

8514019 SPRAGUE, SEMICONDUCTORS/ICS

93D 03611 D

T-29-25

SMALL-OUTLINE JUNCTION FIELD-EFFECT TRANSISTORS

N-Channel JFETs

ELECTRICAL CHARACTERISTICS at T_A = 25°C

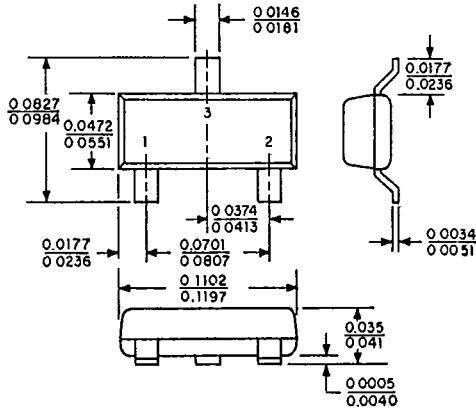
| Device Type | V _{(B)E(SS)} | | I _{GSS} | | V _{GS(on)} | | | | I _{DSS} | | | θ _{IS} | | | C _{ISS} ¹ | | C _{RSS} ¹ | | r _{DS} Max. (Ω) | Process |
|-------------|-----------------------|-----------------------|------------------|-----------------------|---------------------|----------|---------------------|---------------------|------------------|-----------|-----------------------|-----------------|-----------|-----------------------|-------------------------------|-----------------------|-------------------------------|-----------------------|--------------------------|---------|
| | Min. (V) | @ I _G (μA) | Max. (nA) | @ V _{DS} (V) | Limits | | Conditions | | Min. (mA) | Max. (mA) | @ V _{DS} (V) | Min. (mS) | Max. (mS) | @ V _{DS} (V) | Max. (pF) | @ V _{DS} (V) | Max. (pF) | @ V _{DS} (V) | | |
| | | | | | Min. (V) | Max. (V) | V _{DS} (V) | I _D (nA) | | | | | | | | | | | | |
| TMPF5951 | -30 | -1.0 | -1.0 | -15 | -2.0 | -5.0 | 15 | 100 | 7.0 | 13 | 15 | 3.0 | — | 15 | 6.0 | 15 | 2.0 | 15 | — | NJ32 |
| TMPF5952 | -30 | -1.0 | -1.0 | -15 | -1.3 | -3.5 | 15 | 100 | 4.0 | 8.0 | 15 | 1.0 | — | 15 | 6.0 | 15 | 2.0 | 15 | — | NJ32 |
| TMPF5953 | -30 | -1.0 | -1.0 | -15 | -0.8 | -3.0 | 15 | 100 | 2.5 | 5.0 | 15 | 1.0 | — | 15 | 6.0 | 15 | 2.0 | 15 | — | NJ32 |
| TMPF6451 | -20 | -1.0 | -1.0 | -10 | -0.5 | -3.5 | 10 | 1.0 | 5.0 | 20 | 10 | — | — | — | 25 | 10 | 5.0 | 10 | — | NJ132L |
| TMPF6452 | -25 | -1.0 | -1.0 | -15 | -0.5 | -3.5 | 10 | 1.0 | 5.0 | 20 | 10 | — | — | — | 25 | 10 | 5.0 | 10 | — | NJ132L |
| TMPF6453 | -20 | -1.0 | -1.0 | -10 | -0.75 | -5.0 | 10 | 1.0 | 15 | 50 | 10 | — | — | — | 25 | 10 | 5.0 | 10 | — | NJ132L |
| TMPF6454 | -25 | -1.0 | -1.0 | -15 | -0.75 | -5.0 | 10 | 1.0 | 15 | 50 | 10 | — | — | — | 25 | 10 | 5.0 | 10 | — | NJ132L |
| TMPFBC264A | -30 | -1.0 | -10 | -20 | -0.5 | — | 15 | 10 | 2.0 | 4.5 | 15 | 2.5 | — | 15 | 4.0 | 15 | 1.2 | 15 | — | NJ26 |
| TMPFBC264B | -30 | -1.0 | -10 | -20 | -0.5 | — | 15 | 10 | 3.5 | 6.5 | 15 | 3.0 | — | 15 | 4.0 | 15 | 1.2 | 15 | — | NJ26 |
| TMPFBC264C | -30 | -1.0 | -10 | -20 | -0.5 | — | 15 | 10 | 5.0 | 8.0 | 15 | 3.5 | — | 15 | 4.0 | 15 | 1.2 | 15 | — | NJ26 |
| TMPFBC264D | -30 | -1.0 | -10 | -20 | -0.5 | — | 15 | 10 | 7.0 | 12 | 15 | 4.0 | — | 15 | 4.0 | 15 | 1.2 | 15 | — | NJ26 |
