

## PDI Standard Surface Mount Crystal Filters



PDI offers a variety of Surface Mount Filters over a wide range of standard frequencies, (10.000 MHz to 90.000 MHz) and are of the highest quality for any commercial or military grade specifications. PDI's crystal filters are available in a variety of surface mount packages that will meet customer's desired specifications. Contact our Sales Department to discuss PDI's capacity to meet the demands of any customer.

Order Parts using the PDI 16 digit guide listed below.

ex) **MCF—S#—25000X—A—A—B—X—X\*** \*(X) - Check digit (PDI assigned).

### DESIGN TYPE

**MCF** = Monolithic  
**DCF** = Discrete

### PACKAGE TYPE

**S#** = Surface Mt.\*  
**HA** = HC-49/U  
**U1** = UM-1  
**SP** = Customer's Requested Package

### FREQUENCY

**10000X - 99999X** =  
10.000MHz-99.999MHz  
**C10000 - C12000** =  
100.00MHz-120.00MHz

### BANDWIDTH

**A** =  $\pm 3.75\text{KHz}$   
**B** =  $\pm 7.5\text{KHz}$   
**C** =  $\pm 15.0\text{KHz}$   
**D** =  $\pm 30.0\text{KHz}$   
**S** = Special

### CASE OPTIONS

**A, B, C, S** =  
(See package dwg for preferred height)  
**X** = Standard  
(For ceramic package)

### OPERATING TEMPERATURE

**A** = 0 to +70°C  
**B** = -20 to +70°C  
**C** = -30 to +85°C  
**D** = -40 to +85°C  
**E** = -55 to +125°C  
**S** = Special

### ESTABLISHED SUFFIX LIST

**B** = Bulk  
**G** = Gull Wing  
**R** = Tape & Reel  
**S** = Special  
**X** = Open

\*\* Custom Frequencies Available upon Request

Package	Case Options	Frequency	Poles	Pass band	(dB)	Stopband	Ripple	Insertion Loss	Spurious	Ultimate Attenuation	Impedance $\Omega$ (Ohms)	Temp. Range	Spec File
S3	A	10.000	6	$\pm 1.0$	3	$\pm 6.0$	1.0	3.0	-50	-50	50	D	
S2	A	10.700	2	$\pm 7.5$	3	$\pm 28.0$	0.5	2.0	-15	-40	3000	C	
S2	C	21.375	4	$\pm 12.5$	3	$\pm 25.0$	1.0	2.0	-30	-75	1600//2.0pf	D	
S2	A	21.400	2	$\pm 7.50$	3	$\pm 25.0$	0.5	1.5	-15	-50	2600	C	
S2	A	21.400	2	$\pm 3.75$	3	$\pm 18.0$	0.5	2.0	-10	-40	850	A	
S2	B	21.400	4	$\pm 10.0$	3	$\pm 24.0$	1.0	4.0	-70	-70	2500/0.0pf	D	
S2	A	21.400	2	$\pm 15.0$	3	$\pm 50.0$	1.0	2.0	-10	-35	1500//0.0pf	D	
S2	C	21.425	4	$\pm 12.5$	3	$\pm 40.0$	1.0	2.0	-30	-75	1600//2.0pf	D	
S1	A	21.671	6	$\pm 10.0$	3	$\pm 25.0$	1.0	4.5	-65	-65	50	B	
S5	A	34.000	4	$\pm 15.0$	3	$\pm 35.0$	2.0	3.0	-35	-80	2200//0.5pf	D	
S2	A	44.850	4	$\pm 7.50$	3	$\pm 25.0$	1.0	3.0	-20	-70	650//3.0pf	D	
S2	A	45.000	2	$\pm 6.00$	3	$\pm 25.0$	1.0	5.0	-50	-40	670//5.0pf	B	
S2	C	45.000	4	$\pm 10.0$	3	$\pm 25.0$	1.0	3.0	-25	-80	800//1.5pf	S	
S2	C	55.000	4	$\pm 10.0$	3	$\pm 40.0$	1.0	4.0	-40	-40	550//1.5pf	S	
S2	B	64.455	4	$\pm 7.5$	3	$\pm 50$	2.0	6.0	-30	-75	375//4.5pf	C	
S2	C	70.000	4	$\pm 15.0$	3	$\pm 80.0$	1.0	4.0	-40	-75	600//1.0pf	D	
SP	A	70.000	4	$\pm 15.0$	3	$\pm 85.0$	1.0	4.0	-30	-60	50	D	
S2	B	73.400	4	$\pm 12.5$	3	$\pm 25.0$	1.0	6.0	-10	-40	930//1.0pf	C	
S2	B	90.000	4	$\pm 25.0$	3	$\pm 50.0$	1.0	5.0	-40	-70	770//0.7pf	D	
S1	A	90.000	4	$\pm 10.0$	3	$\pm 60.0$	1.0	4.5	-10	-60	50//0pf	B	
S2	A	115.000	2	$\pm 45.0$	3	$\pm 200.0$	0.5	3.0	-15	-30	750//1.5pf	S	
S1	A	124.800	4	$\pm 35.0$	3	$\pm 60.0$	0.5	3.5	-50	-60	50//0pf	S	
S2	A	156.525	2	$\pm 10.0$	3	$\pm 50.0$	1.0	5.0	-50	-70	120//0.8pf	C	

