

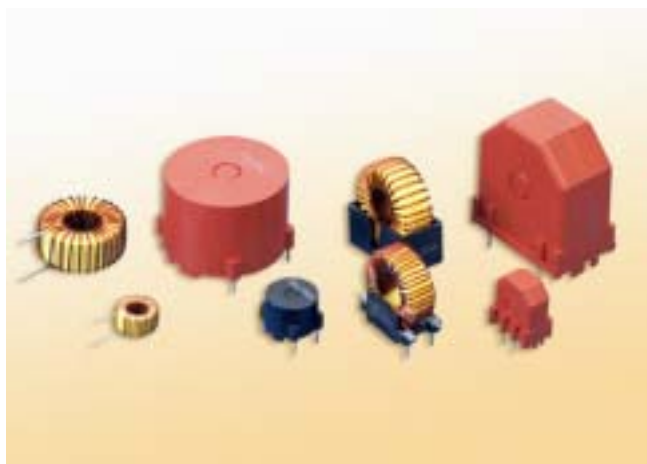


## SW Series • Inductors for National's 50kHz Simple Switcher™

Compatible with National Semiconductor's Simple Switcher™  
Part Number's LM2574, LM2475 and LM2576

### Features

- High energy storage with minimum saturation
- High stability from no load to full load
- Available in both SMD and TH versions
- Manufactured in ISO-9001 approved facility
- Operating temperature range: -40°C to +125°C



### Electrical Specifications at 25°C ambient

| Part Number   | Rated Current (I <sub>DC</sub> ) | L <sub>N</sub> (μH) Typical * | L <sub>O</sub> (μH) ±20% No DC Load | ET <sub>OP</sub> (V-μSec) Max. | DCR (Ohms) Max. | Package |     |     |     |     |     |
|---------------|----------------------------------|-------------------------------|-------------------------------------|--------------------------------|-----------------|---------|-----|-----|-----|-----|-----|
|               |                                  |                               |                                     |                                |                 | "C"     | "S" | "T" | "B" | "F" | "V" |
| SW_-3.0-47    | 3.0                              | 47                            | 38                                  | 90                             | 0.05            | 2       | 5   | 5   |     |     |     |
| SWC-3.0-68    | 3.0                              | 68                            | 55                                  | 90                             | 0.02            | 4       |     |     |     |     |     |
| SWC-3.0-100   | 3.0                              | 100                           | 91                                  | 90                             | 0.04            | 4       |     |     |     |     |     |
| SW_-2.0-150   | 2.0                              | 150                           | 130                                 | 90                             | 0.10            | 4       | 6   |     |     |     |     |
| SW_-1.4-220   | 1.4                              | 220                           | 230                                 | 90                             | 0.38            |         | 5   | 5   |     | 2   | 2   |
| SW_-1.4-220   | 1.4                              | 220                           | 176                                 | 90                             | 0.14            | 3       | 6   |     |     |     |     |
| SW_-0.9-330   | 0.9                              | 330                           | 302                                 | 90                             | 0.74            |         | 5   | 5   |     | 2   | 2   |
| SW_-0.9-330   | 0.9                              | 330                           | 267                                 | 90                             | 0.18            | 3       | 6   |     |     |     |     |
| SWC-0.64-470  | 0.64                             | 470                           | 426                                 | 90                             | 0.16            | 4       |     |     |     |     |     |
| SW_-0.85-680  | 0.85                             | 680                           | 657                                 | 90                             | 1.25            |         | 5   | 5   |     | 2   | 2   |
| SWC-3.0-150   | 3.0                              | 150                           | 136                                 | 200                            | 0.10            | 4       |     |     |     |     |     |
| SWC-3.0-220   | 3.0                              | 220                           | 167                                 | 200                            | 0.07            | 5       |     |     |     |     |     |
| SWC-3.0-330   | 3.0                              | 330                           | 292                                 | 200                            | 0.15            | 5       |     |     |     |     |     |
| SWC-2.0-470   | 2.0                              | 470                           | 369                                 | 200                            | 0.17            | 5       |     |     |     |     |     |
| SWC-1.3-680   | 1.3                              | 680                           | 562                                 | 200                            | 0.20            | 5       |     |     |     |     |     |
| SWC-0.95-1000 | 0.95                             | 1000                          | 762                                 | 200                            | 0.24            | 5       |     |     |     |     |     |
| SWB-0.62-1500 | 0.62                             | 1500                          | 1150                                | 200                            | 1.00            |         |     |     | 8   |     |     |
| SWB-0.42-2200 | 0.42                             | 2200                          | 1730                                | 200                            | 1.80            |         |     |     | 8   |     |     |

### Notes:

- 1) Inductance will be typical for the I<sub>DC</sub> and ET<sub>OP</sub> values listed above.
- 2) No load Inductance measured at B<sub>OP</sub> maximum of 10 gauss (10mV @ 20kHz).
- 3) Simple Switcher™ is a trademark of National Semiconductor Corporation.

