

# TYPE 55P, VF, VK

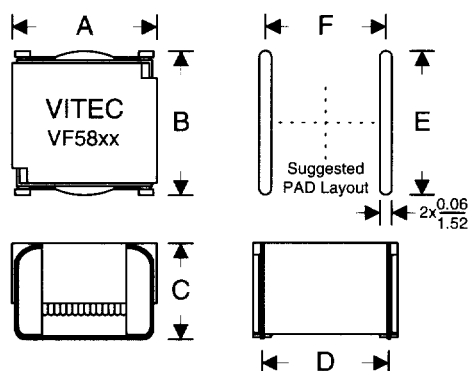
## SURFACE MOUNT AND THROUGH HOLE INDUCTORS

### FEATURES

- Designed for use in National Semiconductor's 150 KHz Simple Switcher.
- Very low cost.
- Operating temperature: -30°C to +130°C.
- Materials meet flammability requirement of UL94V-0.
- Available in surface mount and through hole versions.

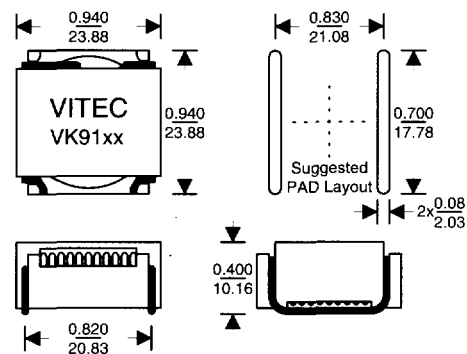


DRAWING A



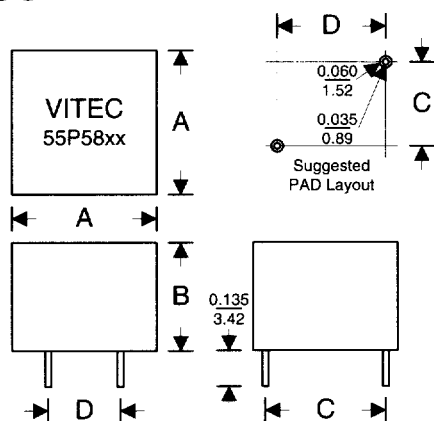
Dimensions Inches/mm +/- 0.01" Unless noted

DRAWING B



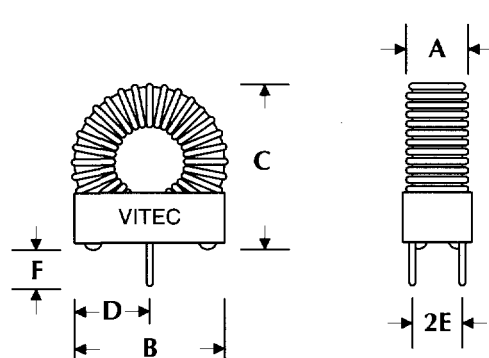
Dimensions Inches/mm +/- 0.01" Unless noted

