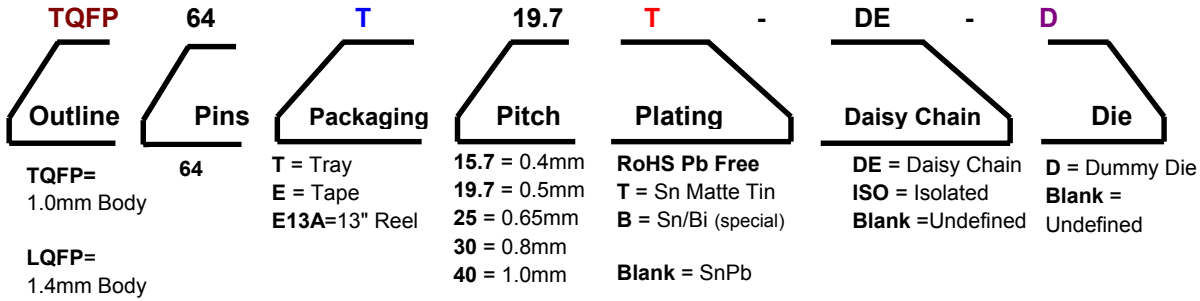


Tel 1-800-776-9888
 info@topline.tv



Dimensions = mm





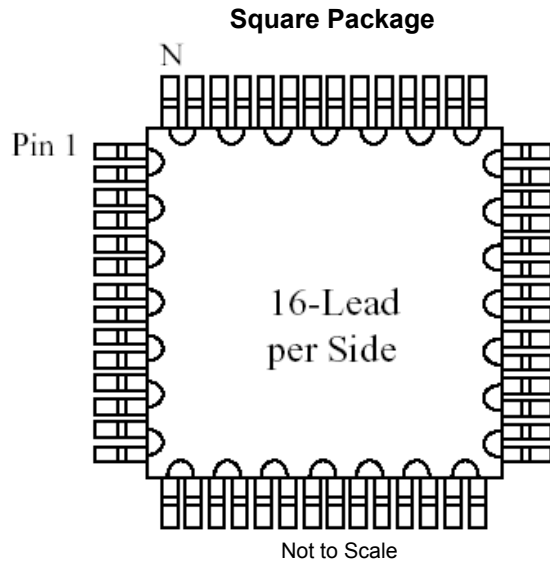
Ordering Steps:

- Step 1: Select outline body thickness TQFP (1.0mm) or LQFP (1.4mm).
- Step 2: Choose packaging. Tray is standard. Tape and Reel is available.
- Step 3: Select plating requirements. RoHS Pb-Free or SnPb
- Step 4: Select options according to your application. See chart below.

Part Number Packaged in Tray (Standard)	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP64T19.7	SnPb	No	No	No	x	x				
TQFP64T19.7T	Pb-Free	No	No	No	x	x				
TQFP64T19.7-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP64T19.7T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP64T19.7-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP64T19.7T-ISO	Pb-Free	No	No	Yes	x	x	x			x

Part Number Packaged in Tape and Reel	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP64E13A19.7	SnPb	No	No	No	x	x				
TQFP64E13A19.7T	Pb-Free	No	No	No	x	x				
TQFP64E13A19.7-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP64E13A19.7T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP64E13A19.7-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP64E13A19.7T-ISO	Pb-Free	No	No	Yes	x	x	x			x

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Daisy Chain Net List TQFP64, LQFP64 and QFP64

Net List		Net List	
From Pin	To Pin	From Pin	To Pin
1	2	33	34
3	4	35	36
5	6	37	38
7	8	39	40
9	10	41	42
11	12	43	44
13	14	45	46
15	16	47	48
17	18	49	50
19	20	51	52
21	22	53	54
23	24	55	56
25	26	57	58
27	28	59	60
29	30	61	62
31	32	63	64

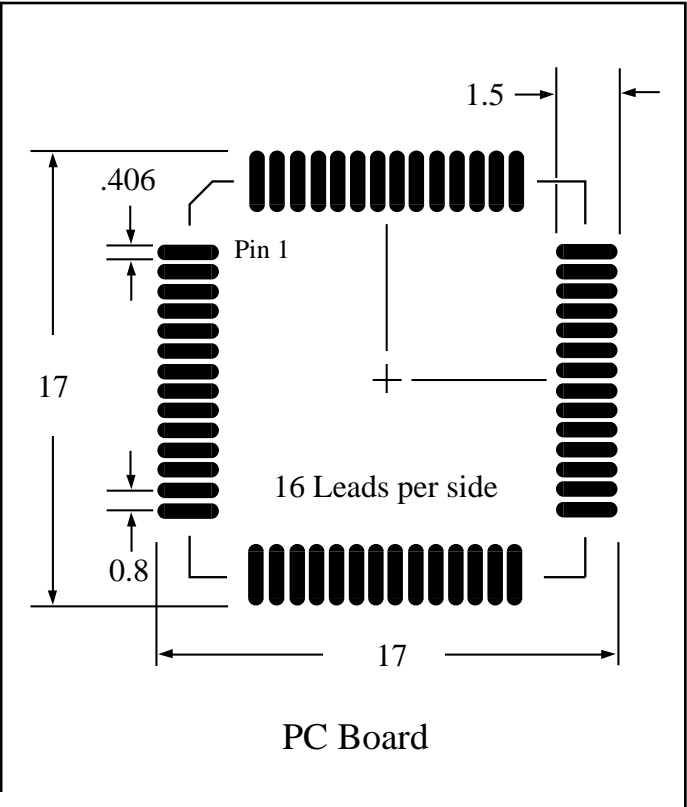
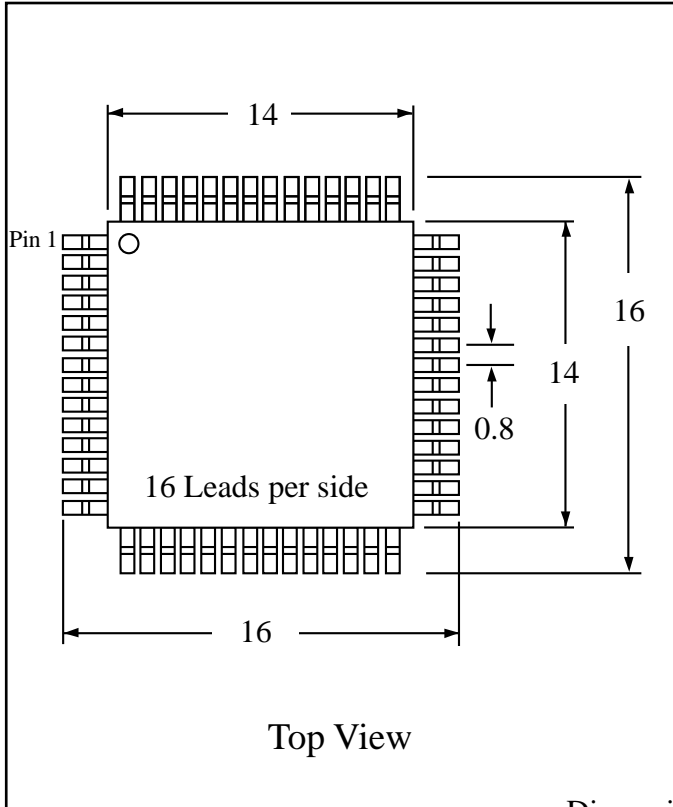
Visit www.TopLine.tv or email info@TopLine.tv for applications assistance.

Part # **TQFP64T30**
 Leads **64** Pitch **0.8mm**
 Body Size **14mm SQ**

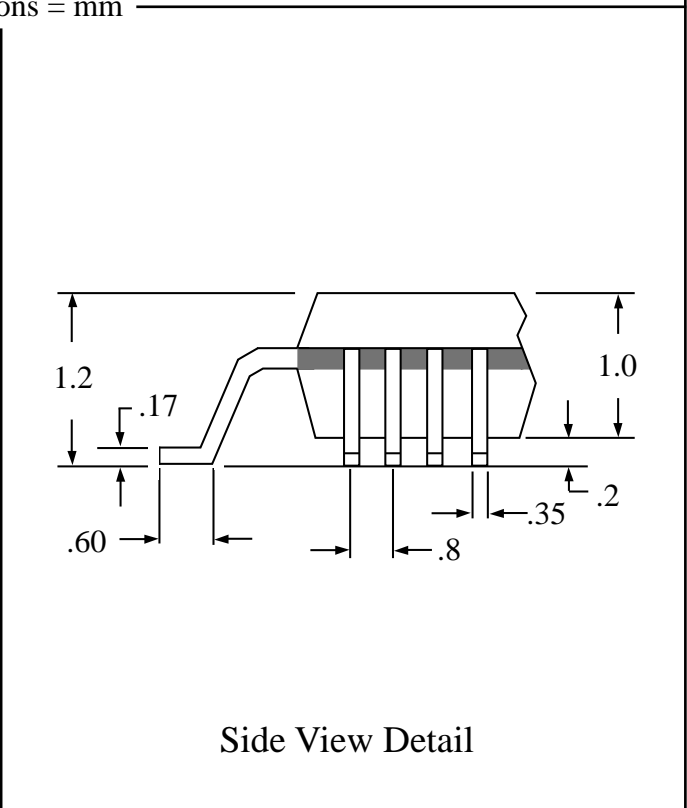
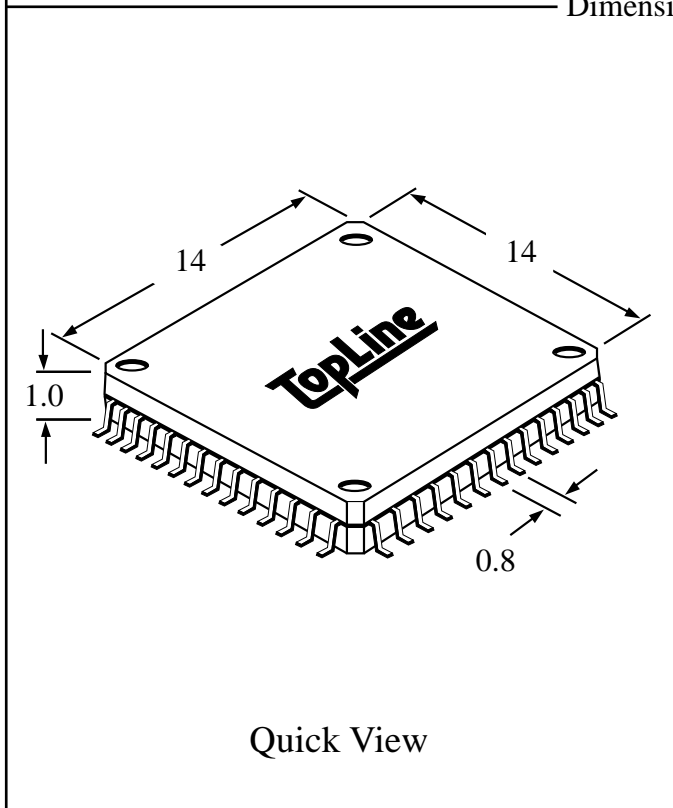


