

## Sensitron Space Diodes: The Sensitron Advantage

Sensitron is a major supplier of discrete diodes to the worldwide hi-reliability market, with over 45 years heritage in diode manufacturing. Sensitron has received JANTXV/JANS qualification per MIL-PRF-19500 on 19 slash sheets, encompassing over 250 JANS part numbers. Sensitron manufactures their standard JANS qualified diodes to our "JANS PLUS" flow, which exceeds the already stringent MIL-PRF-19500 requirements while offering our customers a significant cost savings.



### SPACE HERITAGE

- Sensitron has supplied Axial and MELF diodes to the space market for over 15 years
- Sensitron has shipped over 3 million JANS and JANS-equivalent diodes to space applications
- Sensitron is the *second largest supplier* of Space Level Diodes with the *second largest portfolio* of Space Level Rectifiers, Zener Diodes, Transient Voltage Suppressors, and Switching Diodes in the world
- Sensitron is JANTXV / JANS qualified on *19 individual MIL-PRF-19500* slash sheets, encompassing over 250 JANS part numbers, with more coming every quarter!

### VALUE PROPOSITION

- Sensitron offers the 2nd Largest QPL portfolio of JANS discrete diode semiconductors in the world, and offers highly competitive pricing
- While continuing to add more JAN/JANTX/JANTXV and JANS products, we are now adding at "No Charge" our JANS PLUS Program to all of our JANS product lines
- Additional cost savings for our customer comes from our standard process flow:
  - All parts are Hot Solder Dipped, therefore there is no need to send Sensitron diodes to a third party plating house or to pay a manufacturer for "special plating services"
  - No tags are used to serialize our JANS components, eliminating the need for tag removal and cleaning

*These savings typically translate into a \$3 - \$7.00 price savings per device!*

### JANS PLUS

- MIL-PRF-19500 requires manufacturers to calculate lot norms for specified parameters and remove the atypical units falling outside of statistically normal values
- Sensitron expands the lot norm screening to include the following additional parameters: Rectifiers and Switching Diodes:  $V_f$ , Zener Diodes:  $V_z$
- The JANS Plus program provides the JANS user with additional confidence that atypical devices will not be included in qualified lots and exceed current MIL-PRF-19500 requirements

### About Sensitron:

Sensitron is a leading manufacturer of high reliability power electronic solutions including MIL-PRF-19500 diodes, transient voltage protection components, motor controllers, solid state power management and conversion, and high performance power supply components. Sensitron has over 45 years heritage in serving the complete spectrum of high reliability markets including defense, aerospace, space, and medical. <http://www.sensitron.com>

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### SOLDER DIPPING

- Sensitron's standard lead finish is 63% Sn and 37% Pb for all Axial and MELF devices (Rectifiers, Zener Diodes, Transient Voltage Suppressors, Switching Diodes)
- Solder dipping is part of our standard process- at no cost to you!
- **The Sensitron Advantage:** Hot Solder Dipping is included in the process, therefore there is no risk of voiding the warranties

### SPACE PROGRAM PARTICIPATION

- Following are some of the space programs utilizing Sensitron's diodes:

