

8514019 SPRAGUE. SEMICONDS/ICS

93D 03609DT-29-25

SMALL-OUTLINE JUNCTION FIELD-EFFECT TRANSISTORS

N-Channel JFETs

ELECTRICAL CHARACTERISTICS at $T_A = 25^\circ\text{C}$

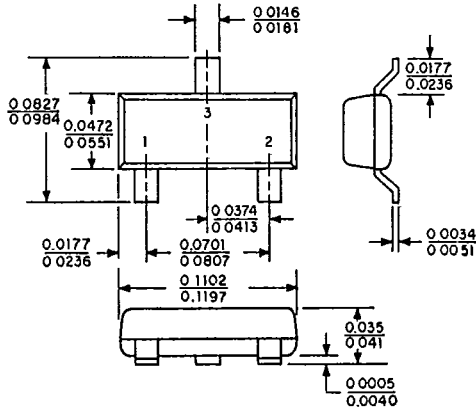
Device Type	V_{BISS}		I_{BISS}		$V_{\text{GS(on)}}$				I_{BISS}			θ_{IS}			C_{ISS}^1		C_{RSS}^1		r_{DS} Max. (Ω)	Process
	Min. (V)	@ I_{G} (μA)	Max. (nA)	@ V_{GS} (V)	Limits		Conditions		Min. (mA)	Max. (mA)	@ V_{DS} (V)	Min. (mS)	Max. (mS)	@ V_{DS} (V)	Max. (pF)	@ V_{DS} (V)	Max. (pF)	@ V_{DS} (V)		
					Min. (V)	Max. (V)	V_{DS} (V)	I_{D} (nA)												
TMPF3369	-40	-1.0	-1.0	-30	-	-6.5	20	1.0 ²	0.5	2.5	30	0.6	2.5	30	20	8.0	3.0	30	-	NJ16
TMPF3370	-40	-1.0	-1.0	-30	-	-3.2	20	1.0 ²	0.1	0.6	30	0.3	2.5	30	20	8.0	3.0	30	-	NJ16
TMPF3458	-50	-1.0	-1.0	-30	-	-7.8	20	1.0 ²	3.0	15	20	2.5	10	20	18	-10 ³	5.0	30	-	NJ32
TMPF3459	-50	-1.0	-1.0	-30	-	-3.4	20	1.0 ²	0.8	4.0	20	1.5	6.0	20	18	-8.0 ³	5.0	30	-	NJ16
TMPF3460	-50	-1.0	-1.0	-30	-	-1.8	20	1.0 ²	0.2	1.0	20	0.8	4.5	20	18	-4.0 ³	5.0	30	-	NJ16
TMPF3819	-25	-1.0	-2.0	-15	-	-8.0	15	2.0	2.0	20	15	2.0	6.5	15	8.0	15	4.0	15	-	NJ32
TMPF3821	-50	-1.0	-1.0	-30	-	-4.0	10	1.0	0.5	2.5	15	1.5	4.5	15	6.0	15	2.0	15	-	NJ16
TMPF3822	-50	-1.0	-1.0	-30	-	-6.0	10	1.0	2.0	10	15	3.0	6.5	15	6.0	15	2.0	15	-	NJ32
TMPF3823	-30	-1.0	-1.0	-20	-	-8.0	10	1.0	4.0	20	15	3.5	6.5	15	6.0	15	2.0	15	-	NJ32
TMPF3824	-50	-1.0	-1.0	-30	-	-8.0	15	0.5	4.0	20	15	3.5	6.5	15	6.0	15	2.0	15	250	NJ32
TMPF3966	-30	-1.0	-1.0	-20	-	-4.0	10	1.0	2.0	20	20	-	-	-	6.0	20	1.5	-7.0 ³	220	NJ32
TMPF3967	-30	-1.0	-1.0	-20	-	-2.0	10	1.0	2.5	10	20	2.5	-	20	5.0	20 ⁶	1.3	20 ⁶	-	NJ26
TMPF3967A	-30	-1.0	-1.0	-20	-	-2.0	10	1.0	2.5	10	20	2.5	-	20	5.0	20 ⁶	1.3	20 ⁶	-	NJ26
TMPF3968	-30	-1.0	-1.0	-20	-	-3.0	20	1.0	1.0	5.0	20	2.0	-	20	5.0	20 ⁷	1.3	20 ⁷	-	NJ26
TMPF3968A	-30	-1.0	-1.0	-20	-	-3.0	20	1.0	1.0	5.0	20	2.0	-	20	5.0	20 ⁷	1.3	20 ⁷	-	NJ26
TMPF3969	-30	-1.0	-1.0	-20	-	-1.7	20	1.0	0.4	2.0	20	1.3	-	20	5.0	20 ⁸	1.3	20 ⁸	-	NJ16
TMPF3969A	-30	-1.0	-1.0	-20	-	-1.7	20	1.0	0.4	2.0	20	1.3	-	20	5.0	20 ⁸	1.3	20 ⁸	-	NJ16
TMPF3970	-40	-1.0	-1.0	-20	-	-4.0	20	1.0	50	150	20	-	-	20	25	20	6.0	-12 ³	30	NJ32
TMPF3971	-40	-1.0	-1.0	-20	-	-2.0	20	1.8	25	75	20	-	-	20	25	20	6.0	-12 ³	60	NJ32
TMPF3972	-40	-1.0	-1.0	-20	-	-0.5	20	1.0	5.0	30	20	-	-	20	25	20	6.0	-12 ³	100	NJ32
