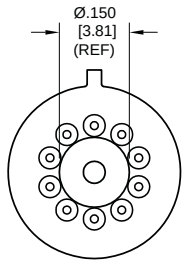
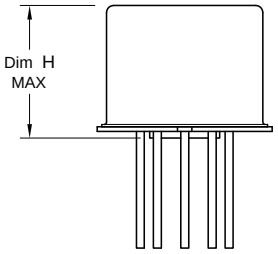
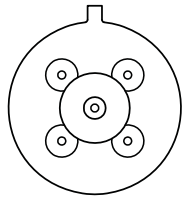
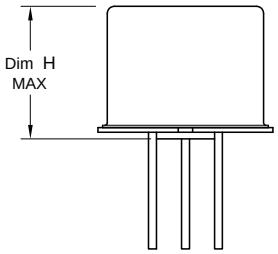
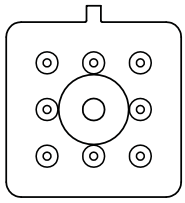
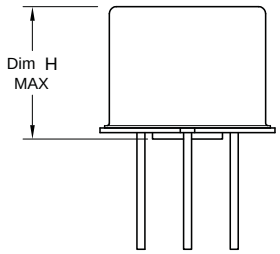
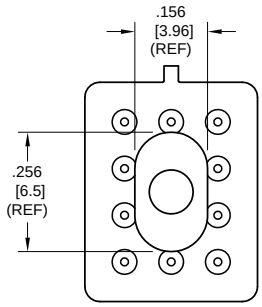
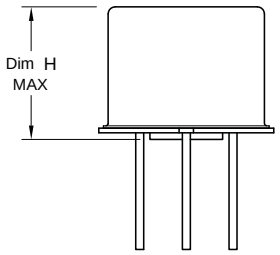
# Appendix A: Spacer Pads

| Pad designation and bottom view dimensions | Height | For use with the following: | Dim. H Max. |
|---|---|---|---|
|  "M4" Pad for TO-5 |  | ER411T<br>ER412, ER412D, ER412DD | .295 (7.49) |
| | | 712, 712D, 712TN,<br>RF300, RF310, RF320 | .300 (7.62) |
| | | ER420, ER422D, ER420DD, 421,<br>ER421D, ER421DD, ER422, ER422D,<br>ER422DD, 722, 722D, RF341 | .305 (7.75) |
| | | ER431T, ER432T,<br>ER432, ER432D, ER432DD | .400 (10.16) |
| | | 732, 732D, 732TN, RF303, RF313,<br>RF323 | .410 (10.41) |
| | | RF312 | .350 (8.89) |
|  "M4" Pad for TO-5 |  | ER411, ER411D, ER411DD | .295 (7.49) |
| | | ER431, ER431D, ER431DD | .400 (10.16) |
| | | RF311 | .300 (7.62) |
| | | RF331 | .410 (10.41) |
|  "M4" Pad for Centigrid® |  | 172, 172D | .305 (7.75) |
| | | ER114, ER114D, ER114DD,<br>J114, J114D, J114DD | .300 (7.62) |
| | | ER134, ER134D, ER134DD,<br>J134, J134D, J134DD | .400 (10.16) |
| | | RF100 | .315 (8.00) |
| | | RF103 | .420 (10.67) |
|  "M9" Pad for Centigrid® |  | 122C, A152 | .320 (8.13) |
| | | ER116C, J116C | .300 (7.62) |
| | | ER136C, J136C | .400 (10.16) |
| | | RF180 | .325 (8.25) |
| | | A150 | .305 (7.75) |

Notes:

1. Spacer pad material: Polyester film.
2. To specify an "M4" or "M9" spacer pad, refer to the mounting variants portion of the part numbering example in the applicable datasheet.
3. Dimensions are in inches (mm).
4. Unless otherwise specified, tolerance is ± .010 (.25).
5. Add 10 mΩ to the contact resistance show in the datasheet.
6. Add 0.01 oz. (0.25 g) to the weight of the relay assembly shown in the datasheet.

