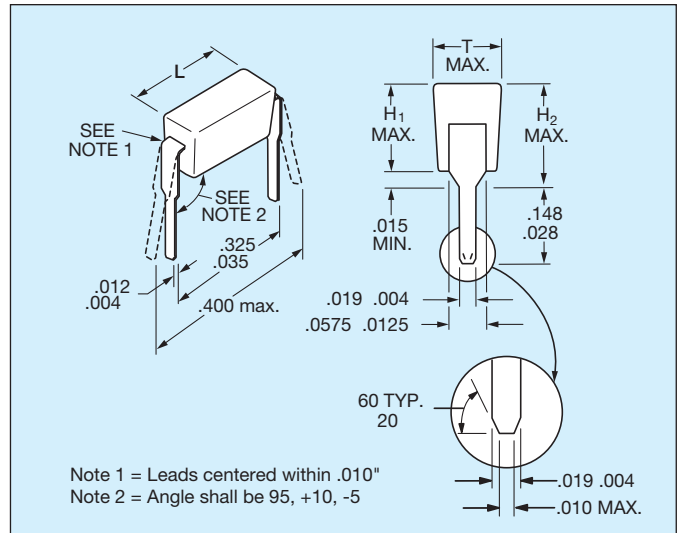


GENERAL INFORMATION

AVX MD Series

Temperature Coefficients: C0G (NP0), X7R, Z5U, 50, 100 Volts

For established reliability DIPGuards see MIL-PRF-39014 section on pages 61 to 66.

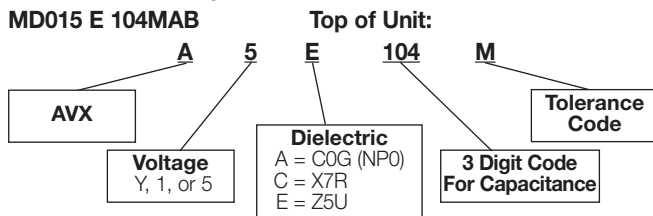


HOW TO ORDER

| | | | | | | | |
|--|---------------------|-------------------------------------|--|--|---|--------------------------------------|--|
| MD01 | 5 | E | 104 | M | A | B | |
| AVX Style | Voltage | Temperature Coefficient | Capacitance | Capacitance Tolerance | Failure Rate | Assembly Method | |
| MD01 CKR22* CKS22** MD02 CKR23* CKS23* MD03 CKR24* CKS24** | 5 = 50V 1 = 100V | A = C0G (NP0) C = X7R E = Z5U | First two digits are the significant figures of capacitance. Third digit indicates the additional number of zeros. For example, order 100,000 pF as 104. | C0G (NP0): F = ±1% J = ±5% K = ±10% | X7R: J = ±5% K = ±10% M = ±20% | Z5U: M = ±20% Z = +80% -20% | A = Hand Assembled B = Automated Assembly |
| * Reference pages 59 to 64. ** Reference page 80. | | | | | Not RoHS Compliant | | |

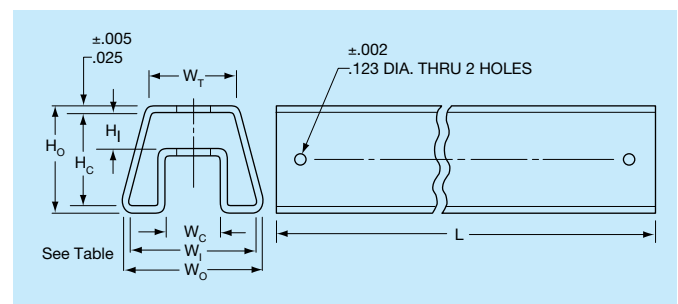
MARKING

Part Number Example



PACKAGING REQUIREMENTS

Standard Packaging: MD01/MD02: 200 pieces per slide pack.
MD03: 200 pieces per vial.