TMPF4091	-40	-1.0	-1.0	-20	-	-5.0	20	1.0	30	-	20	-	-	20	16	20	5.0	-20 ³	30	NJ32
TMPF4092	-40	-1.0	-1.0	-20	-	-2.0	20	1.0	15	-	20	-	-	20	16	20	5.0	-20 ³	50	NJ32
TMPF4093	-40	-1.0	-1.0	-20	-	-1.0	20	1.0	8.0	-	20	-	-	20	16	20	5.0	-20 ³	80	NJ32
TMPF4117	-40	-1.0	-0.01	-20	-	-0.6	10	1.0	0.03	0.09	10	0.07	0.21	10	3.0	10	1.5	10	-	NJ01
TMPF4118	-40	-1.0	-0.01	-20	-	-1.0	10	1.0	0.08	0.24	10	0.08	0.25	10	3.0	10	1.5	10	-	NJ01
TMPF4119	-40	-1.0	-0.01	-20	-	-2.0	10	1.0	0.2	0.6	10	0.10	0.33	10	3.0	10	1.5	10	-	NJ01
TMPF4220	-30	-1.0	-1.0	-15	-	-4.0	15	1.0	0.5	3.0	15	1.0	4.0	15	6.0	15	2.0	15	-	NJ16
TMPF4221	-30	-1.0	-1.0	-15	-	-6.0	15	1.0	2.0	6.0	15	2.0	5.0	15	6.0	15	2.0	15	-	NJ32
TMPF4222	-30	-1.0	-1.0	-15	-	-8.0	15	1.0	5.0	15	15	2.5	6.0	15	6.0	15	2.0	15	-	NJ32
TMPF4223	-30	-1.0	-1.0	-20	-	-8.0	15	1.0	3.0	18	15	3.0	7.0	15	6.0	15	2.0	15	-	NJ32
TMPF4224	-30	-1.0	-1.0	-20	-	-8.0	15	1.0	2.0	20	15	2.0	7.5	15	6.0	15	2.0	15	-	NJ32
TMPF4302	-30	-1.0	-1.0	-15	-	-4.0	20	1.0	0.5	5.0	20	1.0	-	20	6.0	20	3.0	20	-	NJ26
TMPF4303	-30	-1.0	-1.0	-15	-	-6.0	20	1.0	4.0	10	20	2.0	-	20	6.0	20	3.0	20	-	NJ26
TMPF4304	-30	-1.0	-1.0	-15	-	-10	20	1.0	0.5	15	20	1.0	-	20	6.0	20	3.0	20	-	NJ26
TMPF4338	-50	-1.0	-1.0	-30	-	-0.3	15	100	0.2	0.6	15	0.6	1.8	15	7.0	15	3.0	15	2500	NJ16
TMPF4339	-50	-1.0	-1.0	-30	-	-0.6	15	100	0.5	1.5	15	0.8	2.4	15	7.0	15	3.0	15	1700	NJ16
TMPF4340	-50	-1.0	-1.0	-30	-	-1.0	15	100	1.2	3.6	15	1.3	3.0	15	7.0	15	3.0	15	1500	NJ16
TMPF4341	-50	-1.0	-1.0	-30	-	-2.0	15	100	3.0	9.0	15	2.0	4.0	15	7.0	15	3.0	15	800	NJ16
TMPF4391	-40	-1.0	-1.0	-20	-	-4.0	20	1.0	50	150	20	-	-	20	16	20	5.0	-12 ³	30	NJ32
TMPF4392	-40	-1.0	-1.0	-20	-	-2.0	20	1.0	25	100	20	-	-	20	16	20	5.0	-7.0 ³	60	NJ32
TMPF4393	-40	-1.0	-1.0	-20	-	-0.5	20	1.0	5.0	30	20	-	-	20	16	20	5.0	-5.0 ³	100	NJ32
TMPF4416	-30	-1.0	-1.0	-20	-	-6.0	15	1.0	5.0	15	15	4.5	7.5	15	4.5	15	1.2	15	-	NJ26
TMPF4416A	-35	-1.0	-1.0	-20	-	-2.5	15	1.0	5.0	15	15	4.5	7.5	15	4.5	15	1.2	15	-	NJ26
TMPF4856	-40	-1.0	-1.0	-20	-	-4.0	15	1.0	50	-	15	-	-	-	18	-10 ³	8.0	-10 ³	25	NJ32
TMPF4856A	-40	-1.0	-1.0	-20	-	-4.0	15	1.0	50	-	15	-	-	-	10	-10 ³	4.0	-10 ³	25	NJ32
TMPF4857	-40	-1.0	-1.0	-20	-	-2.0	15	1.0	20	100	15	-	-	-	18	-10 ³	8.0	-10 ³	40	NJ32
TMPF4857A	-40	-1.0	-1.0	-20	-	-2.0	15	1.0	20	100	15	-	-	-	10	-10 ³	3.5	-10 ³	40	NJ32
TMPF4858	-40	-1.0	-1.0	-20	-	-0.8	15	1.0	8.0	80	15	-	-	-	18	-10 ³	8.0	-10 ³	60	NJ32