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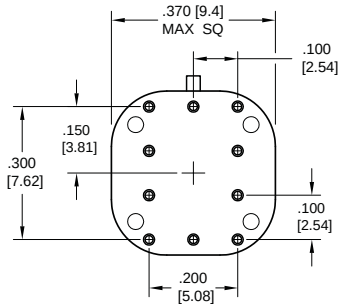
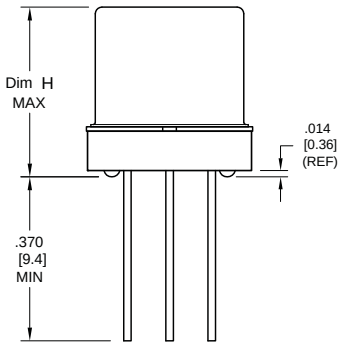
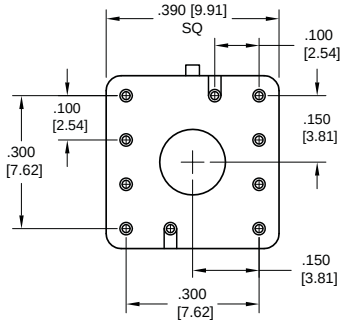
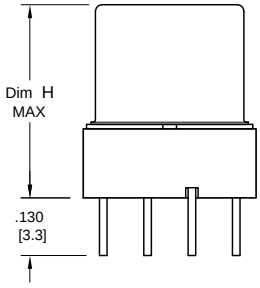
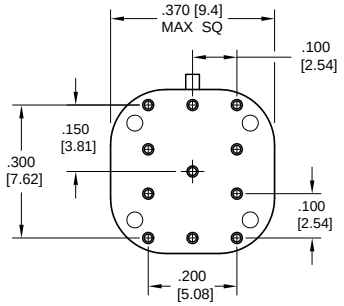
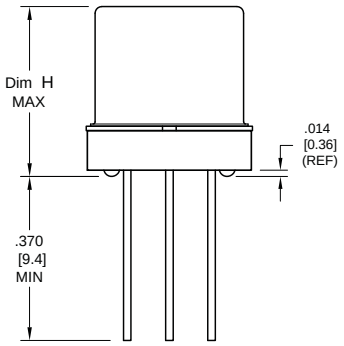
# Appendix A: Spreader Pads

| Pad designation and bottom view dimensions | Height | For use with the following: | Dim. H Max. |
|---|---|---|---|
|  "M" Pad 5/ 6/ |  | ER411T, J411T, ER412, ER412D<br>ER412DD, J412, J412D, J412DD<br>ER412T, J412T | .388 (9.86) |
| | | 712, 712D, 712TN | .393 (9.99) |
| | | ER431T, J431T, ER432, ER432D<br>ER432DD, J432, J432D, J432DD<br>ER432T, J432T | .493 (12.52) |
| | | 732, 732D, 732TN | .503 (12.78) |
| | | ER420, J420, ER420D, J420D<br>ER420DD, J420DD, ER421, J421<br>ER421D, J421D, ER421DD<br>J422D, ER422DD, J422DD, 722 | .398 (10.11) |
|  "M2" Pad 7/ 8/ |  | ER411T<br>ER412, ER412D, ER412DD<br>J412, J412D, J412DD | .441 (11.20) |
| | | 712, 712D | .451 (11.46) |
| | | ER421, ER421D, ER421DD<br>722, 732D | .451 (11.46) |
| | | ER431T<br>ER432, ER432D, ER432DD | .546 (13.87) |
| | | 732, 732D | .556 (14.12) |
|  "M3" Pad 5/ 6/ 9/ |  | ER411, ER411D, ER411DD<br>ER411TX<br>ER412X, ER412DX, ER412DDX<br>ER412TX | .388 (9.86) |
| | | 712X, 712DX, 712TNX | .393 (9.99) |
| | | ER420X, ER420DX, ER420DDX<br>ER421X, ER421DX, ER421DDX<br>ER422X, ER422DX<br>ER422DDX, 722X, 722DDX | .398 (10.11) |
| | | ER431, ER431D, ER431DD<br>ER431TX<br>ER432X, ER432DX, ER432DDX<br>ER432TX | .493 (12.52) |
| | | 732X, 732DX, 732TNX | .503 (12.78) |

Notes:

1. Spreader pad material: Diallyl Phthalate.
2. To specify an "M", "M2" or "M3" spreader pad, refer to the mounting variants portion of the part number example in the applicable datasheet.
3. Dimensions are in inches (mm).
4. Unless otherwise specified, tolerance is ± .010" (0.25).

