

## FEATURES

- Broad Tuning Range
- High Frequency Operation
- ±10% Standard Tolerance
- Glassivated For High Reliability

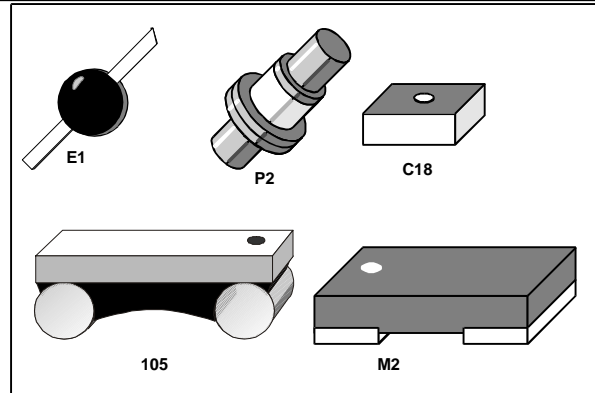
### ENVIRONMENTAL RATINGS

(Maximum)

Operating Temperature.....-65 °C to +175°C

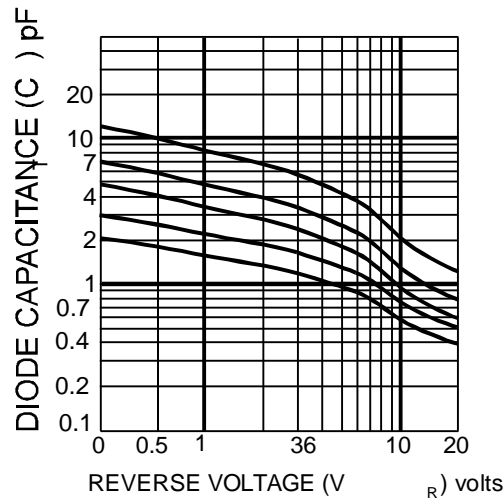
Storage Temperature.....-65 °C to +200°C

Soldering Temperature.....230 °C for 5 seconds



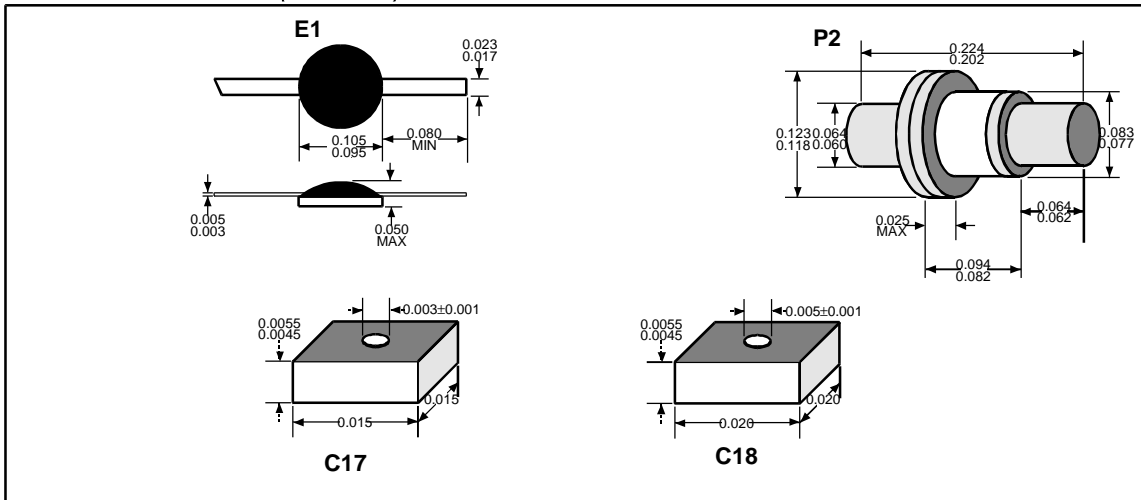
## Electrical Specifications @ 25° C 22 VOLT SILICON SERIES