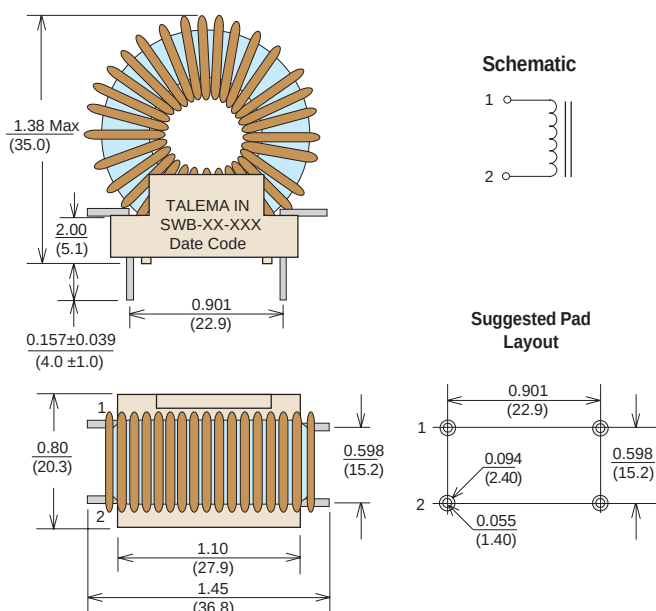
### Ordering Key

**SW C - 3.0 - 47**

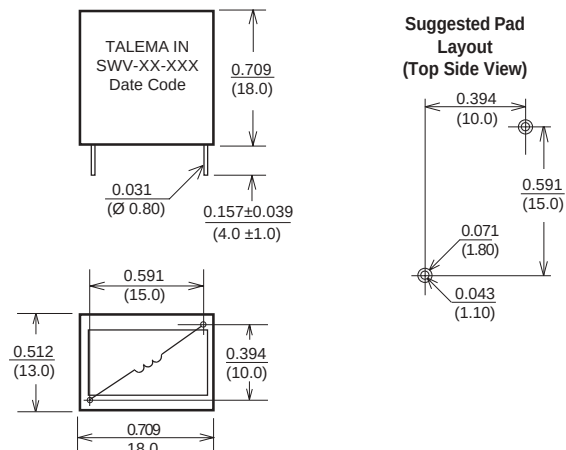
- SW: Basic Series Designation
- C: Mounting Style - Specify the appropriate suffix
  - C = Clip Mount
  - S = Surface Mount (S5 or S6)
  - T = Low Profile TH Mount
  - B = Base Mount
  - F = Flat Encapsulated
  - V = Vertical Encapsulated
- 3.0: Current Rating (Amps)
- 47: Inductance Value in μH

