

8514019 SPRAGUE, SEMICONDUCTORS/ICS

93D 03603 D

T-29-25

PLASTIC-CASE JUNCTION FIELD-EFFECT TRANSISTORS

N-Channel JFETs

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

Device Type	V _{(B)GSS}		I _{GSS}		V _{GS(off)}				I _{DSS}			g _{fs}			C _{iss} ¹		C _{rss} ¹		r _{DS} Max. (Ω)	Process
					Limits		Conditions													
	Min. (V)	@ I _G (μA)	Max. (nA)	@ V _{GS} (V)	Min. (V)	Max. (V)	V _{DS} (V)	I _D (nA)	Min. (mA)	Max. (mA)	@ V _{DS} (V)	Min. (mS)	Max. (mS)	@ V _{DS} (V)	Max. (pF)	@ V _{DS} (V)	Max. (pF)	@ V _{DS} (V)		
MPF110	-20	-10	-100	-10	-0.5	-10	10	10 ²	0.5	20	10	0.5	—	10	—	—	—	—	NJ32	
MPF111	-20	-10	-100	-10	-0.5	-10	10	10 ²	0.5	20	10	0.5	—	10	—	—	—	—	NJ32	
MPF112	-25	-10	-100	-10	-0.5	-10	10	10 ²	1.0	20	10	1.0	7.5	10	—	—	—	—	NJ26	
MPF820	-25	-10	-5.0	15	—	-5.0	10	200 ²	10	—	15	—	—	—	—	—	—	—	NJ26	
TPBC264A	-30	-1.0	-10	-20	-0.5	—	15	10	2.0	4.5	15	2.5	—	15	4.0	15	1.2	15	—	NJ26
TPBC264B	-30	-1.0	-10	-20	-0.5	—	15	10	3.5	6.5	15	3.0	—	15	4.0	15	1.2	15	—	NJ26
TPBC264C	-30	-1.0	-10	-20	-0.5	—	15	10	5.0	8.0	15	3.5	—	15	4.0	15	1.2	15	—	NJ26
TPBC264D	-30	-1.0	-10	-20	-0.5	—	15	10	7.0	12	15	4.0	—	15	4.0	15	1.2	15	—	NJ26
TPJ105	-25	-1.0	-3.0	-15	-4.5	-10	5.0	1.0 ²	500	—	15	—	—	—	50	-10 ³	25	-10 ³	3.0	NJ903
TPJ106	-25	-1.0	-3.0	-15	-2.0	-6.0	5.0	1.0 ²	200	—	15	—	—	—	50	-10 ³	25	-10 ³	6.0	NJ903
TPJ107	-25	-1.0	-3.0	-15	-0.5	-4.5	5.0	1.0 ²	100	—	15	—	—	—	50	-10 ³	25	-10 ³	8.0	NJ903
TPJ108	-25	-1.0	-3.0	-15	-3.0	-10	5.0	1.0 ²	80	—	15	—	—	—	50	-10 ³	25	-10 ³	8.0	NJ903
TPJ109	-25	-1.0	-3.0	-15	-2.0	-6.0	5.0	1.0 ²	40	—	15	—	—	—	50	-10 ³	25	-10 ³	12	NJ903
TPJ110	-25	-1.0	-3.0	-15	-0.5	-4.5	5.0	1.0 ²	10	—	15	—	—	—	50	-10 ³	25	-10 ³	18	NJ903
TPJ308	-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
TPJ309	-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
TPJ310	-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
TPU290	-30	-1.0	-1.0	-15	-4.0	-10	15	3.0	500	—	10	—	—	—	50	-10 ³	25	-10 ³	3.0	NJ903
TPU291	-30	-1.0	-1.0	-15	-1.5	-4.5	15	3.0	200	—	10	—	—	—	50	-10 ³	25	-10 ³	7.0	NJ903
TPU308	-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
TPU309	-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
TPU310	-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
TPU1897	-40	-1.0	-0.4	-20	-5.0	-10	20	1.0	30	—	20	—	—	—	16	20	3.5	20	30	NJ132
TPU1898	-40	-1.0	-0.4	-20	-2.0	-7.0	20	1.0	15	—	20	—	—	—	16	20	3.5	20	50	NJ132
TPU1899	-40	-1.0	-0.4	-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 .
- 6) $I_D = 1.0$ mA.

