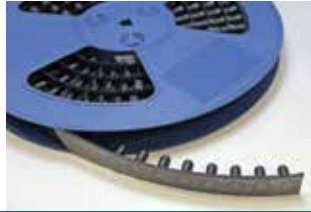


# ReelFast® Surface Mount Captive Panel Screws

New Type SMTPF LSM™ surface mount spring-loaded captive panel screws provide ease of installation and high precision positioning without loose hardware. They mount on P.C. boards in the same manner and at the same time as other surface mount components prior

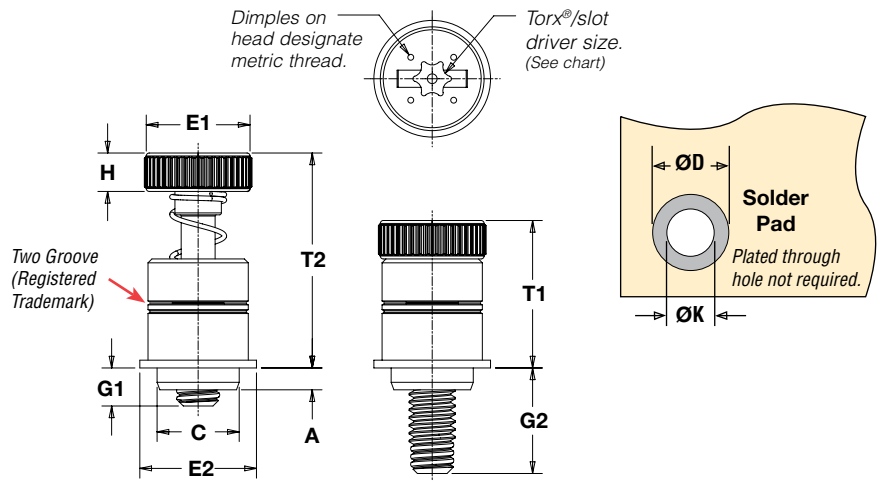


to the automated reflow solder process. This alleviates concerns about potential damage to P.C. boards due to improper secondary installation operations. These fasteners are provided on tape and reel compatible with existing SMT automated installation equipment.



## Features and Benefits

- All metal captive screw assembly installs in one piece utilizing pick and place method
- Combination drive, Torx®/slot
- Solderable finish
- Screw length code "0" retracts flush in up position
- Ease of installation



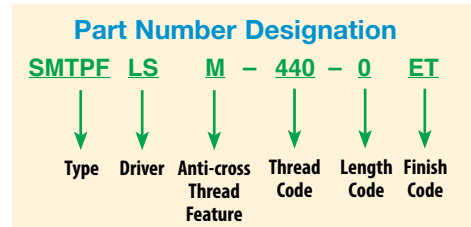
All dimensions are in inches.

UNIFIED	Thread Size	Type	Thread Code	Screw Length Code	A (Shank) Max.	Min. Sheet Thickness	C Max.	E1 ±.010	E2 Nom	G1 ±.025	G2 ±.025	H ±.010	T1 Nom.	T2 Nom.	ØK Hole Size in Sheet +.003 -.000	ØD Min. Solder Pad	Driver Size
	.112-40 (#4-40)	SMTPF LSM	440	0 1	.063	.063	.215	.280	.300	.040 .100	.210 .270	.100	.38	.55	.220	.340	T15
.138-32 (#6-32)	SMTPF LSM	632	0 1	.063	.063	.247	.310	.320	.040 .100	.240 .300	.100	.42	.62	.252	.400	T15	

All dimensions are in millimeters.