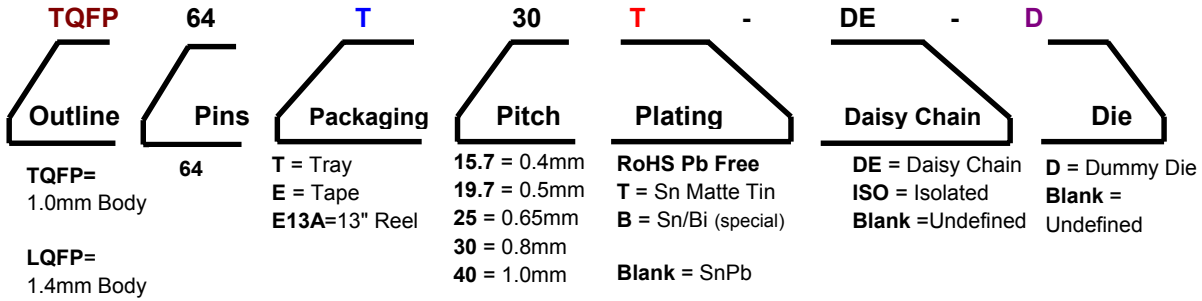
Tel 1-800-766-9888
 info@topline.tv

Dwg Available RoHS Pb-Free



Dimensions = mm





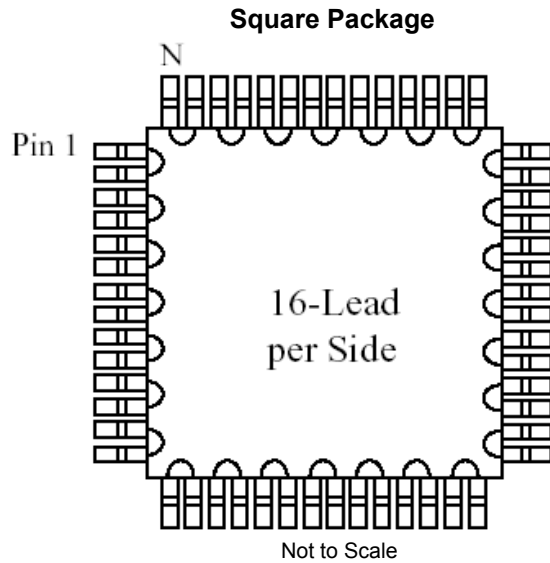
Ordering Steps:

- Step 1: Select outline body thickness TQFP (1.0mm) or LQFP (1.4mm).
- Step 2: Choose packaging. Tray is standard. Tape and Reel is available.
- Step 3: Select plating requirements. RoHS Pb-Free or SnPb
- Step 4: Select options according to your application. See chart below.

Part Number Packaged in Tray (Standard)	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP64T30	SnPb	No	No	No	x	x				
TQFP64T30T	Pb-Free	No	No	No	x	x				
TQFP64T30-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP64T30T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP64T30-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP64T30T-ISO	Pb-Free	No	No	Yes	x	x	x			x

Part Number Packaged in Tape and Reel	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP64E13A30	SnPb	No	No	No	x	x				
TQFP64E13A30T	Pb-Free	No	No	No	x	x				
TQFP64E13A30-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP64E13A30T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP64E13A30-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP64E13A30T-ISO	Pb-Free	No	No	Yes	x	x	x			x

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Daisy Chain Net List TQFP64, LQFP64 and QFP64

Net List		Net List	
From Pin	To Pin	From Pin	To Pin
1	2	33	34
3	4	35	36
5	6	37	38
7	8	39	40
9	10	41	42
11	12	43	44
13	14	45	46
15	16	47	48
17	18	49	50
19	20	51	52
21	22	53	54
23	24	55	56
25	26	57	58
27	28	59	60
29	30	61	62
31	32	63	64

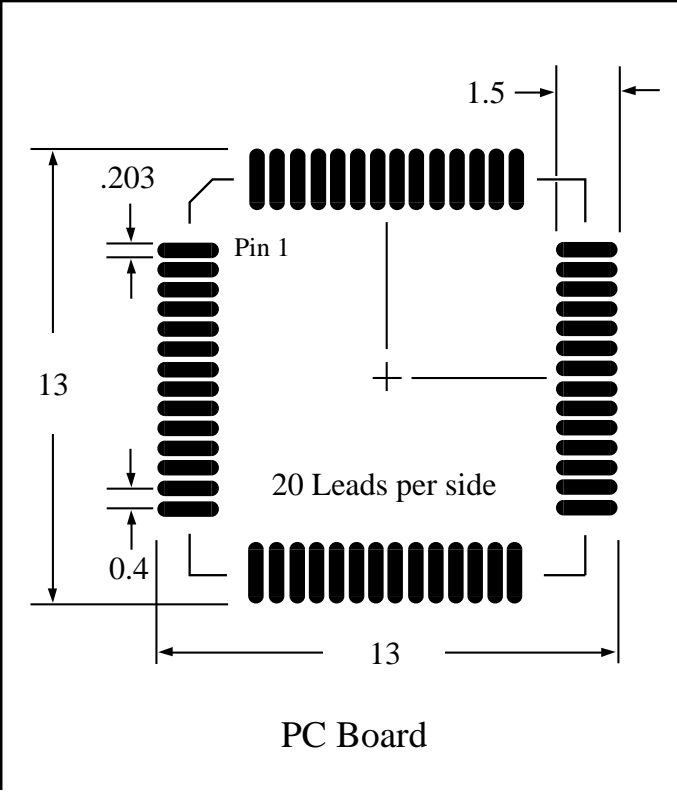
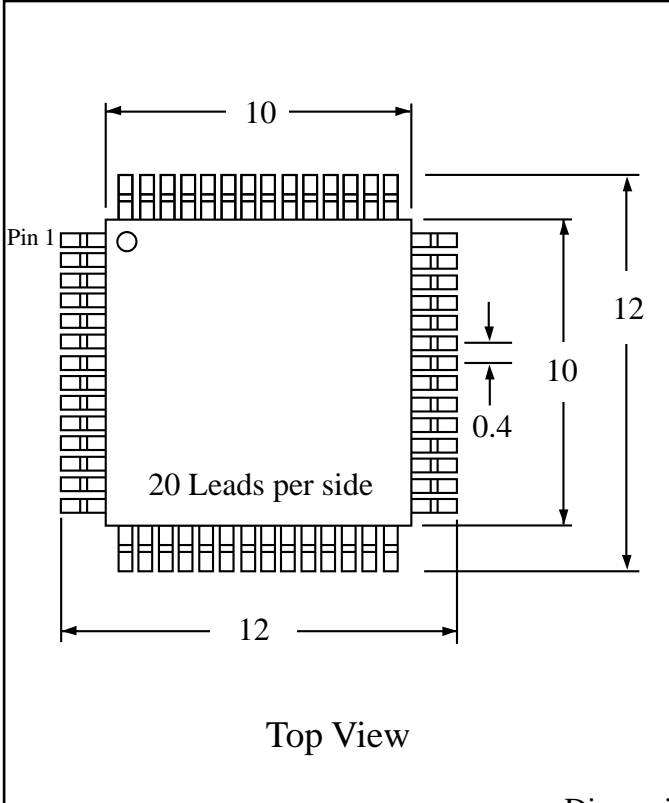
Visit www.TopLine.tv or email info@TopLine.tv for applications assistance.

Part # **TQFP80T15.7**
 Leads **80** Pitch **0.4mm**
 Body Size **10mm SQ**

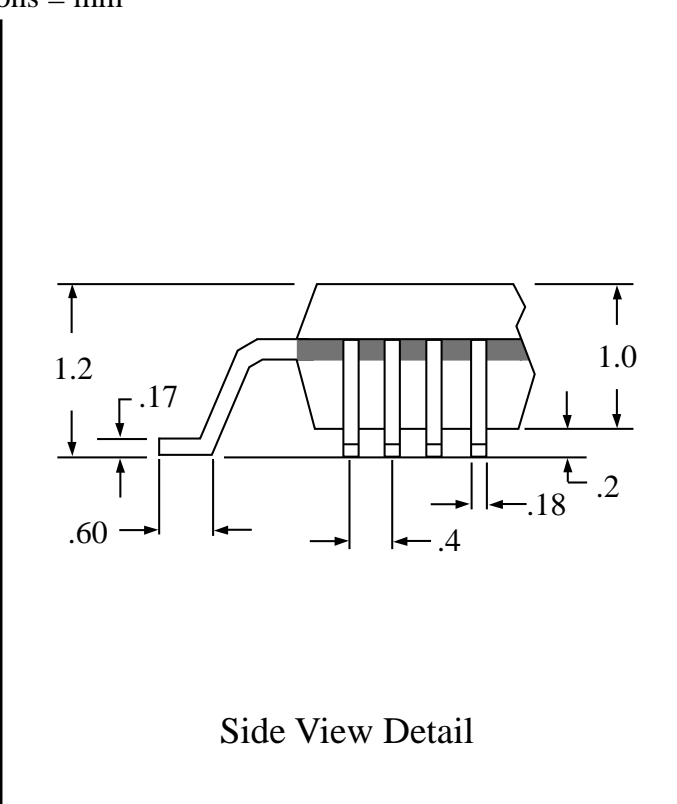
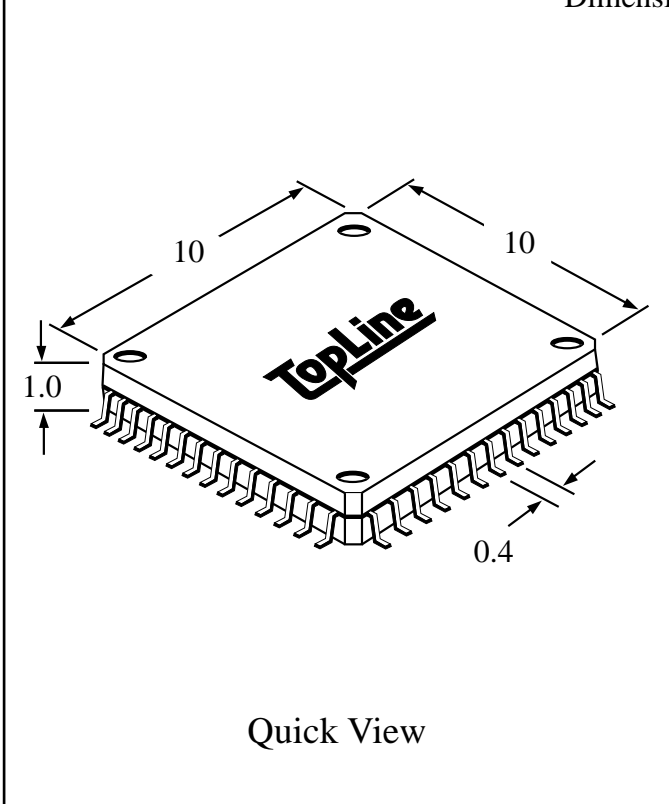
Available RoHS Pb-Free



Tel 1-800-776-9888
 info@topline.tv



Dimensions = mm



TQFP	80	T	15.7	T	-	DE	-	D
Outline TQFP= 1.0mm Body LQFP= 1.4mm Body	Pins 80	Packaging T = Tray E = Tape E13A=13" Reel	Pitch 15.7 = 0.4mm 19.7 = 0.5mm 25 = 0.65mm 30 = 0.8mm 40 = 1.0mm	Plating RoHS Pb Free T = Sn Matte Tin B = Sn/Bi (special) Blank = SnPb		Daisy Chain DE = Daisy Chain ISO = Isolated Blank = Undefined		Die D = Dummy Die Blank = Undefined

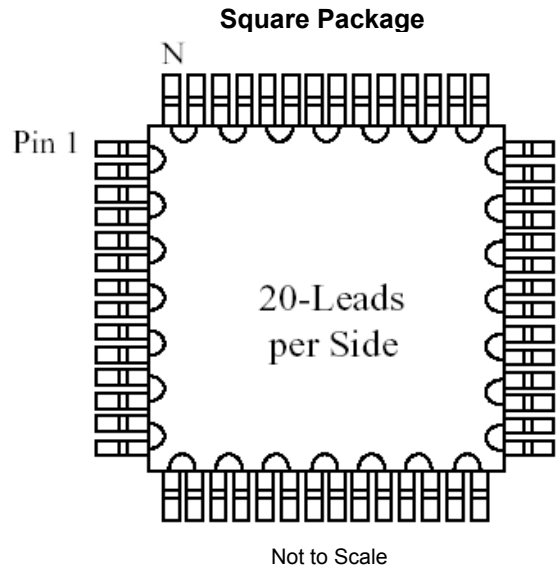
Ordering Steps:

- Step 1: Select outline body thickness TQFP (1.0mm) or LQFP (1.4mm).
- Step 2: Choose packaging. Tray is standard. Tape and Reel is available.
- Step 3: Select plating requirements. RoHS Pb-Free or SnPb
- Step 4: Select options according to your application. See chart below.