## Mounting Styles • SW Series - Low Cost Toroidal Inductors

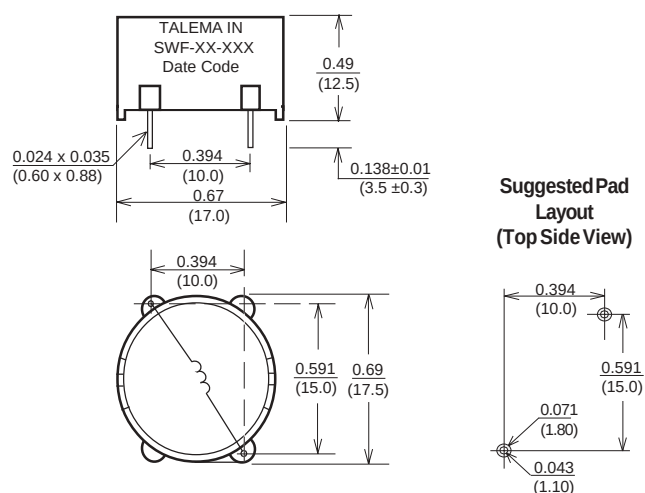
Type "B" - Vertical Mount



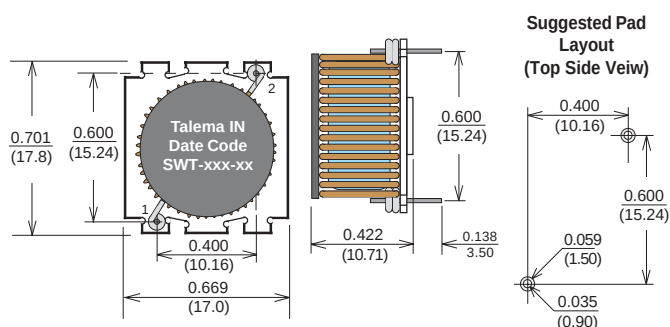
Type "V" - Vertical Mount - Size 2



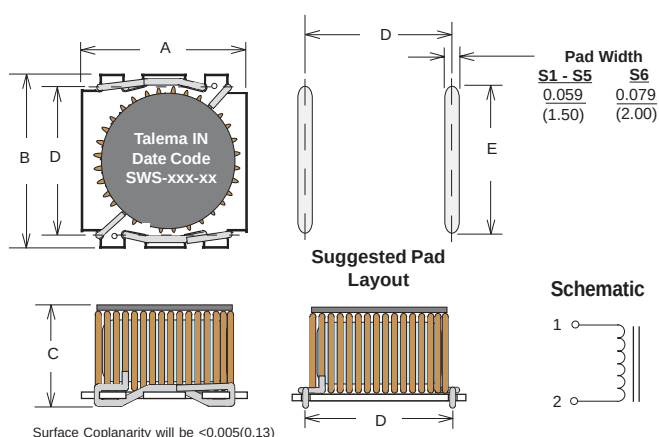
Type "F" - Flat Mount - Size 2



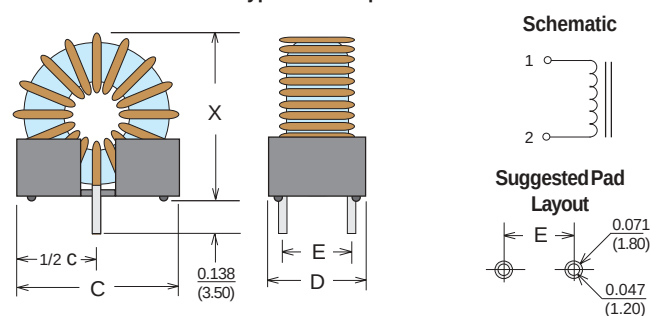
Type SWT - Through Hole Mount



Type SWS - Surface Mount



Type SWC - Clip Mount



| Mounting Style | Size Code | Dimensions - Inches (mm) |              |              |              |              |
|----------------|-----------|--------------------------|--------------|--------------|--------------|--------------|
|                |           | A                        | B            | C            | D            | E            |
| "S" SMD        | S5        | 0.669 (17.0)             | 0.701 (17.8) | 0.425 (10.8) | 0.591 (15.0) | 0.591 (15.0) |
|                | S6        | 0.925 (23.5)             | 0.925 (23.5) | 0.531 (13.5) | 0.827 (21.0) | 0.689 (17.5) |

| Mounting Style          | Size Code | Dimensions - Inches (mm) |              |              |                 |
|-------------------------|-----------|--------------------------|--------------|--------------|-----------------|
|                         |           | C                        | D            | E            | X = Coil O.D. + |
| "C" Vertical Clip Mount | C2        | 0.650 (16.5)             | 0.449 (11.4) | 0.299 (7.60) | 0.110 (2.80)    |
|                         | C3        | 0.827 (21.0)             | 0.449 (11.4) | 0.299 (7.60) | 0.110 (2.80)    |
|                         | C4        | 0.949 (24.1)             | 0.598 (15.2) | 0.449 (11.4) | 0.110 (2.80)    |
|                         | C5        | 1.252 (31.8)             | 0.701 (17.8) | 0.500 (12.7) | 0.130 (3.30)    |



## SW Series Cross Reference for National's 50kHz Simple Switcher™

### Pulse Engineering - Talema

| Pulse Eng.<br>Part<br>Number | Talema Part Number*          |                               |                 |                                |                         |                             |
|------------------------------|------------------------------|-------------------------------|-----------------|--------------------------------|-------------------------|-----------------------------|
|                              | Vertical<br>Clip Mount       | Flat Open<br>SMD              | Flat Open<br>TH | Vertical TH<br>Base Mount      | Flat TH<br>Encapsulated | Vertical TH<br>Encapsulated |
| PE-53112<br>PE-92114K        | SWC-3.0-47<br>SWC-3.0-68     | SWS-3.0-47                    | SWT-3.0-47      |                                |                         |                             |
| PE-92108K<br>PE-53113        | SWC-3.0-100<br>SWC-2.0-150   | SWS-2.0-150                   |                 |                                |                         |                             |
| PE-52626<br>PE-53145         |                              | SWS-1.4-220<br>SWS6-1.4-220   | SWT-1.4-220     |                                | SWF-1.4-220             | SWV-1.4-220                 |
| PE-52627<br>PE-53146         |                              | SWS-0.90-330<br>SWS6-0.90-330 | SWT-0.90-330    |                                | SWF-0.90-330            | SWV-0.90-330                |
| PE-53114<br>PE-52629         | SWC-0.64-470                 |                               |                 |                                |                         |                             |
|                              |                              | SWS-0.85-680                  | SWT-0.85-680    |                                | SWF-0.85-680            | SWV-0.85-680                |
| PE-53115<br>PE-53116         | SWC-3.0-150<br>SWC-3.0-220   |                               |                 |                                |                         |                             |
| PE-53117<br>PE-53118         | SWC-3.0-330<br>SWC-2.0-470   |                               |                 |                                |                         |                             |
| PE-53119<br>PE-53120         | SWC-1.3-680<br>SWC-0.95-1000 |                               |                 |                                |                         |                             |
| PE-53121<br>PE-53122         |                              |                               |                 | SWB-0.62-1500<br>SWB-0.42-2200 |                         |                             |

\*Note: There are no equivalent Pulse SMD types for Talema P/N SWT-3.0-47 and the SWS style SMD package.

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