- NOTES:
 1) $V_{\text{GS}} = 0\text{ V}$.
 2) I_{D} in μA .
 3) $V_{\text{DS}} = 0\text{ V}$, V_{GS} in volts.
 4) $I_{\text{D}} = 10\ \mu\text{A}$.
 5) $I_{\text{D}} = 5.0\ \mu\text{A}$.
 6) $I_{\text{D}} = 1.0\ \text{mA}$.
 7) $I_{\text{D}} = 500\ \mu\text{A}$.
 8) $I_{\text{D}} = 200\ \mu\text{A}$.

TO-236AB/STYLE CK

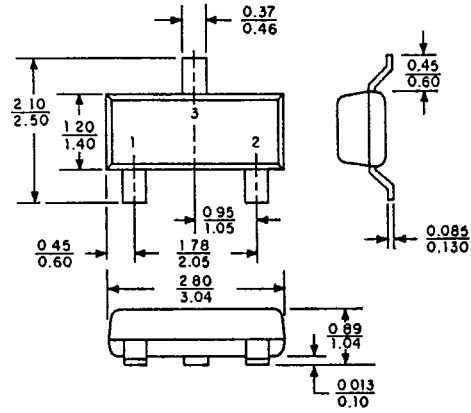
DIMENSIONS IN INCHES

Based on 25.4 mm = 1"



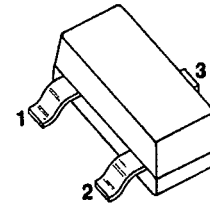
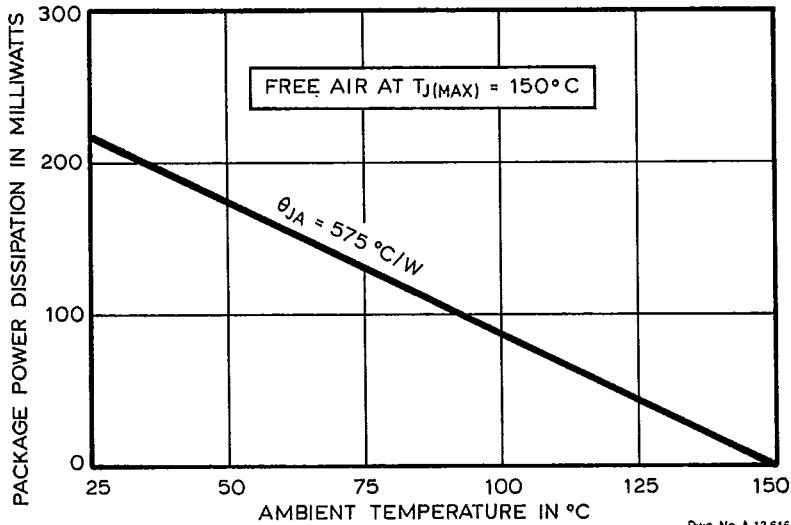
Dwg No. A-12,238B IN

DIMENSIONS IN MILLIMETERS



Dwg No A-12,238B MM

MAXIMUM ALLOWABLE PACKAGE POWER DISSIPATION AS A FUNCTION OF AMBIENT TEMPERATURE



CK PINOUT

Pin	Terminal
1	Drain
2	Source
3	Gate

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.