Part Number Packaged in Tray (Standard)	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP80T15.7	SnPb	No	No	No	x	x				
TQFP80T15.7T	Pb-Free	No	No	No	x	x				
TQFP80T15.7-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP80T15.7T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP80T15.7-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP80T15.7T-ISO	Pb-Free	No	No	Yes	x	x	x			x

Part Number Packaged in Tape and Reel	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP80E13A15.7	SnPb	No	No	No	x	x				
TQFP80E13A15.7T	Pb-Free	No	No	No	x	x				
TQFP80E13A15.7-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP80E13A15.7T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP80E13A15.7-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP80E13A15.7T-ISO	Pb-Free	No	No	Yes	x	x	x			x

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Daisy Chain Net List TQFP80, LQFP80 and QFP80

Net List		Net List	
From Pin	To Pin	From Pin	To Pin
1	2	41	42
3	4	43	44
5	6	45	46
7	8	47	48
9	10	49	50
11	12	51	52
13	14	53	54
15	16	55	56
17	18	57	58
19	20	59	60
21	22	61	62
23	24	63	64
25	26	65	66
27	28	67	68
29	30	69	70
31	32	71	72
33	34	73	74
35	36	75	76
37	38	77	78
39	40	79	80

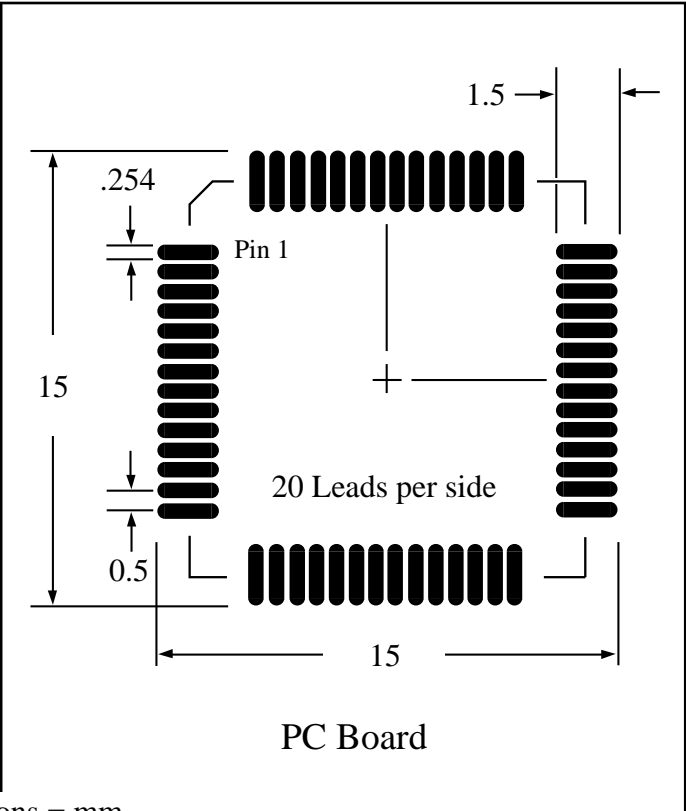
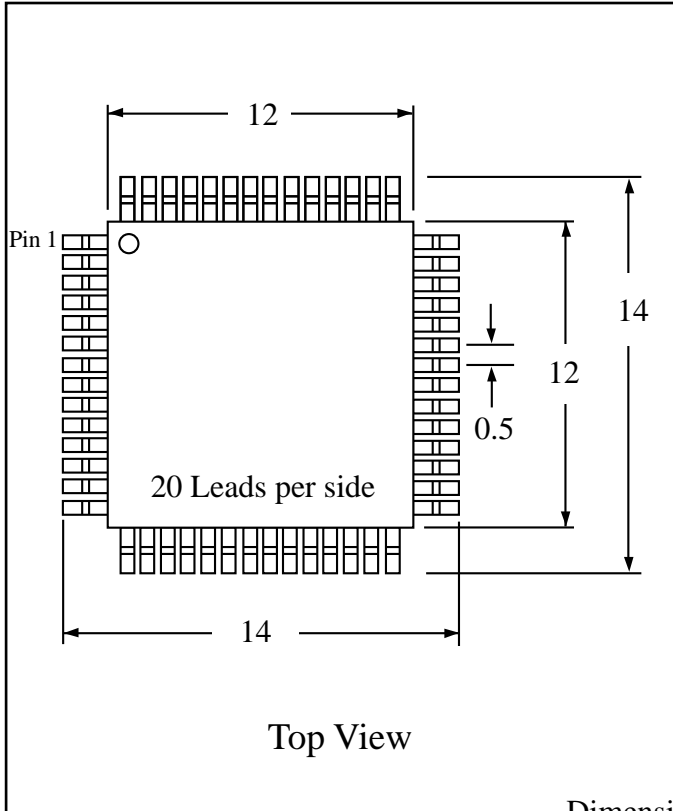
Visit www.TopLine.tv or email info@TopLine.tv for applications assistance.

Part # **TQFP80T19.7**
 Leads **80** Pitch **0.5mm**
 Body Size **12mm SQ**

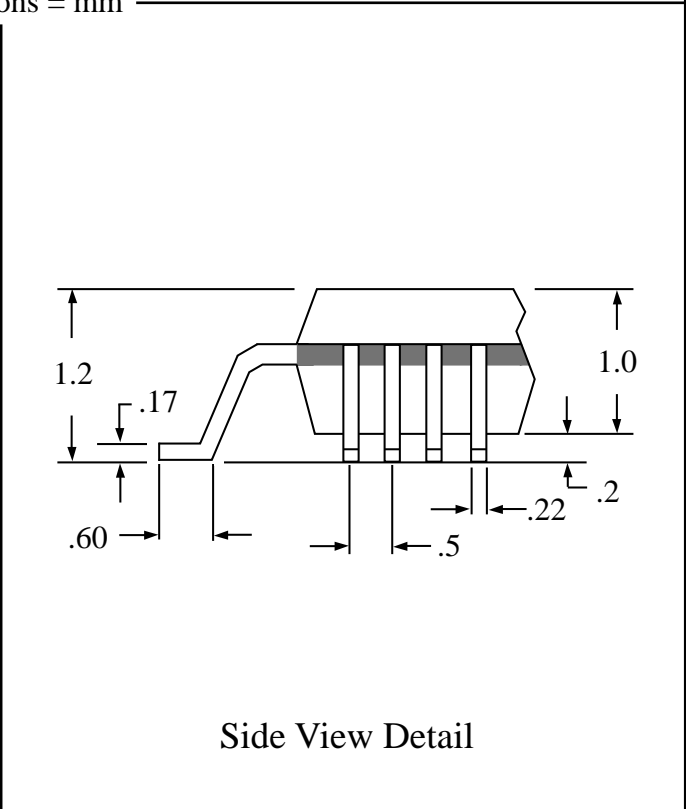
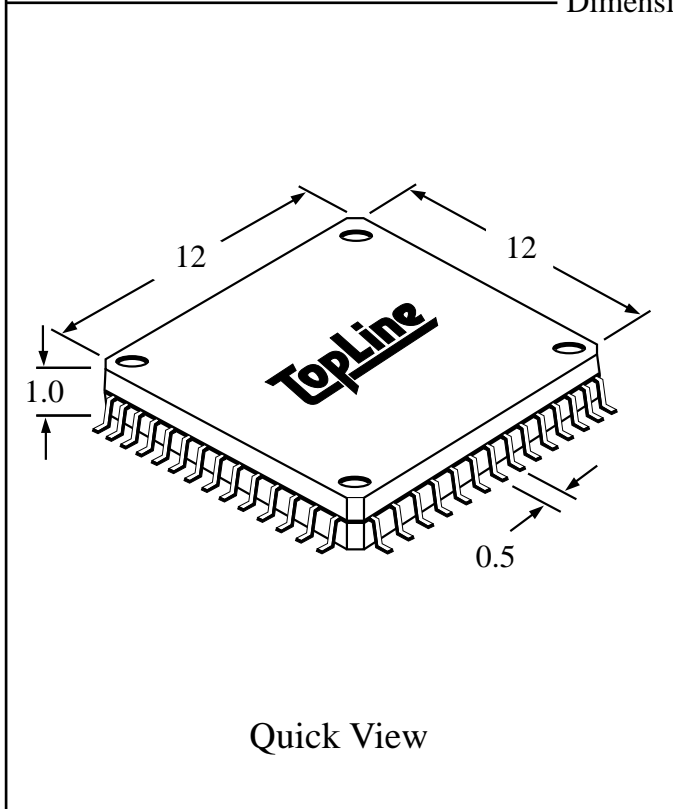
Available RoHS Pb-Free



Tel 1-800-776-9888
 info@topline.tv



Dimensions = mm



TQFP	80	T	19.7	T -	DE -	D
Outline	Pins	Packaging	Pitch	Plating	Daisy Chain	Die
TQFP= 1.0mm Body	80	T = Tray E = Tape E13A=13" Reel	15.7 = 0.4mm 19.7 = 0.5mm 25 = 0.65mm 30 = 0.8mm 40 = 1.0mm	RoHS Pb Free T = Sn Matte Tin B = Sn/Bi (special) Blank = SnPb	DE = Daisy Chain ISO = Isolated Blank = Undefined	D = Dummy Die Blank = Undefined
LQFP= 1.4mm Body						

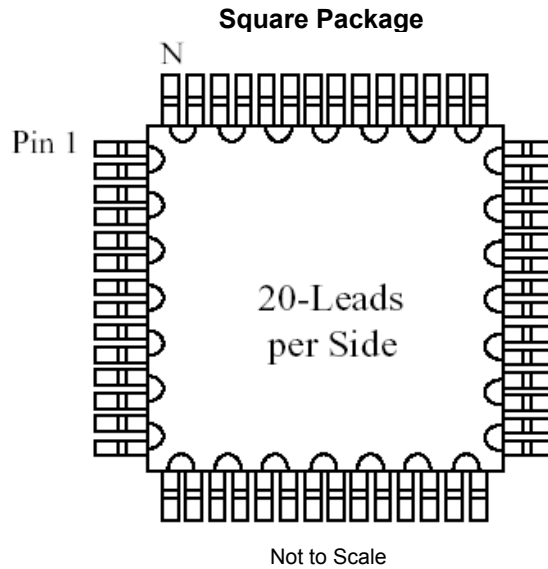
Ordering Steps:

- Step 1: Select outline body thickness TQFP (1.0mm) or LQFP (1.4mm).
- Step 2: Choose packaging. Tray is standard. Tape and Reel is available.
- Step 3: Select plating requirements. RoHS Pb-Free or SnPb
- Step 4: Select options according to your application. See chart below.