|                       |                          |                 |                   |
|-----------------------|--------------------------|-----------------|-------------------|
| □ ABS-2               | □ DAWN SATELLITE         | □ NIMIQ         | □ STAR ONE C4     |
| □ AEHF SATELLITE      | □ DIRECTTV SATELLITE     | □ NPOESS        | □ STAR 2.7        |
| □ AIR FORCE PAYLOADS  | □ EUROSTAR 3000          | □ NBNCO - 1A    | □ STAR TRACKER    |
| □ ANIK G1             | □ GALAXY                 | □ OPTUS         | □ STEREO          |
| □ AMAZONAS 3          | □ GLOBALSTAR             | □ ORION         | □ SWARM           |
| □ AMOS 5              | □ GPS 3                  | □ PALAPA-D      | □ SWIFT SATELLITE |
| □ APSTAR 7            | □ HAAS                   | □ P858          | □ TAURUS II       |
| □ ARGON               | □ HERSCHEL PLANCK        | □ SINOSAT       | □ TELSTAR         |
| □ ARIANE 5            | □ HNS JUPITER            | □ SMALL GEO     | □ TERRASAR        |
| □ ASIATAT             | □ HORIZONS               | □ SPACE SHUTTLE | □ THOR            |
| □ ASTRO15             | □ INTELSAT               | □ SATMEX        | □ TITAN           |
| □ ATLANTIC BIRD 7     | □ IRIDIUM NEXT           | □ SENTENIAL     | □ VIASAT          |
| □ ATLAS V URCU & BRCU | □ ISIS                   | □ SPACE TECH 5  |                   |
| □ COMS MODCS          | □ JWST TELESCOPE PROJECT | □ SPACEBUS 4000 |                   |

### BASE PART NUMBERS AVAILABLE TO JANTXV/JANS SCREENING (as indicated):

| 1N Part Numbers |      |        |      |      |      | MELF Type | Slash Sheet | Qual Status | Description                    |
|-----------------|------|--------|------|------|------|-----------|-------------|-------------|--------------------------------|
| 3595-1          |      |        |      |      |      | US        | 241         | JANS        | Vf Controlled Diode            |
| 3611            | 3612 | 3613   | 3614 | 3957 |      | None      | 228         | TXV         | 1A Standard Recovery Rectifier |
| 4099-1          | to   | 4120-1 |      |      |      | UR-1      | 435         | JANS        | 500mW Zener                    |
| 4245            | 4246 | 4247   | 4248 | 4249 |      | None      | 286         | TXV         | 1A Standard Recovery Rectifier |
| 4460            | 4461 | 4467   | to   | 4496 |      | US        | 406         | JANS        | 1.5W Zener                     |
| 4942            | 4944 | 4946   | 4947 | 4948 |      | None      | 359         | TXV         | 1 A Fast Recovery Rectifier    |
| 4958            | to   | 4989   |      |      |      | US        | 356         | JANS        | 5W Zener                       |
| 5186            | 5187 | 5188   | 5190 |      |      | None      | 424         | TXV         | 3A Fast Recovery Rectifier     |
| 5415            | 5416 | 5417   | 5418 | 5419 | 5420 | US        | 411         | JANS        | 3A Fast Recovery Rectifier     |
| 5550            | 5551 | 5552   |      |      |      | US        | 420         | JANS        | 3A Standard Recovery Rectifier |
| 5614            | 5616 | 5618   | 5620 | 5622 |      | US        | 427         | JANS        | 1A Standard Recovery Rectifier |
| 5615            | 5617 | 5619   | 5621 | 5623 |      | US        | 429         | JANS        | 1A Fast Recovery Rectifier     |
| 5802            | 5804 | 5806   |      |      |      | US        | 477         | JANS        | 1A Ultra Fast Rectifier        |
| 5807            | 5809 | 5811   |      |      |      | US        | 477         | JANS        | 3A Ultra Fast Rectifier        |
| 6105A           | to   | 6137A  |      |      |      | US        | 516         | JANS        | 500W Bi-directional TVS        |
| 6324            | to   | 6351   |      |      |      | US        | 533         | JANS        | 500mW Zener                    |
| 6620            | 6621 | 6622   | 6623 | 6624 | 6625 | U or US   | 585         | JANS        | 1A Ultra Fast Rectifier        |
| 6626            | 6627 | 6628   | 6629 | 6630 | 6631 | U or US   | 590         | JANS        | 2A Ultra Fast Rectifier        |
| 6638            | 6642 | 6643   |      |      |      | U & US    | 578         | JANS        | Small Signal Switching         |
| 6639            | 6640 | 6641   |      |      |      | US        | 609         | JANS        | Small Signal Switching         |