DRAWING C



Dimensions Inches/mm +/- 0.01" Unless noted

DRAWING D



Dimensions Inches/mm +/- 0.01" Unless noted

Notes: -

### SCHEMATIC



# TYPE 55P, VF, VK

## SURFACE MOUNT AND THROUGH HOLE INDUCTORS

ELECTRICAL CHARACTERISTICS @ +25°C

| Part Number |        | Inductance | Rated Current | ET     | DCR  | Dimension Code |     |
|-------------|--------|------------|---------------|--------|------|----------------|-----|
|             |        | uH         | Amps DC       | V-uSec | Ohm  |                |     |
| THT         | SMD    | NOM        | MIN           | MAX    | NOM  | THT            | SMD |
| 55P5801     | VF5801 | 259        | 0.13          | 23.10  | 3.40 | C1             | A1  |
| 55P5802     | VF5802 | 178        | 0.16          | 16.50  | 2.80 | C1             | A1  |
| 55P5803     | VF5803 | 118        | 0.20          | 13.20  | 1.80 | C1             | A1  |
| 55P5804     | VF5804 | 79         | 0.25          | 9.90   | 1.50 | C1             | A1  |
| 55P5805     | VF5805 | 55         | 0.30          | 6.60   | 1.00 | C1             | A1  |
| 55P5806     | VF5806 | 39         | 0.34          | 6.60   | 0.80 | C1             | A1  |
| 55P5807     | VF5807 | 26         | 0.45          | 6.60   | 0.62 | C1             | A1  |
| 55P5808     | VF5808 | 374        | 0.20          | 75.90  | 2.70 | C2             | A2  |
| 55P5809     | VF5809 | 256        | 0.25          | 33.00  | 2.20 | C2             | A2  |
| 55P5810     | VF5810 | 176        | 0.30          | 26.40  | 1.40 | C2             | A2  |
| 55P5811     | VF5811 | 118        | 0.38          | 19.80  | 1.20 | C2             | A2  |
| 55P5812     | VF5812 | 78         | 0.46          | 16.50  | 0.80 | C2             | A2  |
| 55P5813     | VF5813 | 55         | 0.56          | 13.20  | 0.50 | C2             | A2  |
| 55P5814     | VF5814 | 39         | 0.68          | 9.90   | 0.30 | C2             | A2  |
| 55P5815     | VF5815 | 26         | 0.84          | 6.60   | 0.20 | C2             | A2  |
| 55P5816     | VF5816 | 17         | 1.02          | 6.60   | 0.10 | C2             | A2  |
| 55P5817     | VF5817 | 375        | 0.36          | 75.90  | 1.30 | C3             | A3  |
| 55P5818     | VF5818 | 252        | 0.44          | 49.50  | 0.90 | C3             | A3  |
| 55P5819     | VF5819 | 173        | 0.54          | 36.30  | 0.60 | C3             | A3  |
| 55P5820     | VF5820 | 115        | 0.67          | 29.70  | 0.40 | C3             | A3  |
| 55P5821     | VF5821 | 78         | 0.82          | 23.10  | 0.30 | C3             | A3  |
| 55P5822     | VF5822 | 54         | 1.00          | 16.50  | 0.20 | C3             | A3  |
| 55P5823     | VF5823 | 38         | 1.20          | 13.20  | 0.10 | C3             | A3  |
| 55P5824     | VF5824 | 26         | 1.48          | 9.90   | 0.10 | C3             | A3  |
| 55P5825     | VF5825 | 18         | 1.81          | 9.90   | 0.06 | C3             | A3  |
| 55P5826     | VF5826 | 377        | 0.68          | 75.90  | 1.00 | C4             | A4  |
| 55P5827     | VF5827 | 248        | 0.83          | 72.60  | 0.60 | C4             | A4  |
| 55P5828     | VF5828 | 168        | 1.02          | 56.10  | 0.40 | C4             | A4  |
| 55P5829     | VF5829 | 112        | 1.26          | 42.90  | 0.30 | C4             | A4  |
| 55P5830     | VF5830 | 77         | 1.54          | 33.00  | 0.20 | C4             | A4  |
| 55P5831     | VF5831 | 53         | 1.87          | 26.40  | 0.13 | C4             | A4  |
| 55P5832     | VF5832 | 37         | 2.24          | 19.80  | 0.10 | C4             | A4  |
| 55P5833     | VF5833 | 24         | 2.74          | 16.50  | 0.07 | C4             | A4  |
| 55P9164     | VF9164 | 17         | 3.00          | 13.20  | 0.05 | D1             | B   |
| 55P9165     | VK9165 | 250        | 1.50          | 72.60  | 0.23 | D3             | B   |
| 55P9166     | VK9166 | 168        | 1.81          | 75.90  | 0.18 | D3             | B   |
| 55P9167     | VK9167 | 114        | 2.22          | 62.70  | 0.10 | D3             | B   |
| 55P9168     | VK9168 | 77         | 2.70          | 52.80  | 0.09 | D3             | B   |
| 55P9169     | VK9169 | 53         | 3.00          | 42.90  | 0.08 | D3             | B   |
| 55P9170     | VK9170 | 38         | 3.00          | 29.70  | 0.05 | D3             | B   |
| 55P9171     | VF9171 | 25         | 3.00          | 19.80  | 0.04 | D2             | A5  |
| 55P9172     | N/A    | 167        | 2.50          | 75.90  | 0.14 | D4             | N/A |
| 55P9173     | N/A    | 110        | 3.00          | 75.90  | 0.09 | D4             | N/A |
| 55P9174     | VK9174 | 77         | 3.00          | 59.40  | 0.08 | D3             | B   |