Slide Package Dimensions

| | MD01 | MD02 | MD03* |
|----------------------------------|--------------|--------------|--------------|
| (H ₀) Overall Height | .400 ref. | .430 ref. | .545 ref. |
| (H ₂) Channel Height | .141 ± .006 | .171 ± .006 | .295 ± .010 |
| (H ₁) Inside Height | .350 | .380 | .495 |
| (W ₀) Overall Width | .540 ref. | .540 ref. | .600 ref. |
| (W ₁) Inside Width | .490 | .490 | .550 |
| (W ₂) Channel Width | .210 | .210 | .170 |
| (W ₃) Top Width | .350 | .310 | .300 |
| (L) Length | 20.073 ± .06 | 20.073 ± .06 | 20.073 ± .06 |

*Optional

SIZE SPECIFICATIONS

Dimensions: Millimeters (Inches)

| AVX Style | Length (L) | Height (H ₁) | Height (H ₂) | Thickness |
|-----------|-----------------------|--------------------------|--------------------------|---------------------|
| MD01 | 6.60 (.260 ± .020) | 3.43 (.135 max.) | 4.45 (.175 max.) | 2.54 (.098 max.) |
| MD02 | 6.60 (.260 ± .020) | 4.19 (.162 max.) | 5.08 (.195 max.) | 2.54 (.098 max.) |
| MD03 | 6.60 (.260 ± .020) | 7.37 (.290 max.) | 8.13 (.320 max.) | 2.54 (.098 max.) |

MILITARY CROSS REFERENCE GUIDE

Note: For CKR22/23/24, see MIL-PRF-39014 section in the Military Section pages 59 thru 64.
For CKS22/23/24 see MIL-PRF-123 section in the Military Section page 80.

Dimensions: Millimeters (Inches)

| AVX Style | MIL-PRF-39014 | MIL-PRF-123 | Length (L) | Height (H ₁) | Height (H ₂) | Thickness |
|-----------|---------------|-------------|-----------------------|--------------------------|--------------------------|-----------------------|
| MD01 | CKR22 | CKS22 | 6.60 (.260 ± .020) | 3.43 (.135 max.) | 4.45 (.175 max.) | 2.54 (.092 ± .006) |
| MD02 | CKR23 | CKS23 | 6.60 (.260 ± .020) | 4.19 (.162 max.) | 5.08 (.195 max.) | 2.54 (.092 ± .006) |
| MD03 | CKR24 | CKS24 | 6.60 (.260 ± .020) | 7.37 (.290 max.) | 8.13 (.320 max.) | 2.54 (.092 ± .006) |

CAPACITANCE SPECIFICATIONS

C0G (NP0)

| EIA Characteristic | | C0G (NP0) | |
|--------------------|--------------|-----------|----|
| AVX Style | | MD01 | |
| Cap. in pF* | | WVDC | |
| | | 100 | 50 |
| 10 | MD015A100KAB | | |
| 15 | MD015A150KAB | | |
| 22 | MD015A220KAB | | |
| 33 | MD015A330KAB | | |
| 47 | MD015A470KAB | | |
| 68 | MD015A680KAB | | |
| 100 | MD015A101KAB | | |
| 150 | MD015A151KAB | | |
| 220 | MD015A221KAB | | |
| 330 | MD015A331KAB | | |
| 470 | MD015A471KAB | | |
| 680 | MD015A681KAB | | |
| 1000 | MD015A102KAB | | |
| 1500 | MD015A152KAB | | |
| 2200 | MD015A222KAB | | |
| 3300 | MD015A332KAB | | |
| AVX Style | | MD02 | |
| Cap. in pF* | | WVDC | |
| | | 100 | 50 |
| 4700 | MD025A472KAB | | |
| 6800 | MD025A682KAB | | |
| 10000 | MD025A103KAB | | |

For other voltages and tolerances see Part No. Codes.

X7R

| EIA Characteristic | | X7R | |
|--------------------|--------------|------|----|
| AVX Style | | MD01 | |
| Cap. in pF* | | WVDC | |
| | | 100 | 50 |
| 220 | MD015C221KAB | | |
| 330 | MD015C331KAB | | |
| 470 | MD015C471KAB | | |
| 680 | MD015C681KAB | | |
| 1000 | MD015C102KAB | | |
| 1500 | MD015C152KAB | | |
| 2200 | MD015C222KAB | | |
| 3300 | MD015C332KAB | | |
| 4700 | MD015C472KAB | | |
| 6800 | MD015C682KAB | | |
| 10,000 | MD011C103KAB | | |
| 15,000 | MD015C153KAB | | |
| 22,000 | MD015C223KAB | | |
| 33,000 | MD015C333KAB | | |
| 47,000 | MD015C473KAB | | |
| 68,000 | MD015C683KAB | | |
| 100,000 | MD015C104KAB | | |
| AVX Style | | MD02 | |
| Cap. in pF* | | WVDC | |
| | | 100 | 50 |
| 150,000 | MD025C154KAB | | |
| 220,000 | MD025C224KAB | | |
| AVX Style | | MD03 | |
| Cap. in pF* | | WVDC | |
| | | 100 | 50 |
| 330,000 | MD035C334KAA | | |
| 470,000 | MD035C474KAA | | |
| 680,000 | MD035C684KAA | | |
| 1,000,000 | MD035C105KAA | | |
| 1,500,000 | MD035C155KAA | | |
| 2,000,000 | MD035C205KAA | | |

For other voltages and tolerances see Part No. Codes.