| TMPFBF244A | -30 | -1.0 | -5.0 | -20 | -0.5 | -8.0 | 15 | 10 | 2.0 | 6.5 | 15 | 3.0 | 6.5 | 15 | — | — | — | — | — | NJ26 |
| TMPFBF244B | -30 | -1.0 | -5.0 | -20 | -0.5 | -8.0 | 15 | 10 | 6.0 | 15 | 15 | 3.0 | 6.5 | 15 | — | — | — | — | — | NJ26 |
| TMPFBF244C | -30 | -1.0 | -5.0 | -20 | -0.5 | -8.0 | 15 | 10 | 12 | 25 | 15 | 3.0 | 6.5 | 15 | — | — | — | — | — | NJ26 |
| TMPFBF246A | -25 | -1.0 | -5.0 | -15 | -0.6 | -14.5 | 15 | 10 | 30 | 80 | 15 | — | — | — | — | — | — | — | 65 | NJ132 |
| TMPFBF246B | -25 | -1.0 | -5.0 | -15 | -0.6 | -14.5 | 15 | 10 | 60 | 140 | 15 | — | — | — | — | — | — | — | 50 | NJ132 |
| TMPFBF246C | -25 | -1.0 | -5.0 | -15 | -0.6 | -14.5 | 15 | 10 | 110 | 250 | 15 | — | — | — | — | — | — | — | 35 | NJ132 |
| TMPFBF256A | -30 | -1.0 | -5.0 | -20 | -0.5 | -7.5 | 15 | 10 | 3.0 | 7.0 | 15 | 4.5 | — | 15 | 4.5 | 15 | 1.2 | 15 | — | NJ26 |
| TMPFBF256B | -30 | -1.0 | -5.0 | -20 | -0.5 | -7.5 | 15 | 10 | 6.0 | 13 | 15 | 4.5 | — | 15 | 4.5 | 15 | 1.2 | 15 | — | NJ26 |
| TMPFBF256C | -30 | -1.0 | -5.0 | -20 | -0.5 | -7.5 | 15 | 10 | 11 | 18 | 15 | 4.5 | — | 15 | 4.5 | 15 | 1.2 | 15 | — | NJ26 |
| TMPFJ111 | -35 | -1.0 | -1.0 | -15 | -3.0 | -10 | 5.0 | 1.0 | 20 | — | 15 | — | — | — | 16 | 15 | 5 | -10 ³ | 30 | NJ132 |
| TMPFJ111A | -40 | -1.0 | -0.2 | -1.0 | -5.0 | -10 | 5.0 | 1.0 | 30 | — | 15 | — | — | — | 16 | 15 | 5 | -10 ³ | 30 | NJ132 |
| TMPFJ112 | -35 | -1.0 | -1.0 | -15 | -1.0 | -5.0 | 5.0 | 1.0 | 5.0 | — | 15 | — | — | — | 16 | 15 | 5 | -10 ³ | 50 | NJ99 |
| TMPFJ112A | -40 | -1.0 | -0.2 | -1.0 | -2.0 | -7.0 | 5.0 | 1.0 | 15 | — | 15 | — | — | — | 16 | 15 | 5 | -10 ³ | 50 | NJ99 |
| TMPFJ113 | -35 | -1.0 | -1.0 | -15 | — | -3.0 | 5.0 | 1.0 | 2.0 | — | 15 | — | — | — | 16 | 15 | 5 | -10 ³ | 100 | NJ99 |
| TMPFJ113A | -40 | -1.0 | -0.2 | -1.0 | -1.0 | -5.0 | 5.0 | 1.0 | 8.0 | — | 15 | — | — | — | 16 | 15 | 5 | -10 ³ | 80 | NJ99 |
| TMPFJ201 | -40 | -1.0 | -1.0 | -20 | -0.3 | -1.5 | 20 | 10 | 0.2 | 1.0 | 20 | 0.5 | — | 20 | 4.0 | 20 | 1.0 | 20 | — | NJ16 |
| TMPFJ202 | -40 | -1.0 | -1.0 | -20 | -0.8 | -4.0 | 20 | 10 | 0.9 | 4.5 | 20 | 1.0 | — | 20 | 4.0 | 20 | 1.0 | 20 | — | NJ16 |
| TMPFJ203 | -40 | -1.0 | -1.0 | -20 | -2.0 | -10 | 20 | 10 | 4.0 | 20 | 20 | 1.5 | — | 20 | 6.0 | 20 | 1.2 | 20 | — | NJ32 |
| TMPFJ210 | -25 | -1.0 | -1.0 | -15 | -1.0 | -3.0 | 15 | 1.0 | 2.0 | 15 | 15 | 4.0 | 12 | 15 | — | — | — | — | — | NJ26L |