METRIC	Thread Size	Type	Thread Code	Screw Length Code	A (Shank) Max.	Min. Sheet Thickness	C Max.	E1 ±0.25	E2 Nom	G1 ±0.64	G2 ±0.64	H ±0.25	T1 Nom.	T2 Nom.	ØK Hole Size in Sheet +0.08	ØD Min. Solder Pad	Driver Size
	M3 x 0.5	SMTPF LSM	M3	0 1	1.6	1.6	5.46	7	7.6	1 2.5	5.3 6.8	2.5	9.6	14	5.6	8.6	T15
M3.5 x 0.6	SMTPF LSM	M3.5	0 1	1.6	1.6	6.27	7.9	8.13	1 2.5	6.1 7.62	2.5	10.7	15.7	6.4	10.2	T15	

**Threads:** External, ASME B1.1, 2A / ASME B1.13M, 6g <sup>(1)</sup>  
**Material:** Retainer: Carbon Steel  
 Screw: Hardened Carbon Steel  
 Spring: 300 Series Stainless Steel  
**Standard Finish:** Retainer: ET - Electro-plated Tin ASTM B 545, Class A with clear Preservative Coating, Annealed  
 Screw: ZI - Zinc plate, 5µm, colorless  
**For use in:** P.C. Board

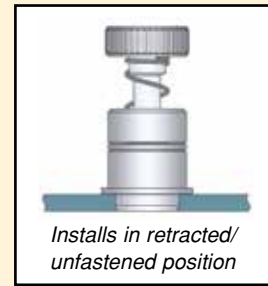
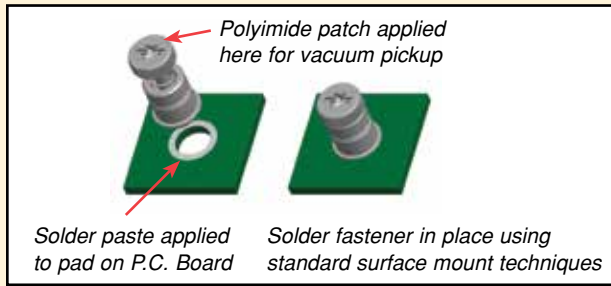


(1) As with all Class 2A/6g external threads with an additive finish, the maximum major and pitch, may equal basic sizes and be gaged to Class 3A/4h, per ANSI B1.12, Section 8, Table 3A and ANSI B1.13M, Section 8, paragraph 8.2.



# ReelFast® Surface Mount Captive Panel Screws

## INSTALLATION



## PERFORMANCE DATA<sup>(1)</sup>

UNIFIED	Type and Thread Size	Min. Tensile Strength (lbs.)	Rec. Tightening Torque (in. lbs.) <sup>(2)</sup>	Test Sheet Material	
				.060" P.C. Board	
				Pull-off (lbs.) <sup>(3)</sup>	
	SMTPF LSM-440	556	4.4	100	
	SMTPF LSM-632	724	7.0	105	

METRIC	Type and Thread Size	Min. Tensile Strength (N)	Rec. Tightening Torque (N•m) <sup>(2)</sup>	Test Sheet Material	
				1.5 mm P.C. Board	
				Pull-off (N) <sup>(3)</sup>	
	SMTPF LSM-M3	2900	0.61	445	
	SMTPF LSM-M3.5	3269	0.8	465	

## TESTING CONDITIONS

<b>Oven</b>	Quad ZCR convection oven with 4 zones
<b>Vias</b>	None
<b>High Temp</b>	245°C / 473°F
<b>Board Finish</b>	62% Sn, 38% Pb
<b>Spokes</b>	2 Spoke Pattern
<b>Paste (lead-free)</b>	Alpha CVP-390 Sn96.5/3.0Ag/0.5Cu (SAC305)
<b>Screen Printer</b>	Ragin Manual Printer
<b>Stencil</b>	.005" / 0.13 mm thick

## NUMBER OF PARTS PER REEL

Thread Size	Screw Length Code	
	-0	-1
440	200	200
632	150	150
M3	200	200
M3.5	150	150

Packaged on 330 mm recyclable reels. Tape width is 24 mm. Supplied with polyimide patch for vacuum pickup. Reels conform to EIA-481.

(1) With lead-free paste. Average values of 30 test points. The data presented here is for general comparison purposes only. Actual performance is dependent upon application variables. We will be happy to provide samples for you to install. If required, we can also test your installed hardware and provide you with the performance data specific to your application.

(2) Torque values shown will produce a preload of 70% minimum tensile with a nut factor "k" equal to .1.

(3) Failure occurred at the solder joint. Screw retention strength is greater than the retainer.



Fastener drawings and models are available at [www.pemnet.com](http://www.pemnet.com)



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SMTPF-2