### DIMENSIONS

| Dimensions for drawing A (SMD) |                |                |               |                |                |                | Dimensions for drawing C (THT) |                |               |                |               | Dimensions for drawing D (THT) |                |                |                |                |               |               |
|--------------------------------|----------------|----------------|---------------|----------------|----------------|----------------|--------------------------------|----------------|---------------|----------------|---------------|--------------------------------|----------------|----------------|----------------|----------------|---------------|---------------|
|                                | A              | B              | C             | D              | E              | F              |                                | A              | B             | C              | D             |                                | A              | B              | C              | D              | E             | F             |
| A1                             | 0.340<br>8.64  | 0.340<br>8.64  | 0.270<br>6.86 | 0.260<br>6.60  | 0.300<br>7.62  | 0.270<br>6.86  | C1                             | 0.360<br>9.14  | 0.310<br>7.87 | 0.250<br>6.35  | 0.250<br>6.35 | D1                             | 0.340<br>8.64  | 0.580<br>14.73 | 0.650<br>16.51 | 0.290<br>7.37  | 0.110<br>2.79 | 0.130<br>3.30 |
| A2                             | 0.435<br>11.05 | 0.440<br>11.18 | 0.360<br>9.14 | 0.350<br>8.89  | 0.400<br>10.16 | 0.360<br>9.14  | C2                             | 0.400<br>10.16 | 0.300<br>7.62 | 0.300<br>7.62  | 0.300<br>7.62 | D2                             | 0.450<br>11.43 | 0.650<br>16.51 | 0.700<br>17.73 | 0.325<br>8.26  | 0.150<br>3.81 | 0.130<br>3.30 |
| A3                             | 0.565<br>14.35 | 0.570<br>14.48 | 0.360<br>9.14 | 0.450<br>11.43 | 0.520<br>13.21 | 0.460<br>11.68 | C3                             | 0.495<br>12.57 | 0.375<br>9.52 | 0.375<br>9.52  | 0.375<br>9.52 | D3                             | 0.450<br>11.43 | 0.830<br>21.08 | 0.950<br>24.13 | 0.415<br>10.54 | 0.150<br>3.81 | 0.130<br>3.30 |
| A4                             | 0.600<br>15.24 | 0.620<br>15.75 | 0.390<br>9.91 | 0.500<br>12.70 | 0.550<br>13.97 | 0.510<br>12.95 | C4                             | 0.635<br>16.13 | 0.365<br>9.27 | 0.500<br>12.70 | 0.300<br>7.62 | D4                             | 0.600<br>15.24 | 0.950<br>24.13 | 1.00<br>25.40  | 0.475<br>12.07 | 0.225<br>5.72 | 0.130<br>3.30 |
| A5                             | 0.670<br>17.02 | 0.700<br>17.78 | 0.390<br>9.91 | 0.580<br>14.73 | 0.620<br>15.75 | 0.590<br>14.99 |                                |                |               |                |               |                                |                |                |                |                |               |               |

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