| TMPFJ211 | -25 | -1.0 | -1.0 | -15 | -2.5 | -4.5 | 15 | 1.0 | 7.0 | 20 | 15 | 6.0 | 12 | 15 | — | — | — | — | — | NJ26L |
| TMPFJ212 | -25 | -1.0 | -1.0 | -15 | -4.0 | -6.0 | 15 | 1.0 | 15 | 40 | 15 | 7.0 | 12 | 15 | — | — | — | — | — | NJ26L |
| TMPFJ230 | -40 | -1.0 | -1.0 | -30 | -0.5 | -3.0 | 20 | 12 | 0.7 | 3.0 | 20 | 1.0 | 3.5 | 20 | — | — | — | — | — | NJ16 |
| TMPFJ231 | -40 | -1.0 | -1.0 | -30 | -1.5 | -5.0 | 20 | 12 | 2.0 | 6.0 | 20 | 1.5 | 4.0 | 20 | — | — | — | — | — | NJ16 |
| TMPFJ232 | -40 | -1.0 | -1.0 | -30 | -3.0 | -6.0 | 20 | 12 | 5.0 | 10 | 20 | 2.5 | 5.0 | 20 | — | — | — | — | — | NJ16 |
| TMPFJ300A | -25 | -1.0 | -1.0 | -15 | -1.5 | -3.0 | 10 | 1.0 | 4.0 | 9.0 | 10 | 4.5 | 9.0 | 10 ⁵ | 5.5 | 10 ⁵ | 1.7 | 10 ⁵ | — | NJ26L |
| TMPFJ300B | -25 | -1.0 | -1.0 | -15 | -2.0 | -4.0 | 10 | 1.0 | 7.0 | 15 | 10 | 4.5 | 9.0 | 10 ⁵ | 5.5 | 10 ⁵ | 1.7 | 10 ⁵ | — | NJ26L |
| TMPFJ300C | -25 | -1.0 | -1.0 | -15 | -2.5 | -5.0 | 10 | 1.0 | 12 | 25 | 10 | 4.5 | 9.0 | 10 ⁵ | 5.5 | 10 ⁵ | 1.7 | 10 ⁵ | — | NJ26L |
| TMPFJ304 | -30 | -1.0 | -1.0 | -20 | -2.0 | -6.0 | 15 | 1.0 | 5.0 | 15 | 15 | 4.5 | 7.5 | 15 | — | — | — | — | — | NJ26 |
| TMPFJ305 | -30 | -1.0 | -1.0 | -20 | -0.5 | -3.0 | 15 | 1.0 | 1.0 | 8.0 | 15 | 3.0 | — | 15 | — | — | — | — | — | NJ26 |
| TMPFJ308 | -25 | -1.0 | -1.0 | -15 | -1.0 | -6.5 | 10 | 1.0 | 12 | 60 | 10 | 8.0 | — | 10 ⁴ | 7.5 | -10 ³ | 3.5 | -10 ³ | — | NJ99 |
| TMPFJ309 | -25 | -1.0 | -1.0 | -15 | -1.0 | -4.0 | 10 | 1.0 | 12 | 30 | 10 | 10 | — | 10 ⁴ | 7.5 | -10 ³ | 3.5 | -10 ³ | — | NJ99 |
| TMPFJ310 | -25 | -1.0 | -1.0 | -15 | -2.0 | -6.5 | 10 | 1.0 | 24 | 60 | 10 | 8.0 | — | 10 ⁴ | 7.5 | -10 ³ | 3.5 | -10 ³ | — | NJ99 |
| TMPFU308 | -25 | -1.0 | -1.0 | -15 | -1.0 | -6.0 | 10 | 1.0 | 12 | 60 | 10 | — | — | — | 7.5 | -10 ³ | 3.5 | -10 ³ | — | NJ99 |
| TMPFU309 | -25 | -1.0 | -1.0 | -15 | -1.0 | -4.0 | 10 | 1.0 | 12 | 30 | 10 | — | — | — | 7.5 | -10 ³ | 3.5 | -10 ³ | — | NJ99 |
| TMPFU310 | -25 | -1.0 | -1.0 | -15 | -2.5 | -6.0 | 10 | 1.0 | 24 | 60 | 10 | — | — | — | 7.5 | -10 ³ | 3.5 | -10 ³ | — | NJ99 |
| TMPFU1897 | -40 | -1.0 | -1.0 | -20 | -5.0 | -10 | 20 | 1.0 | 30 | — | 20 | — | — | — | 16 | 20 | 3.5 | 20 | 30 | NJ132 |
| TMPFU1898 | -40 | -1.0 | -1.0 | -20 | -2.0 | -7.0 | 20 | 1.0 | 15 | — | 20 | — | — | — | 16 | 20 | 3.5 | 20 | 50 | NJ132 |
| TMPFU1899 | -40 | -1.0 | -1.0 | -20 | -1.0 | -5.0 | 20 | 1.0 | 8.0 | — | 20 | — | — | — | 16 | 20 | 3.5 | 20 | 80 | NJ132 |