P-Channel JFETs

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

Device Type	$V_{(B)GSS}$		I_{GSS}		$V_{GS(off)}$				I_{DSS}			g_{fs}			C_{iss}^1		C_{rss}^1		r_{DS} Max. (Ω)	Process
					Limits		Conditions													
	Min. (V)	@ I_G (μA)	Max. (nA)	@ V_{GS} (V)	Min. (V)	Max. (V)	V_{DS} (V)	I_D (nA)	Min. (mA)	Max. (mA)	@ V_{DS} (V)	Min. (mS)	Max. (mS)	@ V_{DS} (V)	Max. (pF)	@ V_{DS} (V)	Max. (pF)	@ V_{DS} (V)		
TP2608	30	1.0	10	5.0	1.0	4.0	-5	-1 ²	-0.9	-4.5	-5	1.0	—	-5.0	17	5.0 ⁴	—	—	—	PJ32
TP2609	30	1.0	10	5.0	1.0	4.0	-5	-1 ²	-2.0	-10	-5	2.5	—	-5.0	30	5.0 ⁴	—	—	—	PJ32
TP3329	20	10	10	10	—	5.0	-15	-10 ²	-1.0	-3.0	-10	—	—	—	20	-10	—	—	—	PJ32
TP3330	20	10	10	10	—	6.0	-15	-10 ²	-2.0	-6.0	-10	—	—	—	20	-10	—	—	—	PJ32
TP3331	20	10	10	10	—	8.0	-15	-10 ²	-5.0	-15	-10	—	—	—	20	-10	—	—	—	PJ32
TP3332	20	10	10	10	—	6.0	-15	-10 ²	-1.0	-6.0	-10	—	—	—	20	-10	—	—	—	PJ32
2N3820	20	10	20	10	—	8.0	-10	-10 ²	-0.3	-15	-10	0.8	5.0	-10	32	-10	16	-10	—	PJ32
TP3993	25	1.0	1.0	15	4.0	9.5	-10	-1 ²	-10	—	-10	6.0	12	-10	16	-10	4.5	10 ³	150	PJ99

NOTES:

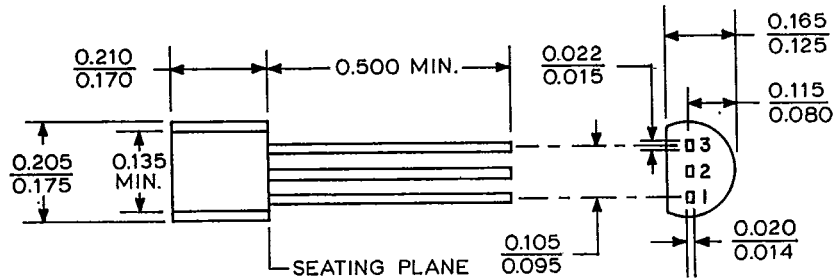
- 1) $V_{GS} = 0$ V.
- 2) I_D in μA .
- 3) $V_{DS} = 0$ V, V_{GS} in volts.
- 4) $V_{GS} = 1.0$ V.

