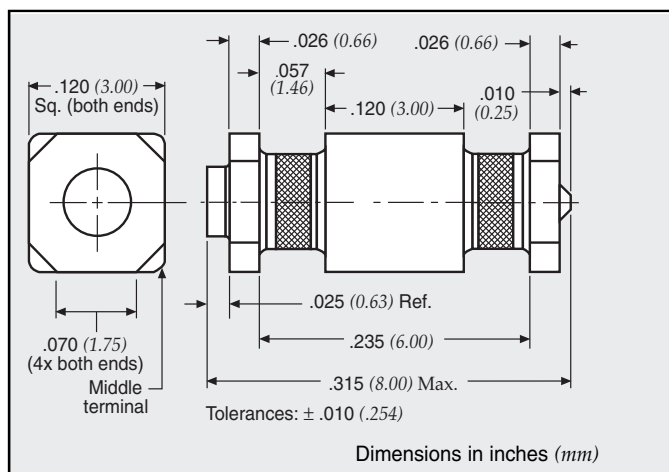


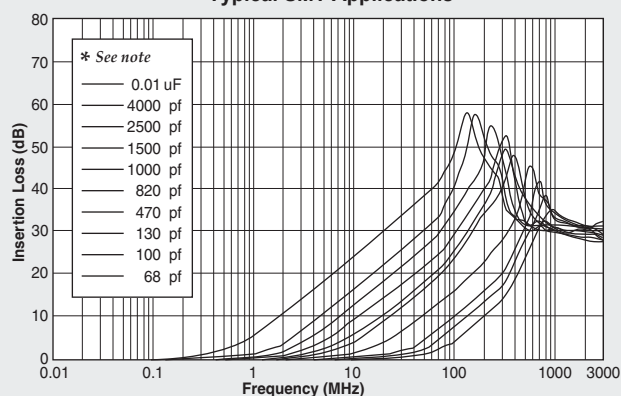
## Power Surface Mount Filters



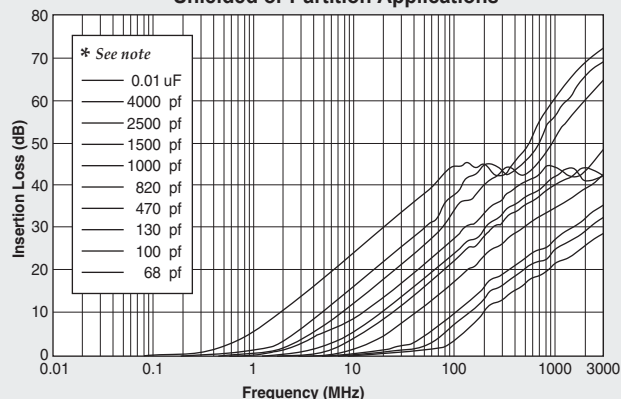
| Parameter             | Value                                            |
|-----------------------|--------------------------------------------------|
| Voltage Rating DC     | 200 VDC @ -55°C to +125°C                        |
| DWV                   | 700 VDC                                          |
| Current Rating        | 20 Amps (Feed-through) max.<br>10 Amps (Pi) max. |
| Insulation Resistance | 1.0 GΩ @ 25°C                                    |
| Dissipation Factor    | 4.0% maximum                                     |
| D.C.R.                | Max. 0.0005Ω, typ. 0.0002Ω                       |