- NOTES:
 1) V_{GS} = 0 V.
 2) I_D in μA.
 3) V_{DS} = 0 V, V_{GS} in volts.
 4) I_D = 10 mA.
 5) I_D = 5.0 μA.

TO-236AB/STYLE CK

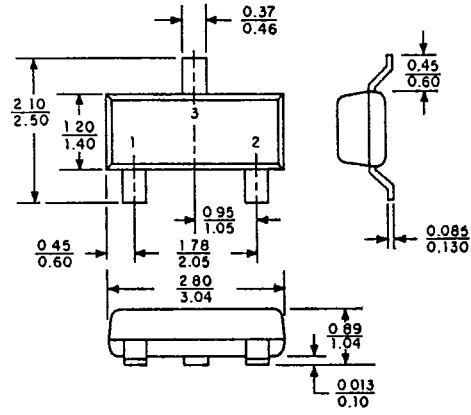
DIMENSIONS IN INCHES

Based on 25.4 mm = 1"



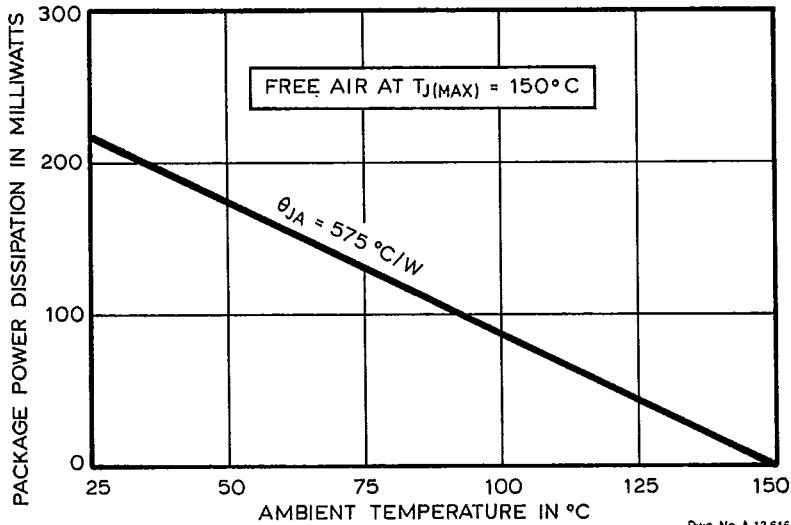
Dwg No. A-12,238B IN

DIMENSIONS IN MILLIMETERS



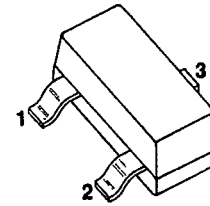
Dwg No A-12,238B MM

MAXIMUM ALLOWABLE PACKAGE POWER DISSIPATION AS A FUNCTION OF AMBIENT TEMPERATURE



Dwg No A-13 616

Die size = 0.635 mm by 0.635 mm (0.025" by 0.025"). Other factors that determine allowable package power dissipation in application include circuit board material, pad size, and proximity of other heat producing circuit elements.



CK PINOUT

| Pin | Terminal |
|-----|----------|
| 1 | Drain |
| 2 | Source |
| 3 | Gate |