T-91-20

PACKAGE INFORMATION

TO-226AA/STYLES CG AND CO

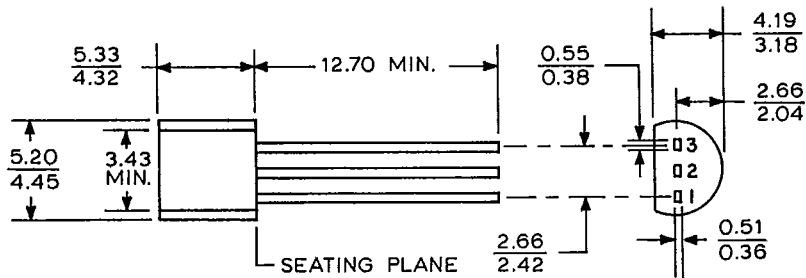
DIMENSIONS IN INCHES



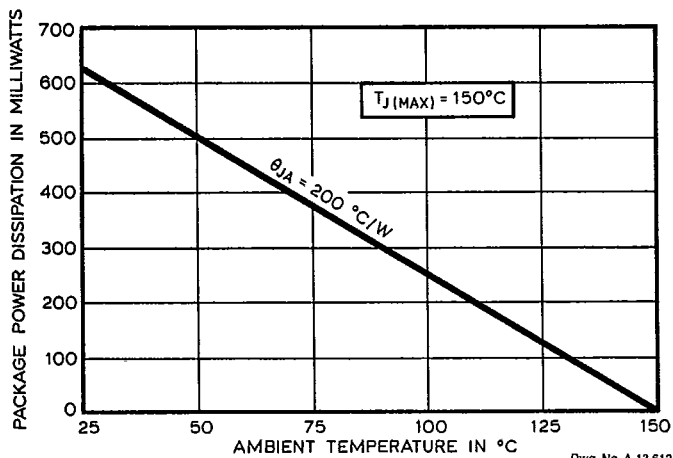
Dwg No A-13.610

DIMENSIONS IN MILLIMETERS

Based on 1" = 25.4 mm



Dwg. No. A-13.611

MAXIMUM ALLOWABLE PACKAGE POWER DISSIPATION
AS A FUNCTION OF AMBIENT TEMPERATURE

Dwg No A-13.612



CG PINOUT

Pin	Terminal
1	Drain
2	Source
3	Gate

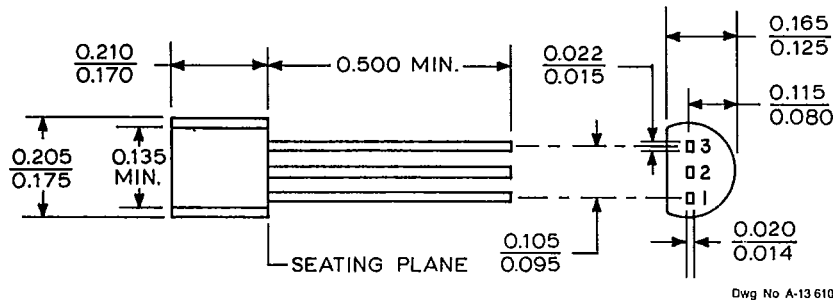
CO PINOUT

Pin	Terminal
1	Source
2	Drain
3	Gate

T-91-20
PACKAGE INFORMATION

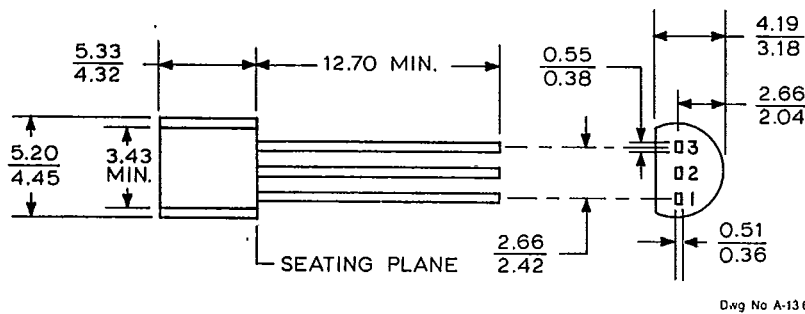
TO-226AA/STYLES CI AND CN

DIMENSIONS IN INCHES

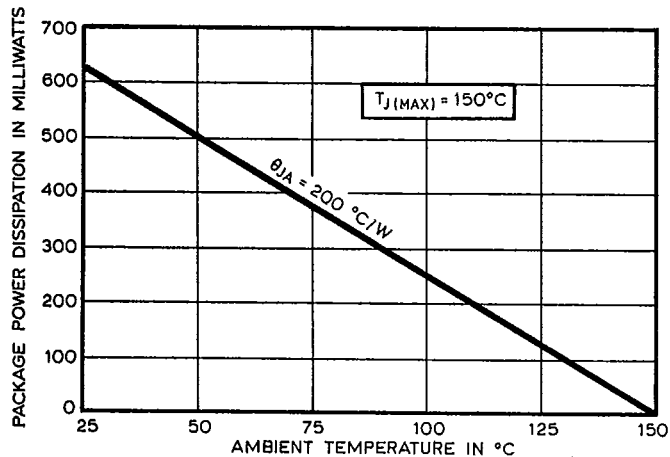