### Feed-Through Insertion Loss

Typical SMT Applications

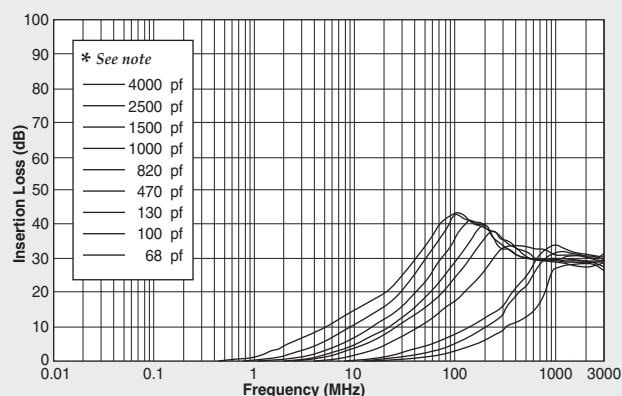


Shielded or Partition Applications

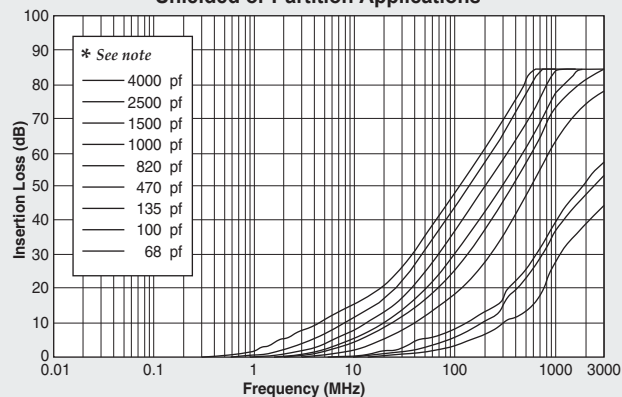


### Pi Insertion Loss

Typical SMT Applications



Shielded or Partition Applications



## Power Surface Mount Filters

## PSM Ordering Information

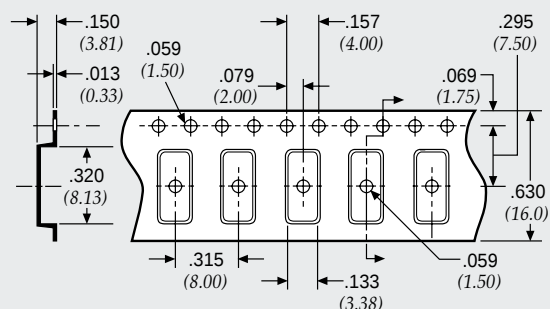
**Example: PSM4-402Z-20T0**

| <b>PSM</b>                                            | <b>4</b>                  | -         | <b>402Z</b>                                                                                                                                                                                                                                                                                                                                                                                       | -    | <b>20</b>                                       | <b>T</b>                                          | <b>0</b>                                                                 |       |      |      |        |      |      |         |      |      |         |          |      |         |         |        |        |          |  |  |  |  |
|-------------------------------------------------------|---------------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------------------------------------|---------------------------------------------------|--------------------------------------------------------------------------|-------|------|------|--------|------|------|---------|------|------|---------|----------|------|---------|---------|--------|--------|----------|--|--|--|--|
| Style                                                 | Circuit Configuration     |           | Capacitance                                                                                                                                                                                                                                                                                                                                                                                       |      | Current Rating                                  | Packaging                                         | Tape and Reel                                                            |       |      |      |        |      |      |         |      |      |         |          |      |         |         |        |        |          |  |  |  |  |
| PSM (Power)                                           | 1 - Pi<br>4 - Feedthrough |           |                                                                                                                                                                                                                                                                                                                                                                                                   |      | 10 - 10 Amps (Pi)<br>20 - 20 Amps (Feedthrough) | T - Tape and reel packaging<br>B - Bulk packaging | 0 - 500 pieces<br><i>Note: Tape and reel packaging - 500 pieces (7")</i> |       |      |      |        |      |      |         |      |      |         |          |      |         |         |        |        |          |  |  |  |  |
|                                                       |                           |           | <table><tr><th>Code</th><th>Value*</th><th>Tolerance</th></tr><tr><td>680M</td><td>68 pF</td><td>±20%</td></tr><tr><td>101M</td><td>100 pF</td><td>±20%</td></tr><tr><td>102M</td><td>1000 pF</td><td>±20%</td></tr><tr><td>252P</td><td>2500 pF</td><td>+100/-0%</td></tr><tr><td>402Z</td><td>4000 pF</td><td>+80/20%</td></tr><tr><td>103Z**</td><td>.01 μF</td><td>+80/-20%</td></tr></table> | Code | Value*                                          | Tolerance                                         | 680M                                                                     | 68 pF | ±20% | 101M | 100 pF | ±20% | 102M | 1000 pF | ±20% | 252P | 2500 pF | +100/-0% | 402Z | 4000 pF | +80/20% | 103Z** | .01 μF | +80/-20% |  |  |  |  |
| Code                                                  | Value*                    | Tolerance |                                                                                                                                                                                                                                                                                                                                                                                                   |      |                                                 |                                                   |                                                                          |       |      |      |        |      |      |         |      |      |         |          |      |         |         |        |        |          |  |  |  |  |
| 680M                                                  | 68 pF                     | ±20%      |                                                                                                                                                                                                                                                                                                                                                                                                   |      |                                                 |                                                   |                                                                          |       |      |      |        |      |      |         |      |      |         |          |      |         |         |        |        |          |  |  |  |  |
| 101M                                                  | 100 pF                    | ±20%      |                                                                                                                                                                                                                                                                                                                                                                                                   |      |                                                 |                                                   |                                                                          |       |      |      |        |      |      |         |      |      |         |          |      |         |         |        |        |          |  |  |  |  |
| 102M                                                  | 1000 pF                   | ±20%      |                                                                                                                                                                                                                                                                                                                                                                                                   |      |                                                 |                                                   |                                                                          |       |      |      |        |      |      |         |      |      |         |          |      |         |         |        |        |          |  |  |  |  |
| 252P                                                  | 2500 pF                   | +100/-0%  |                                                                                                                                                                                                                                                                                                                                                                                                   |      |                                                 |                                                   |                                                                          |       |      |      |        |      |      |         |      |      |         |          |      |         |         |        |        |          |  |  |  |  |
| 402Z                                                  | 4000 pF                   | +80/20%   |                                                                                                                                                                                                                                                                                                                                                                                                   |      |                                                 |                                                   |                                                                          |       |      |      |        |      |      |         |      |      |         |          |      |         |         |        |        |          |  |  |  |  |
| 103Z**                                                | .01 μF                    | +80/-20%  |                                                                                                                                                                                                                                                                                                                                                                                                   |      |                                                 |                                                   |                                                                          |       |      |      |        |      |      |         |      |      |         |          |      |         |         |        |        |          |  |  |  |  |
| *Other capacitance values available as special order. |                           |           |                                                                                                                                                                                                                                                                                                                                                                                                   |      |                                                 |                                                   |                                                                          |       |      |      |        |      |      |         |      |      |         |          |      |         |         |        |        |          |  |  |  |  |
| **Available in feedthrough circuit only.              |                           |           |                                                                                                                                                                                                                                                                                                                                                                                                   |      |                                                 |                                                   |                                                                          |       |      |      |        |      |      |         |      |      |         |          |      |         |         |        |        |          |  |  |  |  |