Part Number Packaged in Tray (Standard)	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP80T19.7	SnPb	No	No	No	x	x				
TQFP80T19.7T	Pb-Free	No	No	No	x	x				
TQFP80T19.7-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP80T19.7T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP80T19.7-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP80T19.7T-ISO	Pb-Free	No	No	Yes	x	x	x			x

Part Number Packaged in Tape and Reel	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP80E13A19.7	SnPb	No	No	No	x	x				
TQFP80E13A19.7T	Pb-Free	No	No	No	x	x				
TQFP80E13A19.7-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP80E13A19.7T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP80E13A19.7-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP80E13A19.7T-ISO	Pb-Free	No	No	Yes	x	x	x			x

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Daisy Chain Net List TQFP80, LQFP80 and QFP80

Net List		Net List	
From Pin	To Pin	From Pin	To Pin
1	2	41	42
3	4	43	44
5	6	45	46
7	8	47	48
9	10	49	50
11	12	51	52
13	14	53	54
15	16	55	56
17	18	57	58
19	20	59	60
21	22	61	62
23	24	63	64
25	26	65	66
27	28	67	68
29	30	69	70
31	32	71	72
33	34	73	74
35	36	75	76
37	38	77	78
39	40	79	80

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Part # **TQFP80T25**

Leads **80** Pitch **0.65mm**

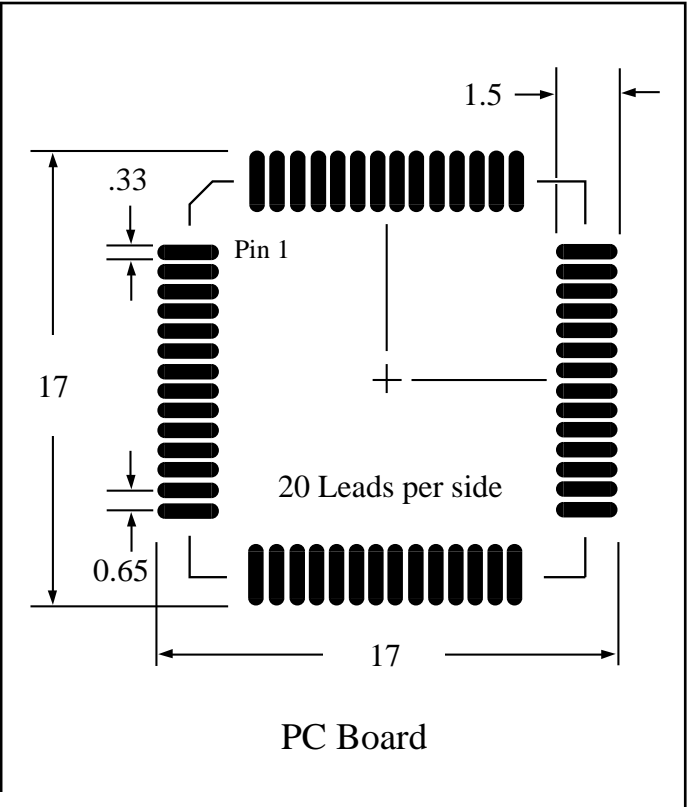
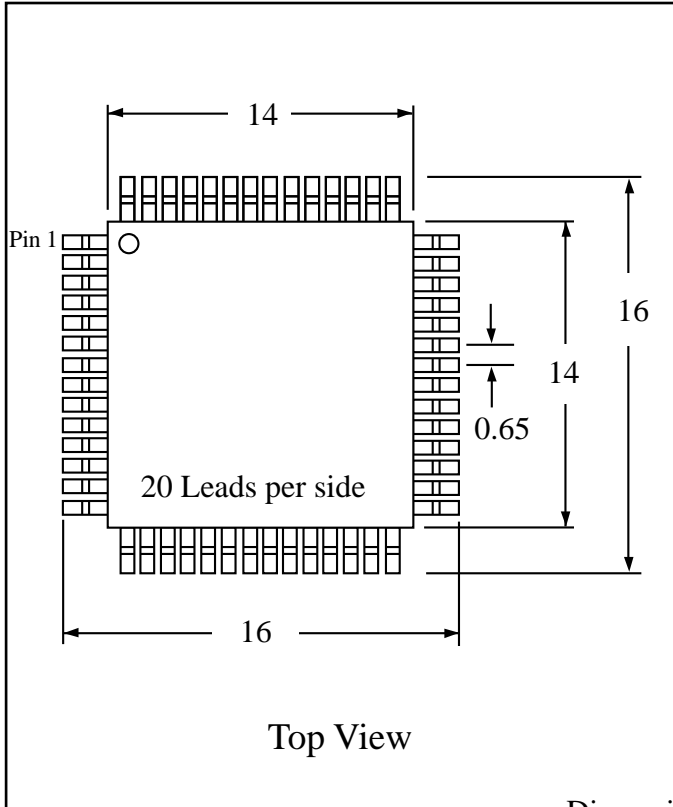
Body Size **14mm SQ**

Available RoHS Pb-Free

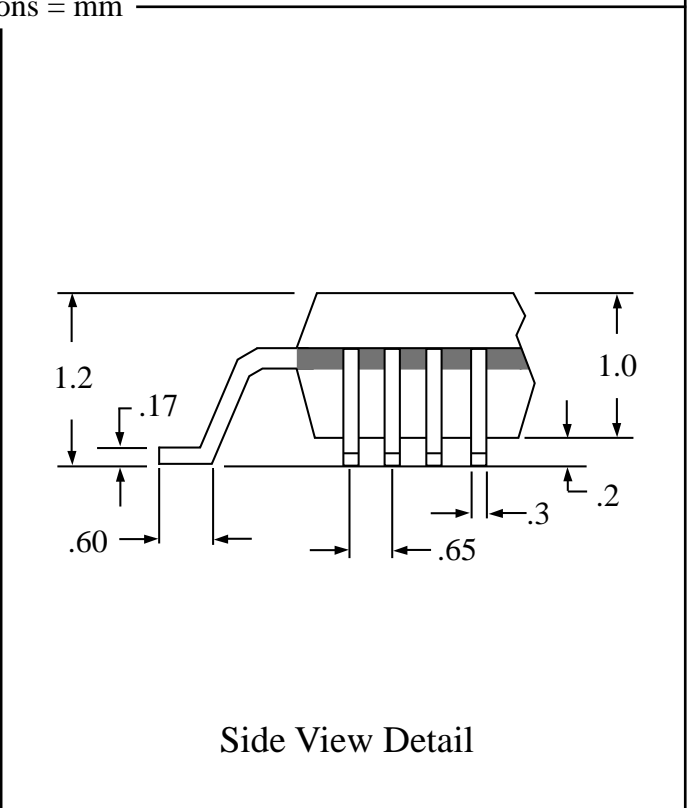
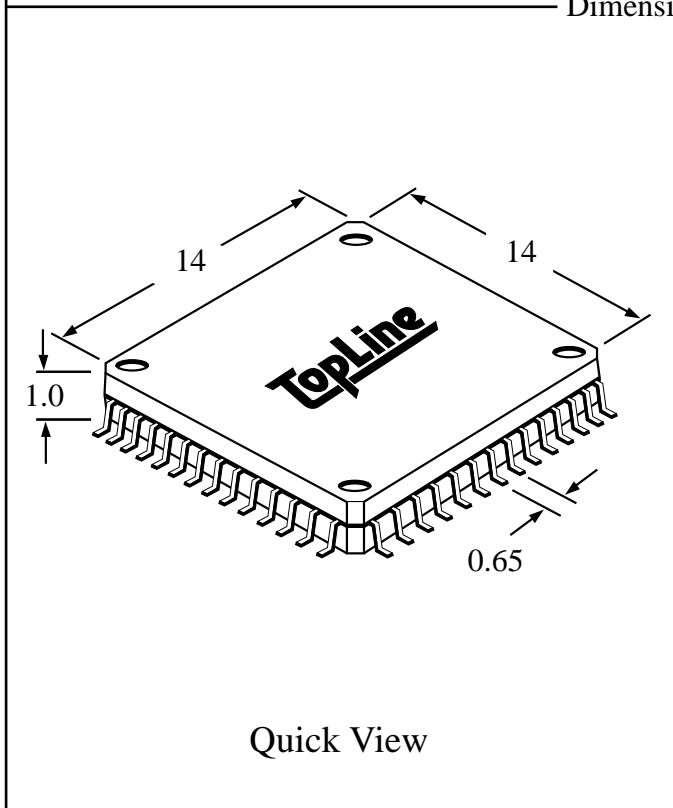
TopLineTM

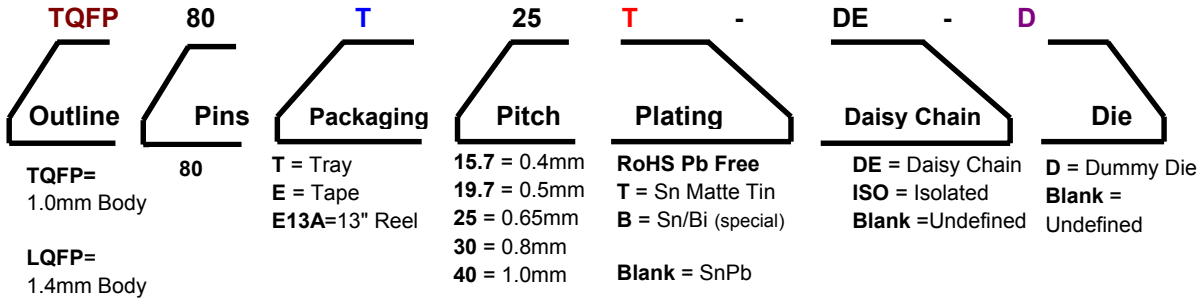
Tel 1-800-776-9888

info@topline.tv



Dimensions = mm





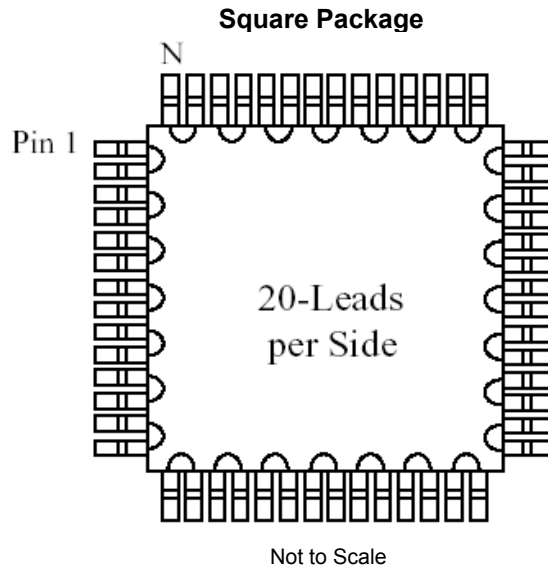
Ordering Steps:

- Step 1: Select outline body thickness TQFP (1.0mm) or LQFP (1.4mm).
- Step 2: Choose packaging. Tray is standard. Tape and Reel is available.
- Step 3: Select plating requirements. RoHS Pb-Free or SnPb
- Step 4: Select options according to your application. See chart below.

