

**Micro Commercial Components** 

### Features

- **High Reliability**
- Low Current Leakage
- Metalurgically Bonded Construction
- Moisture Sensitivity Level 1
- Marking : Cathode band and type number
- Lead Free Finish/Rohs Compliant (Note1) ("P"Suffix designates Compliant. See ordering information)

Rohs

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### **Maximum Ratings**

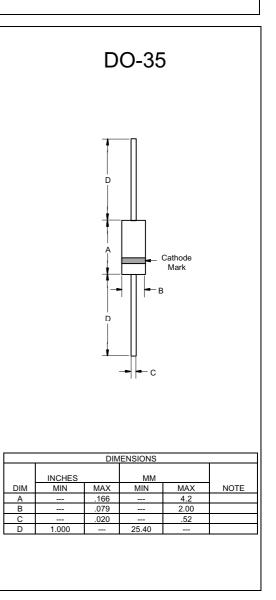
- Operating Temperature: -65℃ to +175℃ •
- Storage Temperature: -65℃ to +175℃
- Maximum Thermal Resistance: 300K/W Junction To Ambient

### Electrical Characteristics @ 25 $^\circ C$ Unless Otherwise Specified

| Reverse Voltage  | $V_{R}$          | 75V                   |   |
|--|------------------|-----------------------|---|
| Breakdown Voltage  | $V_{BR}$         | 100V                  | I <sub>R</sub> =100 μ A   |
| Average Forward<br>Current                                       | Ι <sub>ο</sub>   | 150mA                 |   |
| Power Dissipation  | P <sub>TOT</sub> | 500mW                 |   |
| Junction<br>Temperature  | TJ               | <b>175</b> ℃          |   |
| Peak Forward Surge<br>Current                                    | I <sub>FSM</sub> | 2.0A                  | $t_p = 1.0 \ \mu \ s$   |
| Maximum<br>Instantaneous<br>Forward Voltage                      | V <sub>F</sub>   | 1.0V                  | I <sub>FM</sub> = 10mA  |
| Maximum DC<br>Reverse Current At<br>Rated DC Blocking<br>Voltage | I <sub>R</sub>   | 25nA<br>5.0μA<br>50μA | $V_R$ =20V; $T_J$ = 25 °C<br>$V_R$ =75V; $T_J$ = 25 °C<br>$V_R$ =20V; $T_J$ =150 °C |
| Maximum Junction<br>Capacitance                                  | CJ               | 4.0pF                 | Measured at<br>1.0MHz, V <sub>R</sub> =0V   |
| Maximum Reverse<br>Recovery Time                                 | Trr              | 4.0ns                 | $I_F$ =10mA; $V_R$ = 6V<br>R <sub>L</sub> =100 $\Omega$                             |



## **500mW High Speed Switching Diode 100 Volt**



\*Pulse test: Pulse width 300 µsec, Duty cycle 2%

Note: 1. Lead in Glass Exemption Applied, see EU Directive Annex 7(C)-I.

### 1N4148

Figure 1 Typical Forward Characteristics



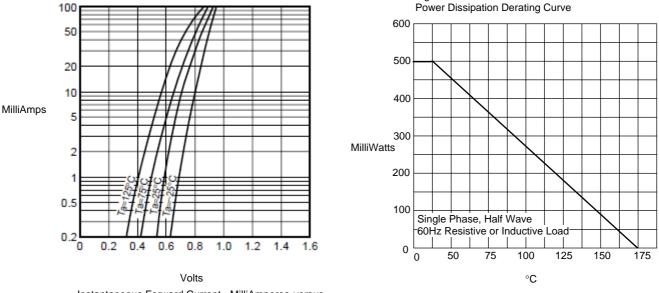
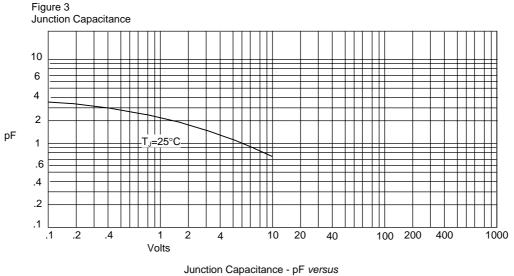


Figure 2

Admissable Power Dissipation - MilliWatts versus Junction Temperature -  $^\circ\mathrm{C}$ 

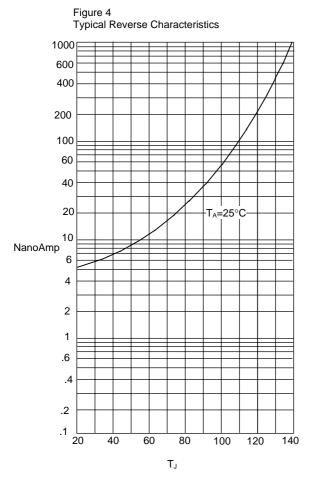


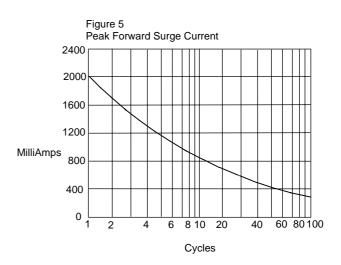
Reverse Voltage - Volts

Instantaneous Forward Current - MilliAmperes versus Instantaneous Forward Voltage - Volts

## 1N4148







Peak Forward Surge Current - Amperes *versus* Number Of Cycles At 60Hz - Cycles

Instantaneous Reverse Leakage Current - NanoAmperes <code>versus</code> Junction Temperature -  $^{\circ}\text{C}$ 



### **Ordering Information :**

| Device         | Packing                      |  |
|----------------|------------------------------|--|
| Part Number-TP | Tape&Reel: 10Kpcs/Reel       |  |
| Part Number-AP | Ammo Packing: 5Kpcs/Ammo Box |  |
| Part Number-BP | Bulk: 100Kpcs/Carton         |  |

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