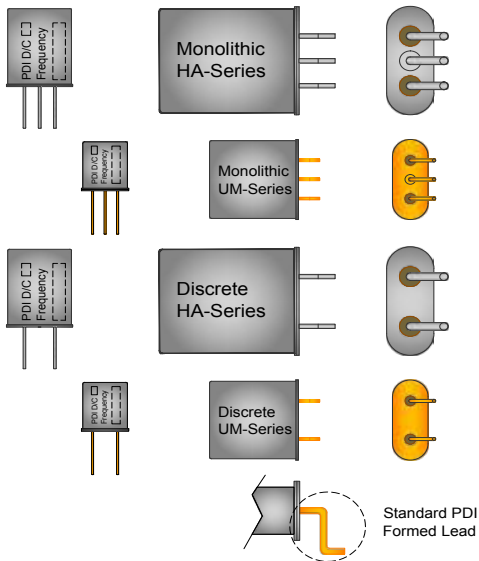
## PDI Gullwinged and Ceramic Outline Drawings



### Features:

Surface Mount Ceramic Packages  
(Includes 4-Pole in one ceramic package,  
Suitable for Pick and Place Applications)  
All HA and UM Packages available to be  
made into Surface Mount.

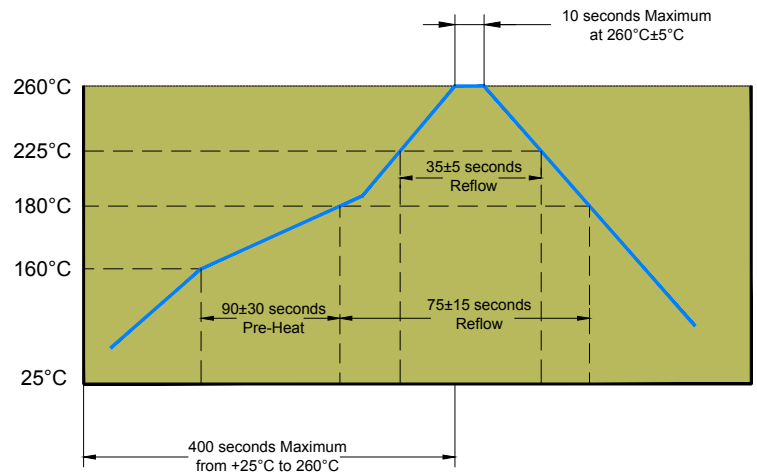
HA and UM Leaded Surface Mount Crystal Filters  
(Clips available upon request)