Z5U

| EIA Characteristic | | Z5U | |
|--------------------|--------------|------|----|
| AVX Style | | MD01 | |
| Cap. in pF* | | WVDC | |
| | | 100 | 50 |
| 10,000 | MD015E103ZAB | | |
| 15,000 | MD015E153ZAB | | |
| 22,000 | MD015E223ZAB | | |
| 33,000 | MD015E333ZAB | | |
| 47,000 | MD015E473ZAB | | |
| 68,000 | MD015E683ZAB | | |
| 100,000 | MD015E104ZAB | | |
| 150,000 | MD015E154ZAB | | |
| 220,000 | MD015E224ZAB | | |
| 330,000 | MD015E334ZAB | | |
| AVX Style | | MD02 | |
| Cap. in pF* | | WVDC | |
| | | 100 | 50 |
| 470,000 | MD025E474ZAB | | |
| AVX Style | | MD03 | |
| Cap. in pF* | | WVDC | |
| | | 100 | 50 |
| 680,000 | MD035E684ZAA | | |
| 1,000,000 | MD035E105ZAA | | |

For other voltages and tolerances see Part No. Codes.

*Other capacitance values available upon special request.

= Industry preferred values

Mouser Electronics

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AVX:

[MD035C334KAA](#) [MD015C332KAB](#) [MD025C224KAB](#) [MD015C152KAB](#) [MD025C154KAB](#) [MD015A101KAB](#)
[MD025A103KAB](#) [MD015A222KAB](#) [MD015A100KAB](#) [MD015C221KAB](#) [MD015C223KAB](#) [MD015E154ZAB](#)
[MD035C474KAA](#) [MD015C472KAB](#) [MD015C471KAB](#) [MD011C103KAB](#) [MD015C103KAB](#) [MD015E224MAB](#)
[MD015E224ZAB](#) [MD015E223MAB](#) [MD015C152MAB](#) [MD035E105MAA](#) [MD015E334ZAB](#) [MD015E333MAB](#)
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[MD025A103FAB](#) [MD015A560KAB](#) [MD015A100JAB](#) [MD015A331JAB](#) [MD011A100KAB](#) [MD011A101JAB](#)
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[MD011C152KAB](#) [MD011C472KAB](#) [MD011C473KAB](#) [MD011C682KAB](#) [MD015A100FAB](#) [MD015A101JAB](#)
[MD015A122JAB](#) [MD015A151JAB](#) [MD015A222JAB](#) [MD015A681JAB](#) [MD015C103MAB](#) [MD015C563KAB](#)
[MD015E223ZAB](#) [MD021C104KAB](#) [MD025G105ZAB](#) [MD015A680JAB](#) [MD015E154MAB](#) [MD011A151JAB](#)
[MD011A151KAB](#) [MD011A180JAB](#) [MD011A180KAB](#) [MD011A181KAB](#) [MD011A201FAB](#) [MD011A220JAB](#)
[MD011A221KAB](#) [MD011A222JAB](#) [MD011A222KAB](#) [MD011A270JAB](#) [MD011A270KAB](#) [MD011A271JAB](#)
[MD011A330JAB](#) [MD011A331JAB](#) [MD011A390JAB](#) [MD011A391JAB](#) [MD011A391KAB](#) [MD011A470JAB](#)
[MD011A470KAB](#) [MD011A471JAB](#) [MD011A560JAB](#) [MD011A561JAB](#) [MD011A680JAB](#) [MD011A681JAB](#)
[MD011A681KAB](#) [MD011A820JAB](#) [MD011A820KAB](#) [MD011A821GAB](#) [MD011A821JAB](#) [MD011A821KAB](#)
[MD011C102JAB](#) [MD011C103MAB](#) [MD011C122KAB](#) [MD011C151KAB](#)