DIMENSIONS IN MILLIMETERS

Based on 1" = 25.4 mm



**MAXIMUM ALLOWABLE PACKAGE POWER DISSIPATION
 AS A FUNCTION OF AMBIENT TEMPERATURE**



CI PINOUT

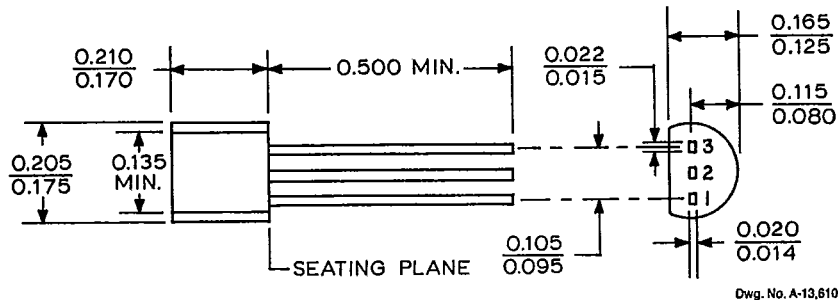
Pin	Terminal
1	Drain
2	Gate
3	Source

CN PINOUT

Pin	Terminal
1	Source
2	Gate
3	Drain

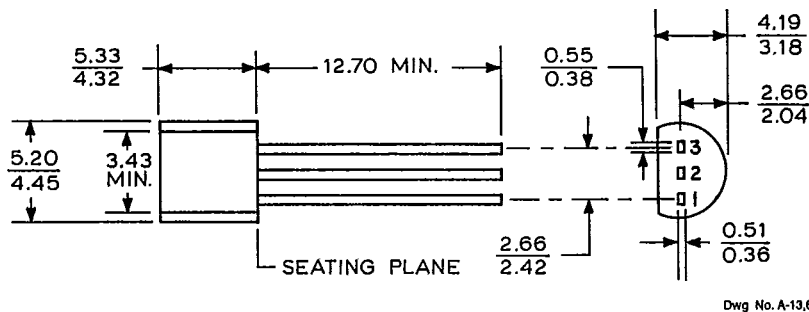
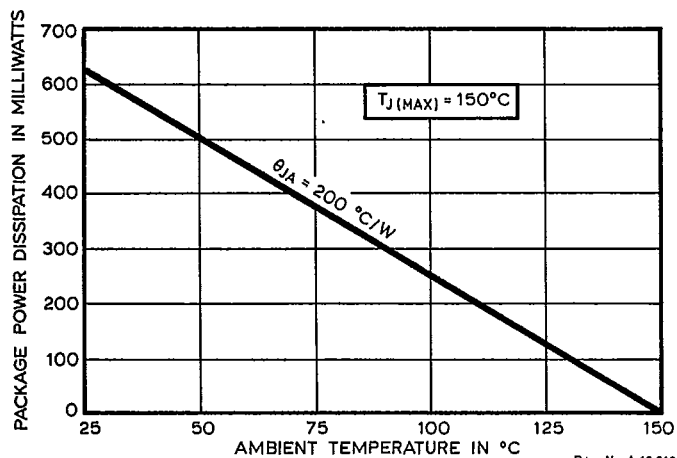
TO-226AA/STYLES CJ AND CY

DIMENSIONS IN INCHES



DIMENSIONS IN MILLIMETERS

Based on 1" = 25.4 mm

MAXIMUM ALLOWABLE PACKAGE POWER DISSIPATION
AS A FUNCTION OF AMBIENT TEMPERATURE

CJ PINOUT

Pin	Terminal
1	Gate
2	Source
3	Drain

CY PINOUT

Pin	Terminal
1	Gate
2	Drain
3	Source