Part Number Packaged in Tray (Standard)	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP80T25	SnPb	No	No	No	x	x				
TQFP80T25T	Pb-Free	No	No	No	x	x				
TQFP80T25-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP80T25T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP80T25-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP80T25T-ISO	Pb-Free	No	No	Yes	x	x	x			x

Part Number Packaged in Tape and Reel	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP80E13A25	SnPb	No	No	No	x	x				
TQFP80E13A25T	Pb-Free	No	No	No	x	x				
TQFP80E13A25-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP80E13A25T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP80E13A25-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP80E13A25T-ISO	Pb-Free	No	No	Yes	x	x	x			x

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Daisy Chain Net List TQFP80, LQFP80 and QFP80

Net List		Net List	
From Pin	To Pin	From Pin	To Pin
1	2	41	42
3	4	43	44
5	6	45	46
7	8	47	48
9	10	49	50
11	12	51	52
13	14	53	54
15	16	55	56
17	18	57	58
19	20	59	60
21	22	61	62
23	24	63	64
25	26	65	66
27	28	67	68
29	30	69	70
31	32	71	72
33	34	73	74
35	36	75	76
37	38	77	78
39	40	79	80

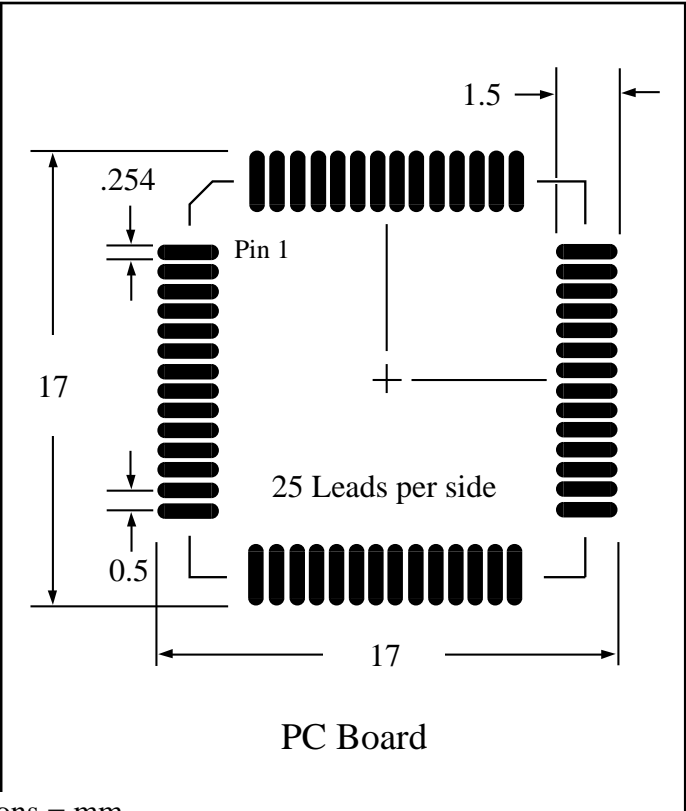
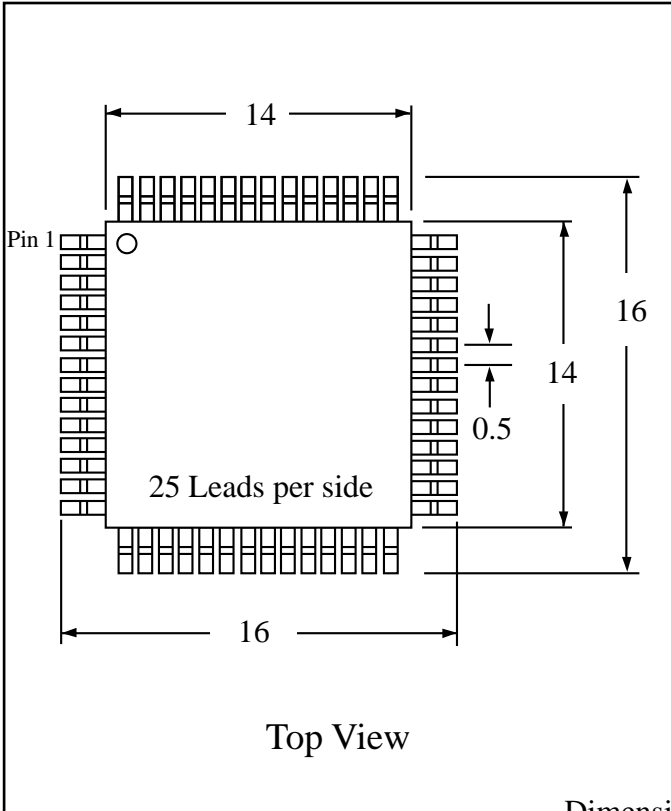
Visit www.TopLine.tv or email info@TopLine.tv for applications assistance.

Part # **TQFP100T19.7**
 Leads **100** Pitch **0.5mm**
 Body Size **14mmSQ**

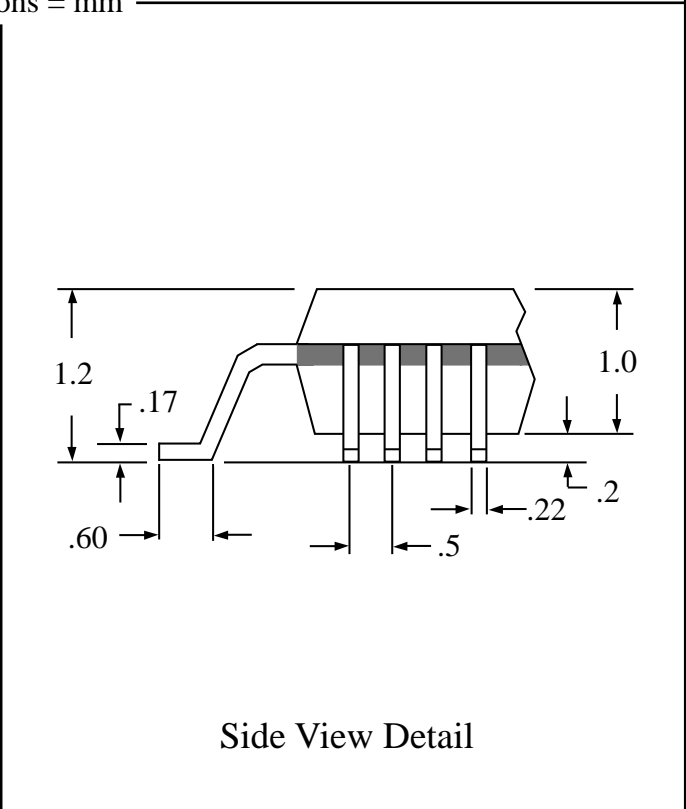
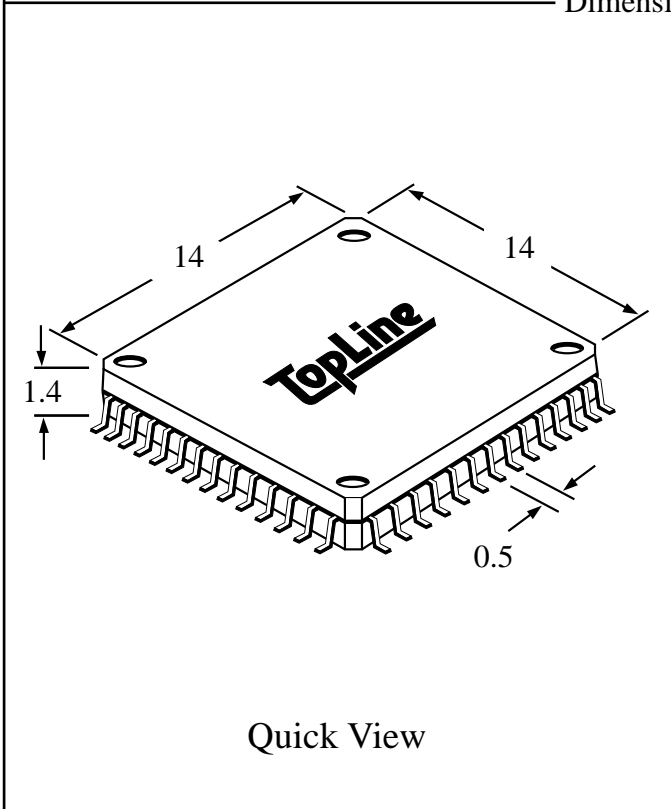
Available RoHS Pb-Free

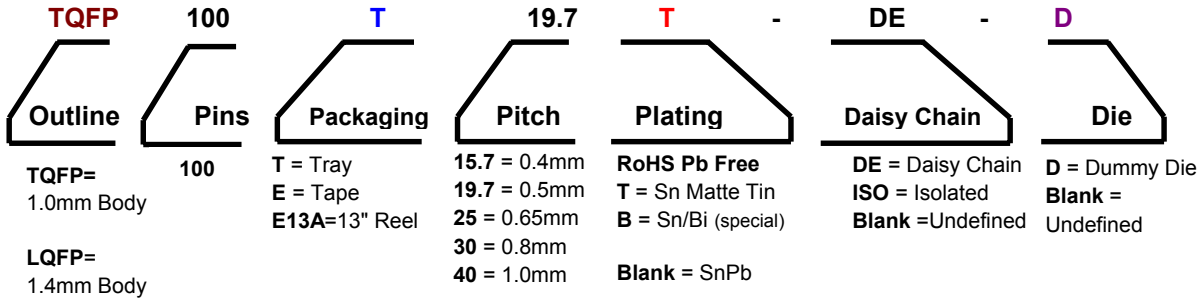


Tel 1-800-776-9888
 info@topline.tv



Dimensions = mm





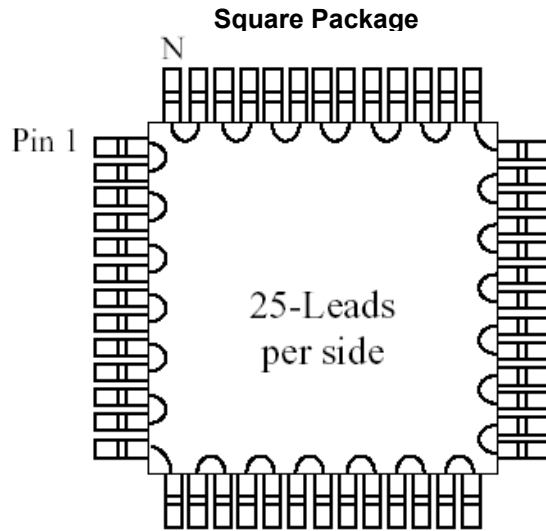
Ordering Steps:

- Step 1: Select outline body thickness TQFP (1.0mm) or LQFP (1.4mm).
- Step 2: Choose packaging. Tray is standard. Tape and Reel is available.
- Step 3: Select plating requirements. RoHS Pb-Free or SnPb
- Step 4: Select options according to your application. See chart below.