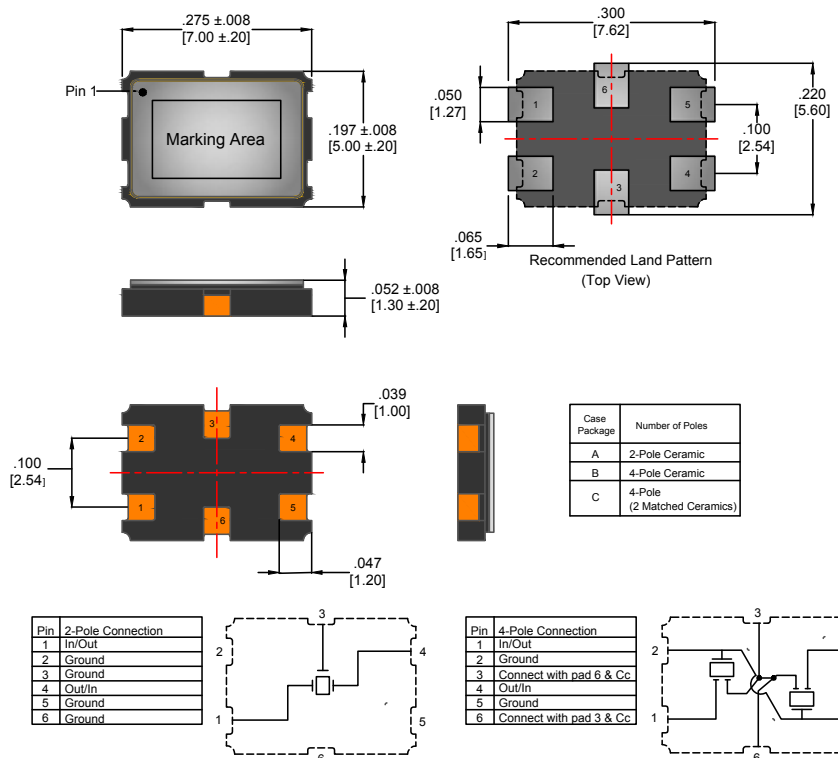
### Features:

Tape and Reel Available  
RoHS Compliance and Pb (Lead) are available  
Custom Designs Available

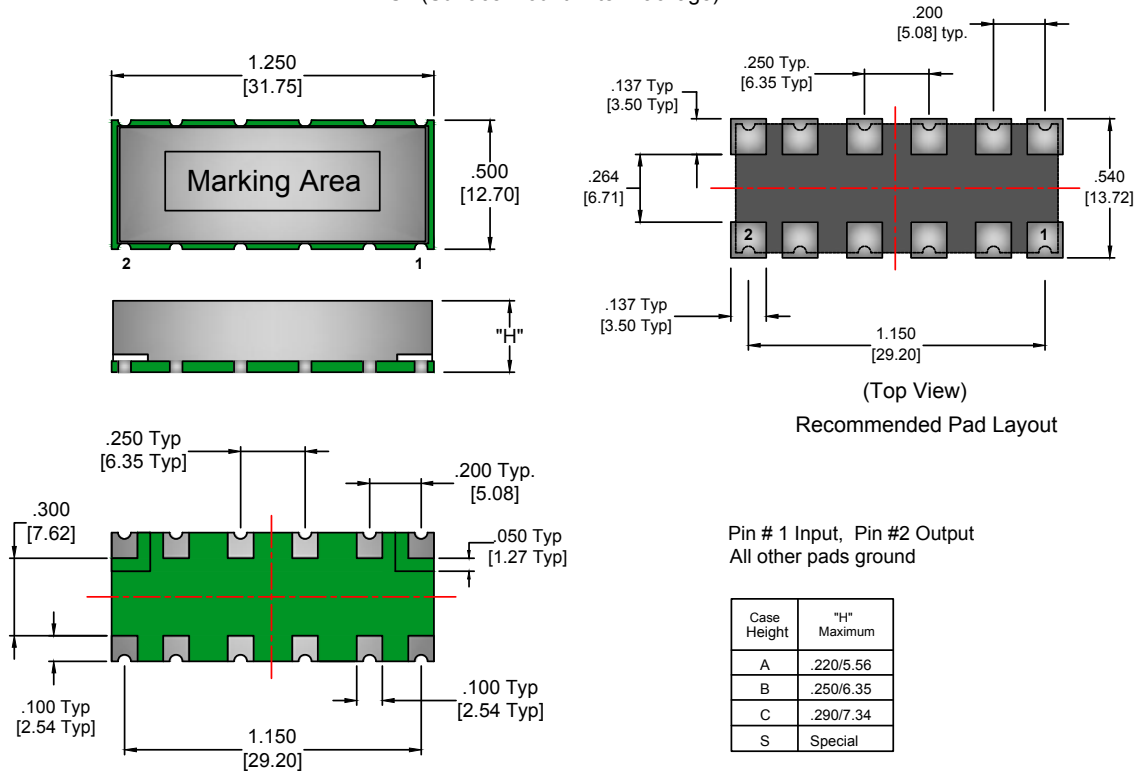
### Solder Reflow Profile:



