The documentation and process conversion measures necessary to comply with this document shall be completed by 12 November 2019.

INCH-POUND

MIL-PRF-19500/742C
12 July 2019
SUPERSEDING
MIL-PRF-19500/742B
16 July 2014

PERFORMANCE SPECIFICATION SHEET

SEMICONDUCTOR DEVICE, DIODE, SILICON, ULTRAFAST RECOVERY, POWER RECTIFIER,
TYPES 1N5802CB, 1N5804CB, 1N5806CB, 1N5807CB, 1N5809CB, AND 1N5811CB,
AXIAL LEADED AND SURFACE MOUNT PACKAGE,
QUALITY LEVELS JAN, JANTX, AND JANTXV

Inactive for new design after 28 September 2009. See 6.6 for supersession data.

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-PRF-19500.

1. SCOPE

1.1 Scope. This specification covers the performance requirements for silicon, fast recovery, power rectifier diodes. Four levels of product assurance (JAN, JANTX, and JANTXV) are provided for each encapsulated device type as specified in MIL-PRF-19500.

1.2 Package outlines. The device package outlines are as follows: An axial leaded package (modified DO-204AM, formerly DO-35) in accordance with figure 1 and square end-cap surface mount (US) in accordance with figure 2.

1.3 Maximum ratings. Unless otherwise specified, $T_A$ = +25°C.

1.3.1 Ratings applicable to all Part or Identifying Numbers (PIN). $T_{STG}$ = $T_{J(max)}$ = −65°C to +175°C.

1.3.2 Ratings applicable to individual types.

| Col. 1 | Col. 2 | Col. 3 | Col. 4 | Col. 5 | Col. 6 | Col. 7 | Col. 8 | Col. 9 |
|---|---|---|---|---|---|---|---|---|
| Types (1) | $V_{RWM}$ | $I_{O(L)}$ $T_L$ = +75°C L = .25 inch (6.35 mm) (2) (3) | $I_{O1}$ $T_A$ = +55°C (4) (5) (6) | $I_{FSM}$ at +25°C operating at $I_{O1}$ $t_p$ = 8.3 ms | $t_{rr}$ | $R_{\theta JL}$ at L = .375 inch (9.52 mm) | $R_{\theta JEC}$ (7) | $R_{\theta JX}$ (6) |
| | | A | A | A(pk) | ns | °C/W | °C/W | °C/W |
| 1N5802CB, CBUS | 50 | 2.5 | 1.0 | 35 | 25 | 36 | 13 | 154 |
| 1N5804CB, CBUS | 100 | 2.5 | 1.0 | 35 | 25 | 36 | 13 | 154 |
| 1N5806CB, CBUS | 150 | 2.5 | 1.0 | 35 | 25 | 36 | 13 | 154 |
| 1N5807CB, CBUS | 50 | 6.0 | 3.0 | 125 | 30 | 22 | 6.5 | 52 |
| 1N5809CB, CBUS | 100 | 6.0 | 3.0 | 125 | 30 | 22 | 6.5 | 52 |
| 1N5811CB, CBUS | 150 | 6.0 | 3.0 | 125 | 30 | 22 | 6.5 | 52 |

See notes on next page.

Comments, suggestions, or questions on this document should be addressed to DLA Land and Maritime, VAC, P.O. Box 3990, Columbus, OH 43218-3990, or emailed to Semiconductor@dla.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at https://assist.dla.mil.

AMSC N/A

FSC 5961