Part Number Packaged in Tray (Standard)	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP100T19.7	SnPb	No	No	No	x	x				
TQFP100T19.7T	Pb-Free	No	No	No	x	x				
TQFP100T19.7-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP100T19.7T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP100T19.7-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP100T19.7T-ISO	Pb-Free	No	No	Yes	x	x	x			x

Part Number Packaged in Tape and Reel	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP100E13A19.7	SnPb	No	No	No	x	x				
TQFP100E13A19.7T	Pb-Free	No	No	No	x	x				
TQFP100E13A19.7-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP100E13A19.7T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP100E13A19.7-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP100E13A19.7T-ISO	Pb-Free	No	No	Yes	x	x	x			x

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Not to Scale

Daisy Chain Net List TQFP100 and LQFP100

Net List		Net List	
From Pin	To Pin	From Pin	To Pin
1	2	51	52
3	4	53	54
5	6	55	56
7	8	57	58
9	10	59	60
11	12	61	62
13	14	63	64
15	16	65	66
17	18	67	68
19	20	69	70
21	22	71	72
23	24	73	74
25	26	75	76
27	28	77	78
29	30	79	80
31	32	81	82
33	34	83	84
35	36	85	86
37	38	87	88
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43	44	93	94
45	46	95	96
47	48	97	98
49	50	99	100

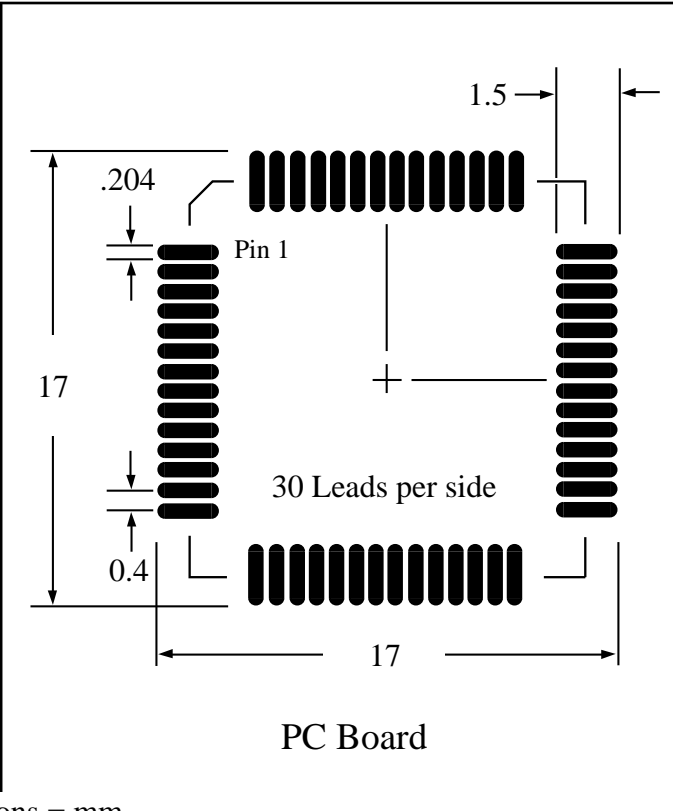
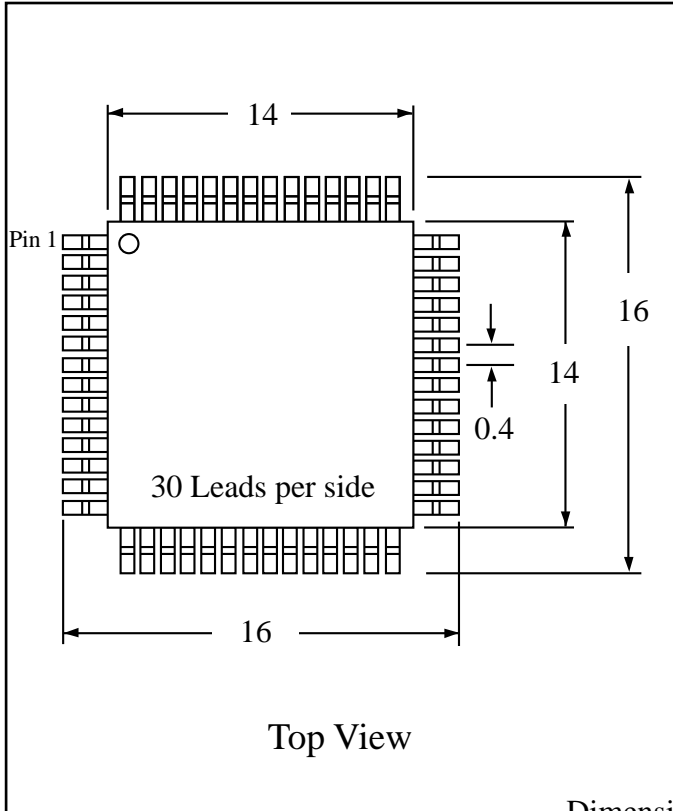
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Part # **TQFP120T15.7**
 Leads **120** Pitch **0.4mm**
 Body Size **14mm SQ**

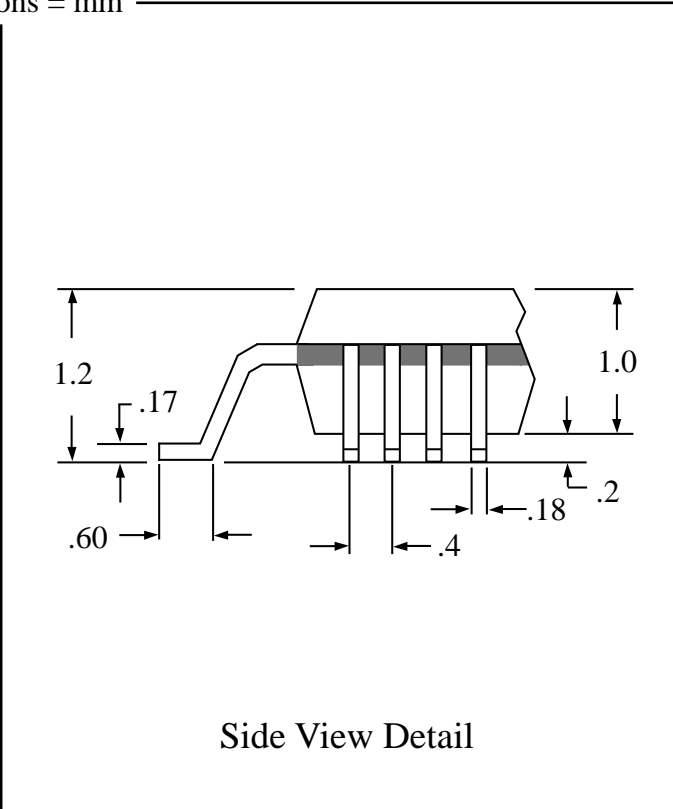
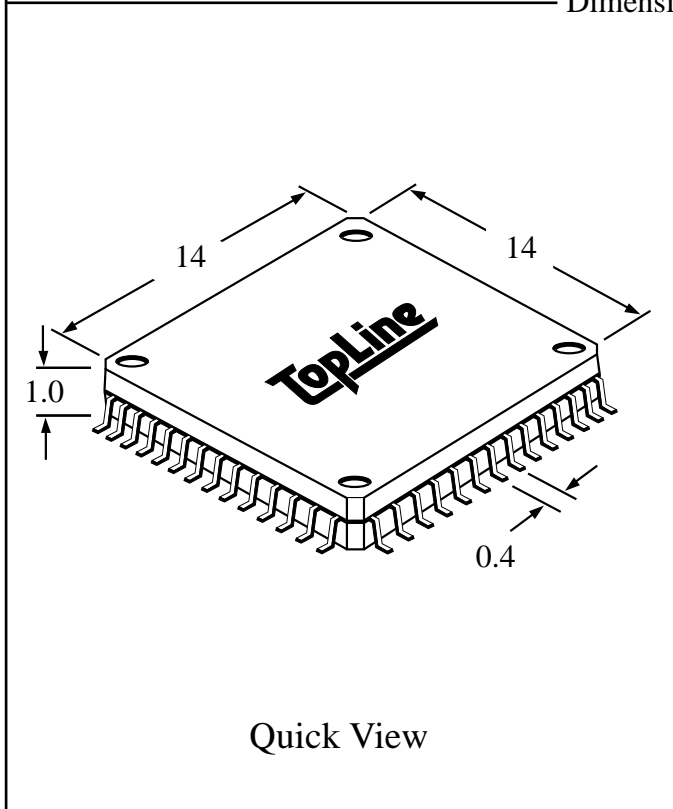
Available RoHS Pb-Free

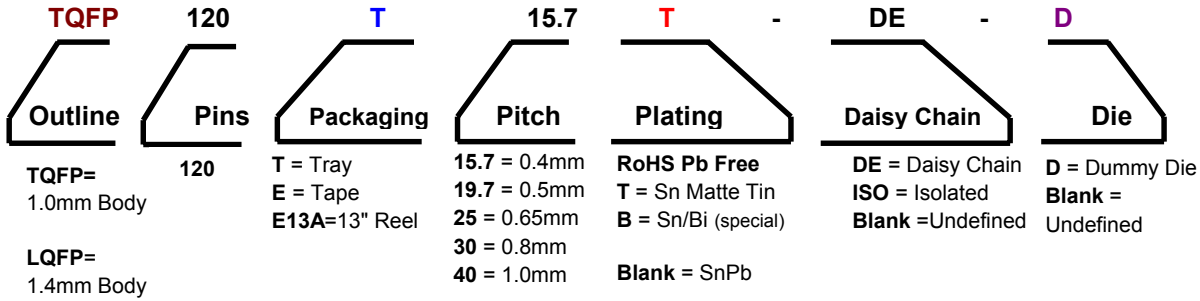


Tel 1-800-776-9888
 info@topline.tv



Dimensions = mm





Ordering Steps:

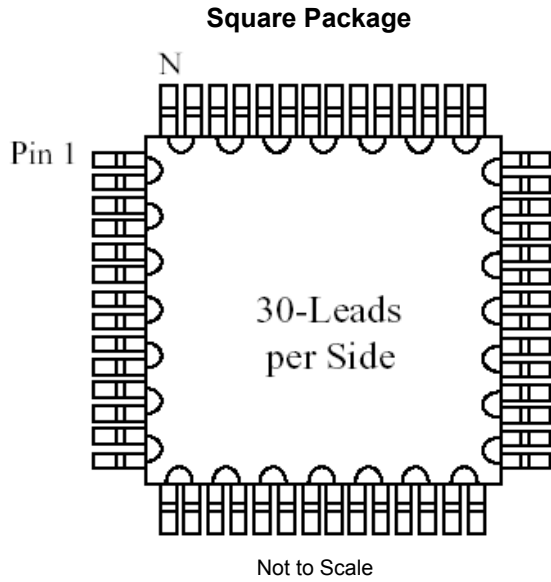
- Step 1: Select outline body thickness TQFP (1.0mm) or LQFP (1.4mm).
- Step 2: Choose packaging. Tray is standard. Tape and Reel is available.
- Step 3: Select plating requirements. RoHS Pb-Free or SnPb
- Step 4: Select options according to your application. See chart below.