S2 (Surface Mount Filter Package)



S1 (Surface Mount Filter Package)



S3 (Surface Mount Filter Package)

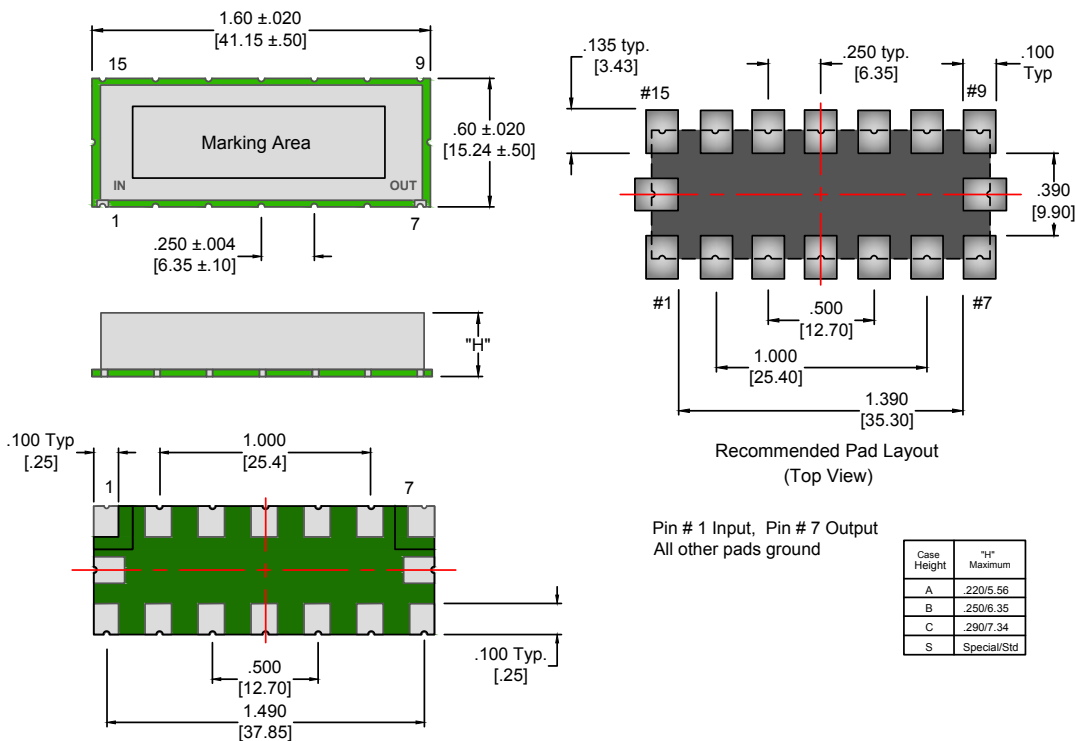


Figure 1: PCB layout dimensions for the 100-pin connector. The figure includes three views: a top view of the connector area, a side view of the connector area, and a top view of the recommended pad layout.

**Top View of Connector Area:**

- Overall width: 1.60 ±.020 [41.15 ±.50]
- Overall height: 9
- Inner width: 15
- Inner height: 7
- Marking Area: IN, OUT
- Dimension: .550 ±.020 [13.97 ±.50]
- Dimension: .250 ±.004 [6.35 ±.10]

**Side View of Connector Area:**

- Dimension: .310 Max. [7.87 Max.]

**Top View of Recommended Pad Layout (Top View):**

- Overall width: 1.000 [25.4]
- Overall height: 1.490 [37.85]
- Pin # 1 Input, Pin # 7 Output
- All other pads ground
- Dimension: .100 Typ. [2.54]
- Dimension: .500 [12.70]
- Dimension: 1.390 [35.30]
- Dimension: 1.000 [25.40]
- Dimension: .500 [12.70]
- Dimension: .340 [8.64]
- Dimension: .135 typ. [3.43]
- Dimension: .250 typ. [6.35]
- Dimension: .100 Typ
- Pin # 15, Pin # 9, Pin # 1, Pin # 7

[illegible]