| PART NUMBER     | CASE STYLE | CT0 (pF)<br>Typical<br>See Note 2 | CT4 (pF)<br>See Note 2 |      | CT20 (pF)<br>See Note 2 |      | Min Q<br>At 50 MHz<br>See Note 1 |
|-----------------|------------|-----------------------------------|------------------------|------|-------------------------|------|----------------------------------|
|                 |            |                                   | MIN                    | MAX  | MIN                     | MAX  |                                  |
| MP 6501         | C17        | 2.0                               | 0.70                   | 0.90 | 0.13                    | 0.25 | 500                              |
| MP 6502         | P2         | 2.2                               | 0.90                   | 1.10 | 0.35                    | 0.45 | 500                              |
| MP 6503         | M2         | 2.1                               | 0.80                   | 1.00 | 0.25                    | 0.35 | 500                              |
| MP 6504         | E1         | 2.1                               | 0.80                   | 1.00 | 0.25                    | 0.35 | 500                              |
| MP 6505         | S1         | 2.2                               | 0.90                   | 1.10 | 0.35                    | 0.45 | 500                              |
| MP 6506         | C17        | 3.2                               | 1.15                   | 1.45 | 0.25                    | 0.35 | 500                              |
| MP 6507         | P2         | 3.4                               | 1.35                   | 1.65 | 0.45                    | 0.55 | 500                              |
| MP 6508         | M2         | 3.3                               | 1.25                   | 1.55 | 0.35                    | 0.45 | 500                              |
| MP 6509         | E1         | 3.3                               | 1.25                   | 1.55 | 0.35                    | 0.45 | 500                              |
| MP 6510         | S1         | 3.4                               | 1.35                   | 1.65 | 0.45                    | 0.55 | 500                              |
| MP 6511         | C17        | 4.7                               | 1.60                   | 2.00 | 0.35                    | 0.50 | 400                              |
| MP 6512         | P2         | 4.9                               | 1.80                   | 2.20 | 0.55                    | 0.70 | 400                              |
| MP 6513         | M2         | 4.8                               | 1.70                   | 2.10 | 0.45                    | 0.60 | 400                              |
| MP 6514         | E1         | 4.8                               | 1.70                   | 2.10 | 0.45                    | 0.60 | 400                              |
| MP 6515         | S1         | 4.9                               | 1.80                   | 2.20 | 0.55                    | 0.70 | 400                              |
| MP 6516         | C17        | 7.0                               | 2.50                   | 3.10 | 0.50                    | 0.70 | 400                              |
| MP 6517         | P2         | 7.2                               | 2.70                   | 3.30 | 0.70                    | 0.90 | 400                              |
| MP 6518         | M2         | 7.1                               | 2.60                   | 3.20 | 0.60                    | 0.80 | 400                              |
| MP 6519         | E1         | 7.1                               | 2.60                   | 3.20 | 0.60                    | 0.80 | 400                              |
| MP 6520         | S1         | 7.2                               | 2.70                   | 3.30 | 0.70                    | 0.90 | 400                              |
| MP 6521         | C18        | 13.8                              | 4.30                   | 5.30 | 0.80                    | 1.10 | 400                              |
| MP 6522         | P2         | 14.0                              | 4.50                   | 5.50 | 1.00                    | 1.30 | 400                              |
| MP 6523         | M2         | 13.9                              | 4.40                   | 5.40 | 0.90                    | 1.20 | 400                              |
| MP 6524         | E1         | 13.9                              | 4.40                   | 5.40 | 0.90                    | 1.20 | 400                              |
| MP 6525         | S1         | 14.0                              | 4.50                   | 5.50 | 1.00                    | 1.30 | 400                              |
| Test Conditions |            | V <sub>R</sub> = 0V               | R = -4V                |      | R = -20V                |      | R = -4V, 50MHz                   |



TYPICAL CV CURVES - P2 PACKAGE

**CASE DIMENSIONS (INCHES)**



**Specifications Notes:**

1. Q is evaluated from the equation  $Q = 10^6 / 2\pi F R_S C_J$  where F is MHz and  $R_S$  = series resistance measured at 1 GHz using transmission loss techniques and  $C_J$  = junction capacitance in pF measured at 1 MHz and 4 volts.
2. Total Capacitance ( $C_T$ ) is the total capacitance of the junction ( $C_J$ ) and the package capacitance ( $C_P$ ).
3. Other capacitance values may be available on request .
4. Case is the heat sink end of each package and is the cathode .
5. Temperature coefficient: 300 ppm/°C at  $V_R = -4$  volts .
6. Standard Tolerance is  $\pm 10\%$ . Other Tolerances Available upon request.