Part Number Packaged in Tray (Standard)	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP120T15.7	SnPb	No	No	No	x	x				
TQFP120T15.7T	Pb-Free	No	No	No	x	x				
TQFP120T15.7-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP120T15.7T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP120T15.7-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP120T15.7T-ISO	Pb-Free	No	No	Yes	x	x	x			x

Part Number Packaged in Tape and Reel	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP120E13A15.7	SnPb	No	No	No	x	x				
TQFP120E13A15.7T	Pb-Free	No	No	No	x	x				
TQFP120E13A15.7-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP120E13A15.7T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP120E13A15.7-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP120E13A15.7T-ISO	Pb-Free	No	No	Yes	x	x	x			x

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Daisy Chain TQFP120, LQFP120 and QFP120



Daisy Chain Net List TQFP120, LQFP120 and QFP120

Net List		Net List		Net List	
From Pin	To Pin	From Pin	To Pin	From Pin	To Pin
1	2	41	42	81	82
3	4	43	44	83	84
5	6	45	46	85	86
7	8	47	48	87	88
9	10	49	50	89	90
11	12	51	52	91	92
13	14	53	54	93	94
15	16	55	56	95	96
17	18	57	58	97	98
19	20	59	60	99	100
21	22	61	62	101	102
23	24	63	64	103	104
25	26	65	66	105	106
27	28	67	68	107	108
29	30	69	70	109	110
31	32	71	72	111	112
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35	36	75	76	115	116
37	38	77	78	117	118
39	40	79	80	119	120

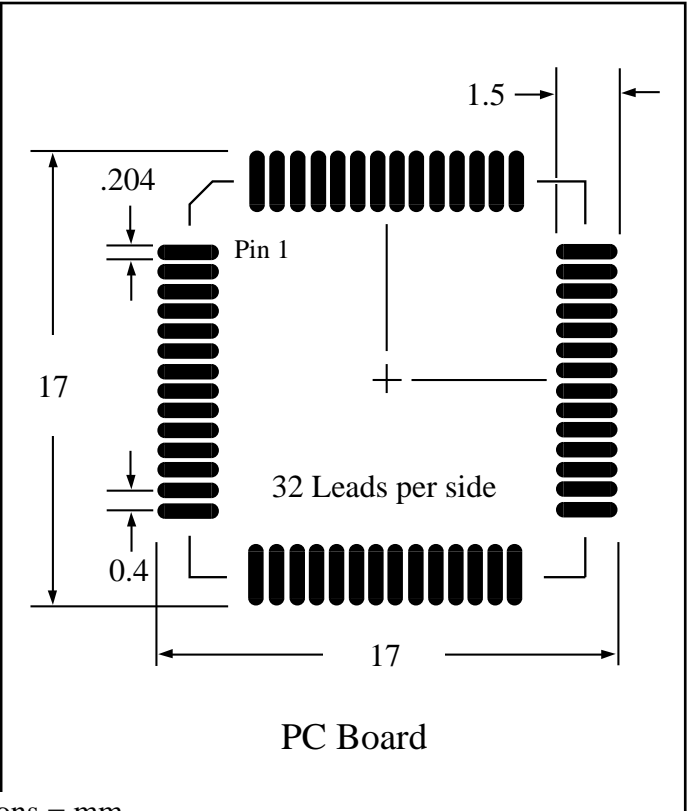
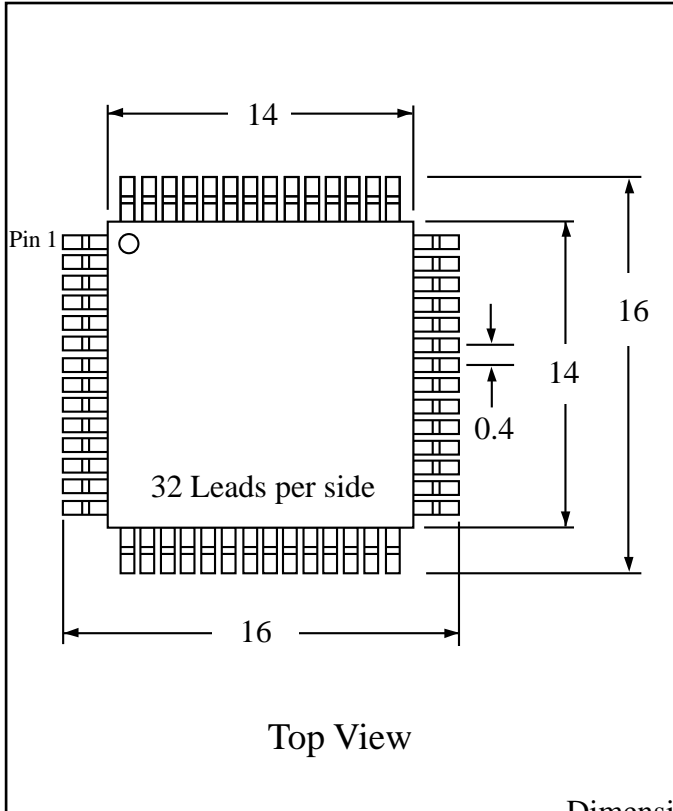
Visit www.TopLine.tv or email info@TopLine.tv for applications assistance.

Part # **TQFP128T15.7**
 Leads **128** Pitch **0.4mm**
 Body Size **14mm SQ**

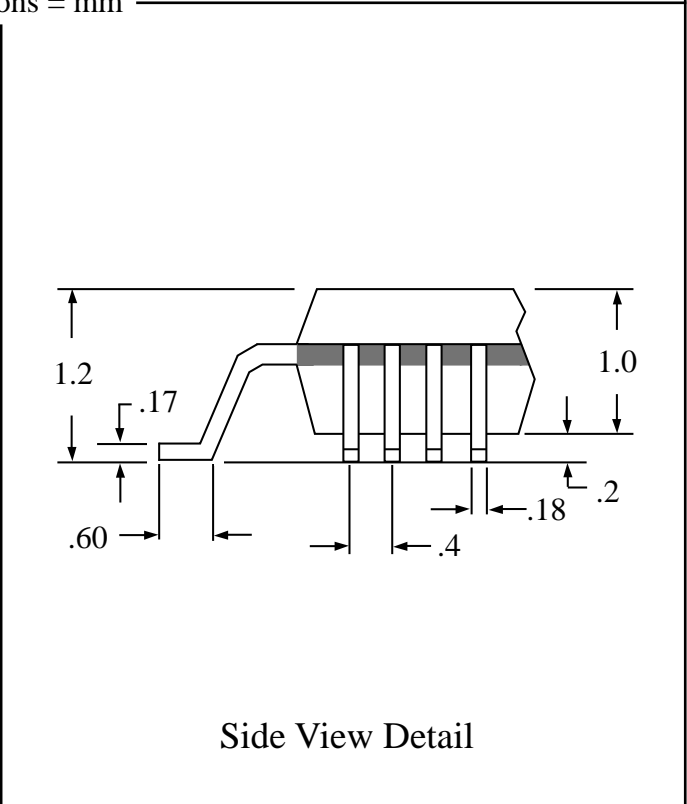
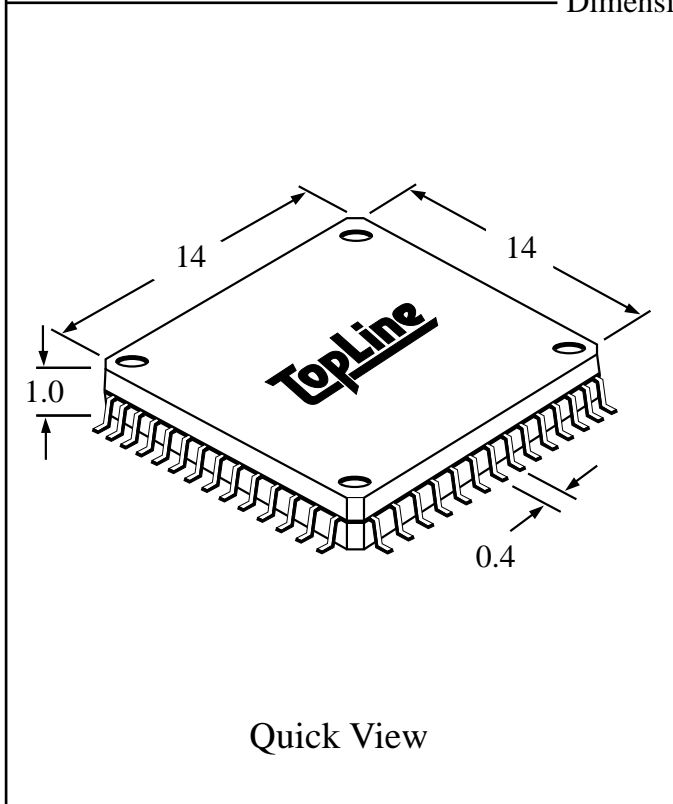
Available RoHS Pb-Free

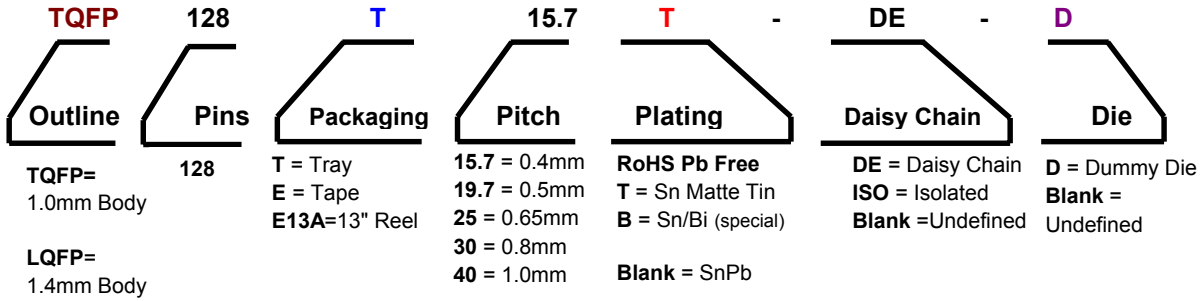


Tel 1-800-776-9888
 info@topline.tv



Dimensions = mm





Ordering Steps:

- Step 1: Select outline body thickness TQFP (1.0mm) or LQFP (1.4mm).
- Step 2: Choose packaging. Tray is standard. Tape and Reel is available.
- Step 3: Select plating requirements. RoHS Pb-Free or SnPb
- Step 4: Select options according to your application. See chart below.

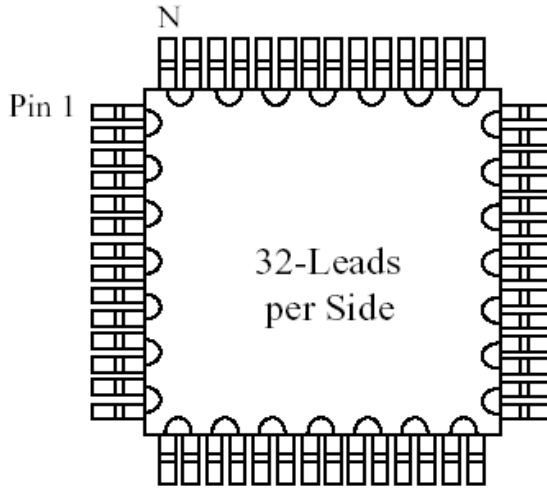
Part Number Packaged in Tray (Standard)	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP128T15.7	SnPb	No	No	No	x	x				
TQFP128T15.7T	Pb-Free	No	No	No	x	x				
TQFP128T15.7-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP128T15.7T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP128T15.7-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP128T15.7T-ISO	Pb-Free	No	No	Yes	x	x	x			x

Part Number Packaged in Tape and Reel	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP128E13A15.7	SnPb	No	No	No	x	x				
TQFP128E13A15.7T	Pb-Free	No	No	No	x	x				
TQFP128E13A15.7-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP128E13A15.7T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP128E13A15.7-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP128E13A15.7T-ISO	Pb-Free	No	No	Yes	x	x	x			x

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Daisy Chain TQFP128, LQFP128 and QFP128

Square Package



Not to Scale

Daisy Chain Net List TQFP, LQFP128 and QFP128

Net List	
From Pin	To Pin
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24
25	26
27	28
29	30
31	32
33	34
35	36
37	38
39	40
41	42

Net List	
From Pin	To Pin
43	44
45	46
47	48
49	50
51	52
53	54
55	56
57	58
59	60
61	62
63	64
65	66
67	68
69	70
71	72
73	74
75	76
77	78
79	80
81	82
83	84

Net List	
From Pin	To Pin
85	86
87	88
89	90
91	92
93	94
95	96
97	98
99	100
101	102
103	104
105	106
107	108
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115	116
117	118
119	120
121	122
123	124
125	126
127	128