## Technical Notes

- Soldering recommendations supplied upon request
- Reflow temperature limit is 260°C
- Unit weight is approximately 0.4 grams

## PSM Tape and Reel Packaging



Dimensions in inches (mm)

## PSM Recommended Board Pattern



Solder paste pattern  
Recommended pad, must be able to support continuous signal current



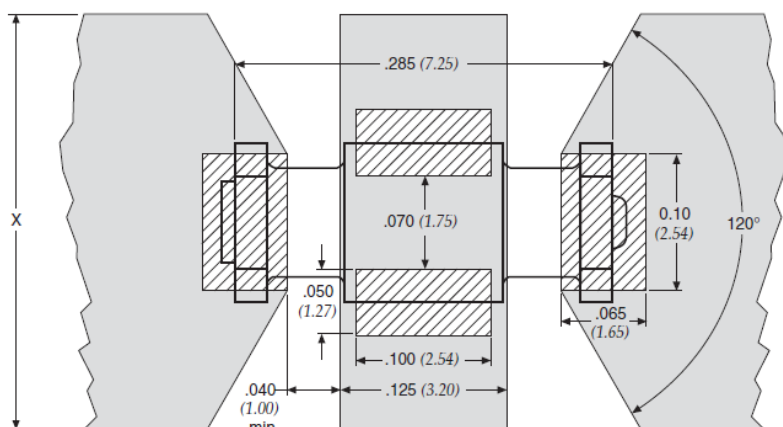
## 20 Amps Feedthrough

X = 0.350" minimum for 1 oz. copper  
(0.036 mm thickness)

X = 0.200" minimum for 2 oz. copper  
(0.071 mm thickness)

## 10 Amp Pi

X = 0.130" minimum for 1 oz. copper  
(0.036 mm thickness)



Dimensions in inches (mm)