5/. Add 25 mΩ to the contact resistance shown in the datasheet.
6/. Add .01 oz. (0.25 g) to the weight of the relay assembly shown in the datasheet.
7/. Add 50 mΩ to the contact resistance shown in the datasheet.
8/. Add 0.025 oz (0.71 g) to the weight of the relay assembly shown in the datasheet.
9/. M3 pad to be used only when the relay has a center pin (e.g. ER411M3-12A, 722XM3-26.)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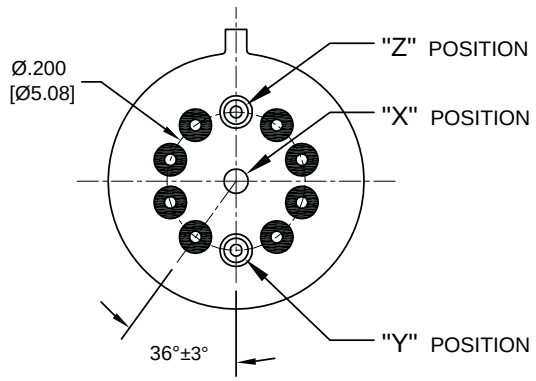
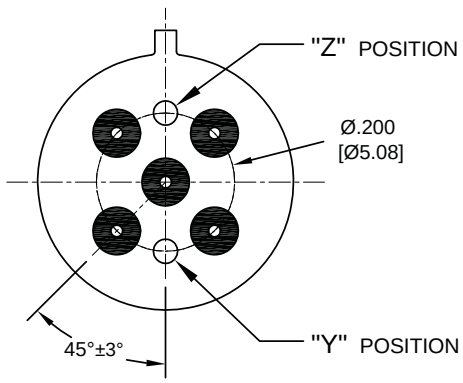
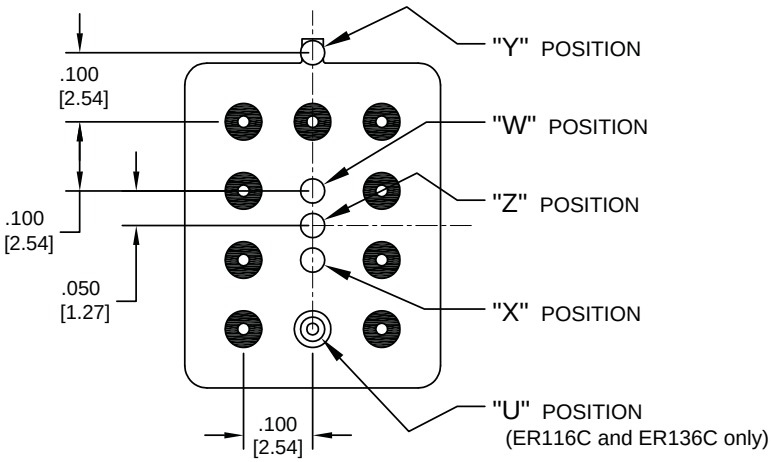
# Appendix A: Ground Pin Positions



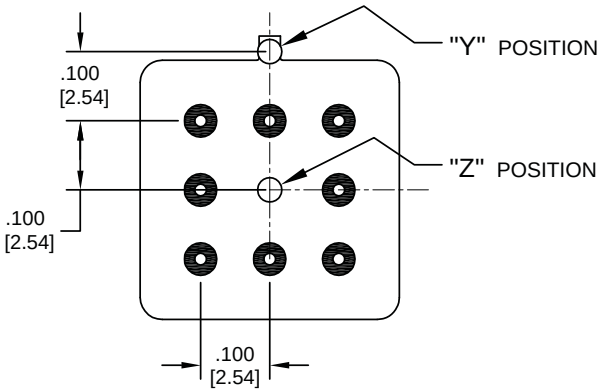

**TO-5 Relays:**
ER411T, ER412, ER412T, ER420, ER421, ER422, ER431T, ER432, ER432T, 712, 712TN, 400H, 400K, 400V, RF300, RF303, RF341, RF312, RF310, RF313, RF320, RF323




**TO-5 Relays:**
ER411, ER431, RF311, RF331




**Centigrid® Relays:**
RF180, ER116C, 122C, ER136C




**Centigrid® Relays:**
RF100, RF103, ER114, ER134, 172

○ Indicates ground pin position

● Indicates glass insulated lead position

◎ Indicates ground pin or lead position depending on relay type

**NOTES**
1. Terminal views shown
2. Dimensions are in inches (mm)
3. Tolerances: ± .010 (±.25) unless otherwise specified
4. Ground pin positions are within .015 (0.38) dia. of true position
5. Ground pin head dia., 0.035 (0.89) ref: height 0.010 (0.25) ref.
6. Lead dia. 0.017 (0.43) nom.

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