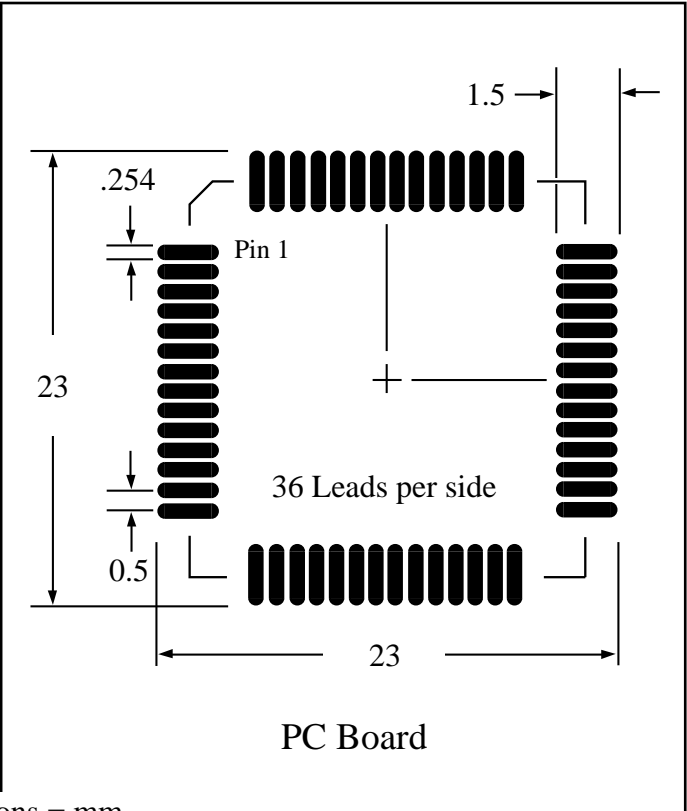
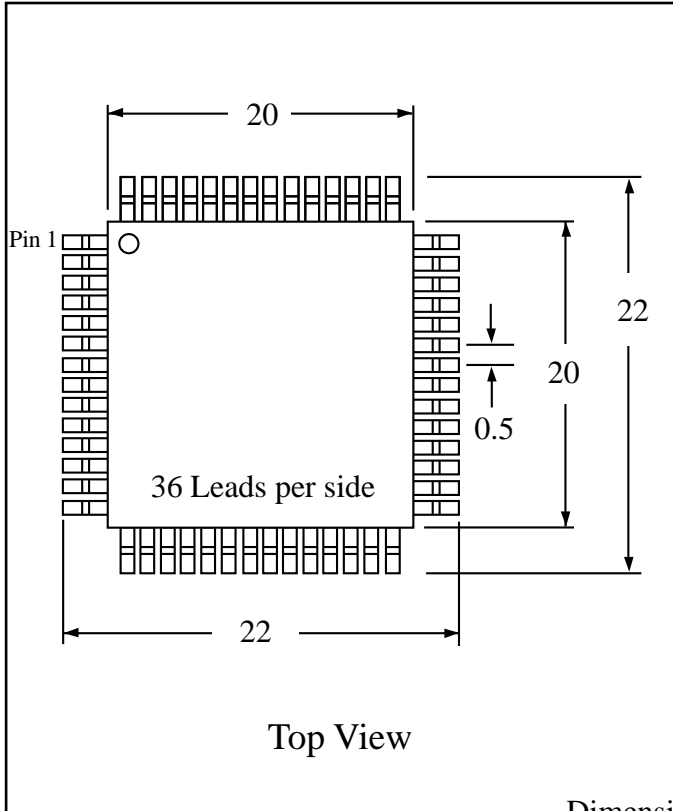
Visit www.TopLine.tv or email info@TopLine.tv for applications assistance.

Part # **TQFP144T19.7**
 Leads **144** Pitch **0.5mm**
 Body Size **20mm SQ**

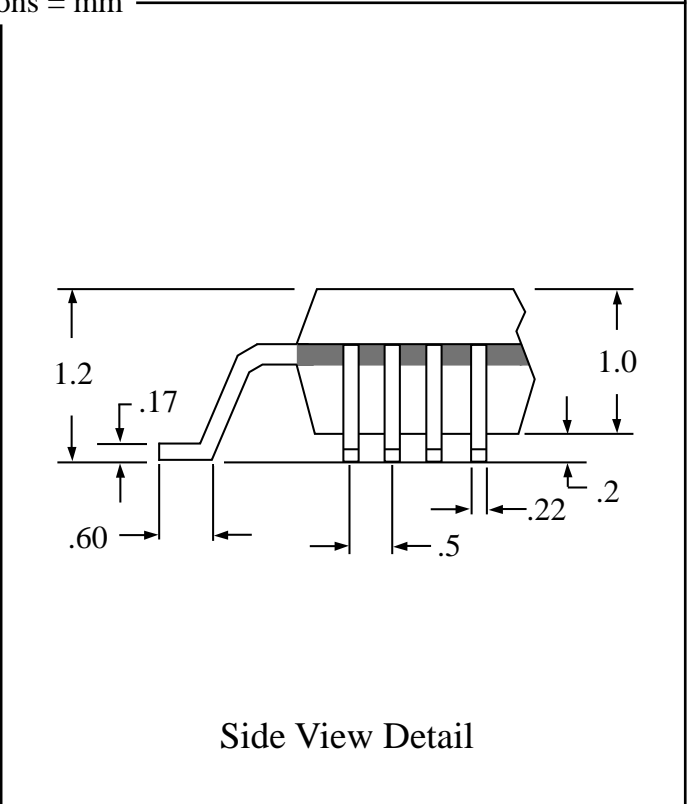
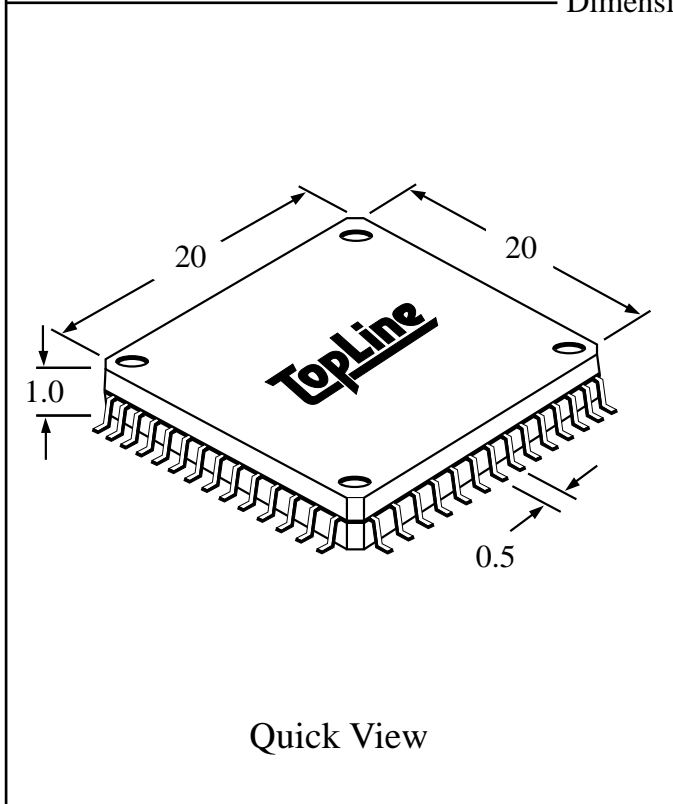
Available RoHS Pb-Free

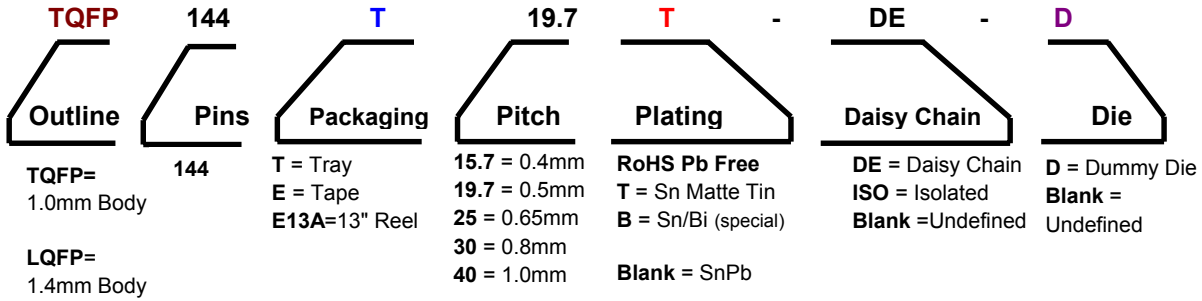
TopLineTM

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 info@topline.tv



Dimensions = mm





Ordering Steps:

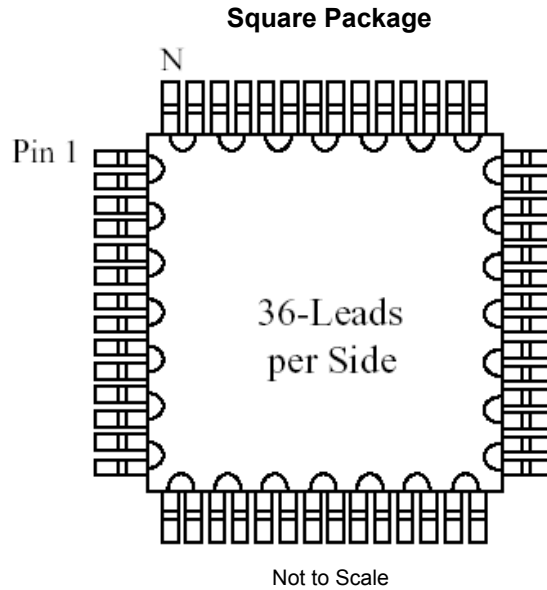
- Step 1: Select outline body thickness TQFP (1.0mm) or LQFP (1.4mm).
- Step 2: Choose packaging. Tray is standard. Tape and Reel is available.
- Step 3: Select plating requirements. RoHS Pb-Free or SnPb
- Step 4. Select options according to your application. See chart below.

Part Number Packaged in Tray (Standard)	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP144T19.7	SnPb	No	No	No	x	x				
TQFP144T19.7T	Pb-Free	No	No	No	x	x				
TQFP144T19.7-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP144T19.7T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP144T19.7-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP144T19.7T-ISO	Pb-Free	No	No	Yes	x	x	x			x

Part Number Packaged in Tape and Reel	Options				Applications					
	Plating	Daisy Chain	Dummy Die	Isolated Pins	Mounting Practice	Rework Solder Practice	Reflow Temperature Profiling	Continuity Test	Life Cycle Test	S.I.R. Test
TQFP144E13A19.7	SnPb	No	No	No	x	x				
TQFP144E13A19.7T	Pb-Free	No	No	No	x	x				
TQFP144E13A19.7-DE-D	SnPb	Yes	Yes	No	x	x	x	x	x	
TQFP144E13A19.7T-DE-D	Pb-Free	Yes	Yes	No	x	x	x	x	x	
TQFP144E13A19.7-ISO	SnPb	No	No	Yes	x	x	x			x
TQFP144E13A19.7T-ISO	Pb-Free	No	No	Yes	x	x	x			x

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Daisy Chain TQFP144, LQFP144 and QFP144



Daisy Chain Net List TQFP144, LQFP144 and QFP144

Net List		Net List		Net List		Net List	
From Pin	To Pin	From Pin	To Pin	From Pin	To Pin	From Pin	To Pin
1	2	37	38	73	74	109	110
3	4	39	40	75	76	111	112
5	6	41	42	77	78	113	114
7	8	43	44	79	80	115	116
9	10	45	46	81	82	117	118
11	12	47	48	83	84	119	120
13	14	49	50	85	86	121	122
15	16	51	52	87	88	123	124
17	18	53	54	89	90	125	126
19	20	55	56	91	92	127	128
21	22	57	58	93	94	129	130
23	24	59	60	95	96	131	132
25	26	61	62	97	98	133	134
27	28	63	64	99	100	135	136
29	30	65	66	101	102	137	138
31	32	67	68	103	104	139	140
33	34	69	70	105	106	141	142
35	36	71	72	107	108	143	144

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