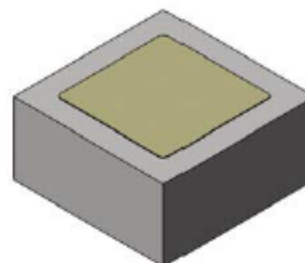


Features

- Available as JANHCE and JANKCE per MIL-PRF-19500/477
- Electrically equivalent to 1N5807, 1N5809 and 1N5811
- Passivated junction
- Compatible with all wire bonding and die attach techniques with the exception of solder reflow



| TYPE | V_R | $V_{BR} @ 100 \mu A$ | I_O $T_J = 75^\circ C$ |
|--------|-------|----------------------|-----------------------------|
| CD5807 | 50 V | 60 V | 6.0 A |
| CD5809 | 100 V | 110 V | 6.0 A |
| CD5811 | 150 V | 160 V | 6.0 A |

Electrical Characteristics:

| CHARACTERISTIC | SYMBOL | MAXIMUM | UNITS |
|--|--------|---------|---------|
| Reverse Current Rated $V_R, T_C = 25^\circ C$ | I_R | 5 | μA |
| Reverse Current Rated $V_R, T_C = 125^\circ C$ | I_R | 525 | μA |
| Forward Voltage Drop, $I_F = 4A, T_C = 25^\circ C$ | V_F | 0.875 | Volts |
| Junction Capacitance @ $V_R = 10V$ | C_j | 60 | pF |

Reverse Recovery Characteristics:

| CHARACTERISTIC | SYMBOL | MAXIMUM | UNITS |
|--|--------------|---------|-------|
| Reverse Recovery Time $I_F = 1A, I_{RM} = 1A, I_{(REC)} = 0.1A$ | T_{rr} | 30 | ns |
| Forward Recovery Voltage @ 500 mA $T_r = 8$ ns | $V_{(Peak)}$ | 2.2 | V |
| Forward Recovery Time, $I_F = 500$ mA | - - - | 15 | ns |

CD5807, CD5809 & CD5811



Rectifier Diode Chips
Ultrafast Recovery

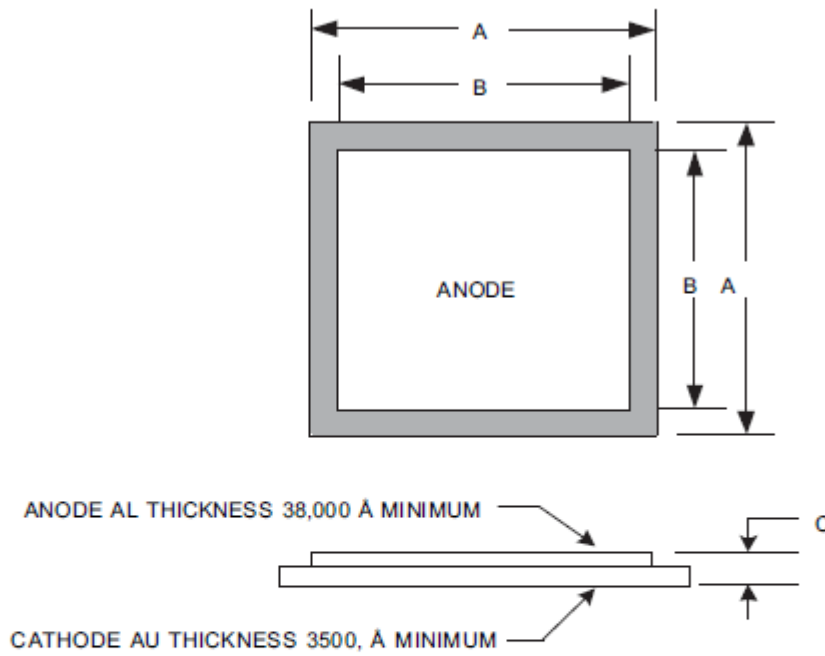
Rev. V1

Group A Electricals:

DRAWING NUMBER: MIL-S-19500/477, NUMBER: JANHCE1N5807/5809/5811, JANKCE1N5807/5809/5811

| SYMBOL | TEST CONDITIONS | MINIMUM | MAXIMUM | UNIT |
|--------------------|--|----------------------------|------------------|-------------|
| V _{FM1} | I _{FM} = 3.0 A, T _p = 8.3 ms (maximum) | | 0.865 | V |
| V _{FM2} | I _{FM} = 4.0 A, T _p = 8.3 ms (maximum) | | 0.875 | V |
| V _{FM3} | I _{FM} = 6.0 A, T _p = 8.3 ms (maximum) | | 0.925 | V |
| I _{R1} | V _R = 50 V (CD5807) V _R = 100 V (CD5809) V _R = 150 V (CD5811) | | 5.0 | μA |
| V _{(BR)1} | I _(BR) = 100 μA, T _p = 20 mS (maximum) | CD5807 CD5809 CD5811 | 60 110 160 | V V V |
| I _{R2} | V _R = 50 V (CD5807) V _R = 100 V (CD5809) V _R = 150 V (CD5811) | T _A = +125 °C | 525 | μA |
| V _{FM4} | I _{FM} = 4.0 A, T _A = +125 °C, T _p = 8.3 mS (maximum) | | 0.830 | V |
| V _{FM5} | I _{FM} = 4.0 A, T _A = -65 °C, T _p = 8.3 mS (maximum) | | 1.075 | V |
| V _{(BR)2} | I _(BR) = 100 μA, T _A = -65 °C, T _p = 20 ms (maximum) | CD5807 CD5809 CD5811 | 50 100 150 | V V V |
| t _{rr} | I _F = I _{FM} = 1.0 A, I _{RM(REC)} = 0.1 A, di/dt = 100 A/us (minimum) | | 30 | nS |
| C _J | V _R = 10 V, f = 1 MHz, V _{sig} = 50 mV (P-P) (maximum) | | 60 | pF |
| V _{FRM} | t _r = 8 nS, I _{FM} = 500 mA | | 2.2 | V |
| t _{fr} | t _p ≥ 20 nS, t _r = 8 nS, V _{FR} = 1.1 x V _F , I _{FM} = 500 mA | | 15 | nS |

Outline Drawing



| Ltr | Dimensions | | | |
|-----|------------|------|-------------|------|
| | Inches | | Millimeters | |
| | Min | Max | Min | Max |
| A | .068 | .072 | 1.73 | 1.83 |
| B | .057 | .061 | 1.45 | 1.55 |
| C | .008 | .012 | 0.20 | 0.30 |

Notes:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.

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