

### High Power GaAs FETs (L, S-Band)

#### Features

- High power
  - $P_{1dB} = 39.5$  dBm at 2.6 GHz
- High gain
  - $G_{1dB} = 8.5$  dB at 2.6 GHz
- Hermetically sealed package

#### RF Performance Specifications ( $T_a = 25^\circ\text{C}$ )

Characteristics	Symbol	Condition	Unit	Min.	Typ.	Max
Output Power at 1dB Compression Point	$P_{1dB}$	$V_{DS} = 10V$ $f = 2.6$ GHz	dBm	38.5	39.5	—
Power Gain at 1dB Compression Point	$G_{1dB}$		dB	7.5	8.5	—
Drain Current	$I_{DS}$		A	—	2.0	2.5
Power Added Efficiency	$N_{add}$		%	—	38	—
Channel-Temperature Rise	$\Delta T_{ch}$	NOTE 1	$^\circ\text{C}$	—	—	80

#### Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

Characteristic	Symbol	Condition	Unit	Min.	Typ.	Max
Trans-conductance	gm	$V_{DS}=3V$ $I_{DS}=1.8$ A	mS	—	1600	—
Pinch-off Voltage	$V_{GSoff}$	$V_{DS}=3V$ $I_{DS}=350$ mA	V	-1.0	-3.0	-4.0
Saturated Drain Current	$I_{DSS}$	$V_{DS}=3V$ $V_{GS}=0V$	A	—	5.0	6.5
Gate to Source Breakdown Voltage	$V_{GSO}$	$I_{GS}=-105$ $\mu$ A	V	-5	—	—
Thermal Resistance	$R_{th(c-c)}$	Channel to case	$^\circ\text{C/W}$	—	3.8	4.8

NOTE 1:  $\Delta T_{ch} = (V_{DS} \times I_{DS} + P_{in} - P_{1dB}) \times R_{th(c-c)}$

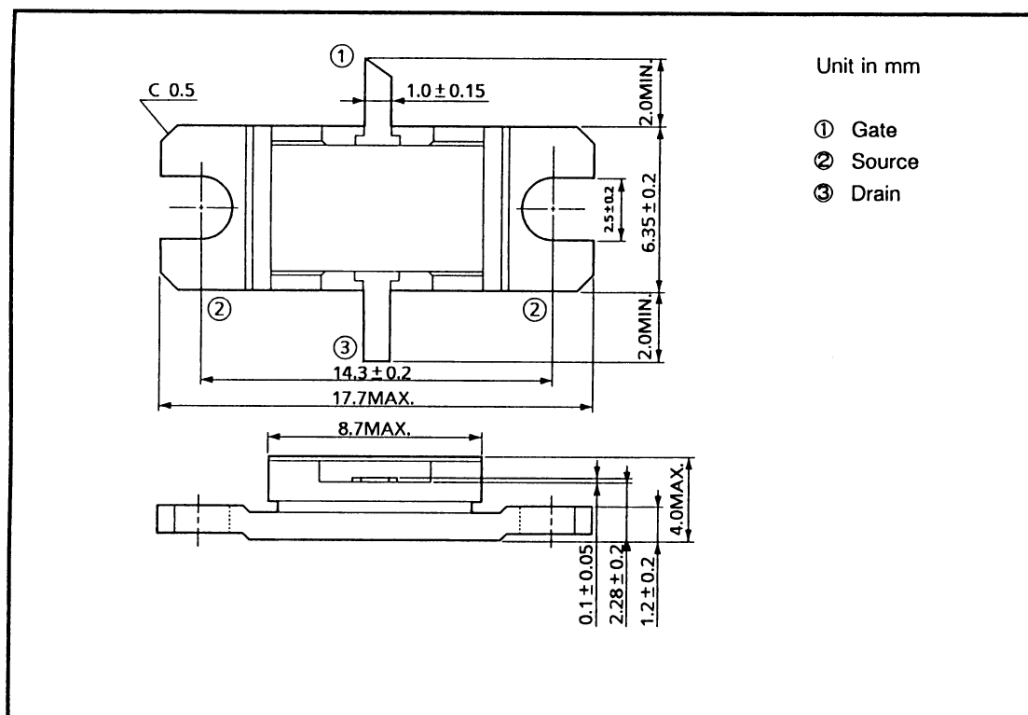
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Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Characteristic	Symbol	Unit	Rating
Drain Source Voltage	$V_{DS}$	V	15
Gate Source Voltage	$V_{GS}$	V	-5
Drain Current	$I_D$	A	6.5
Total Power Dissipation ( $T_c = 25^\circ\text{C}$ )	$P_T$	W	30
Channel Temperature	$T_{ch}$	$^\circ\text{C}$	175
Storage Temperature	$T_{stg}$	$^\circ\text{C}$	-65~175

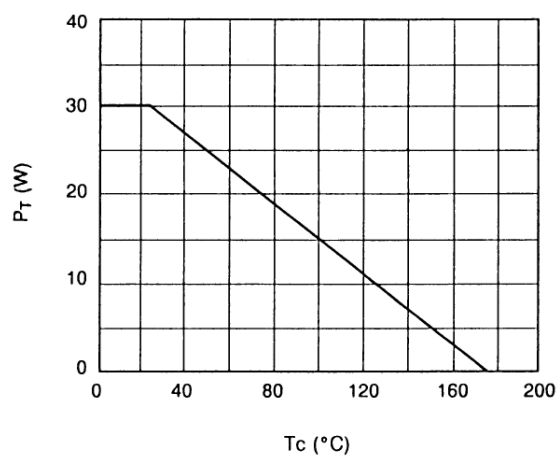
## Package Outline (2-9D2A)



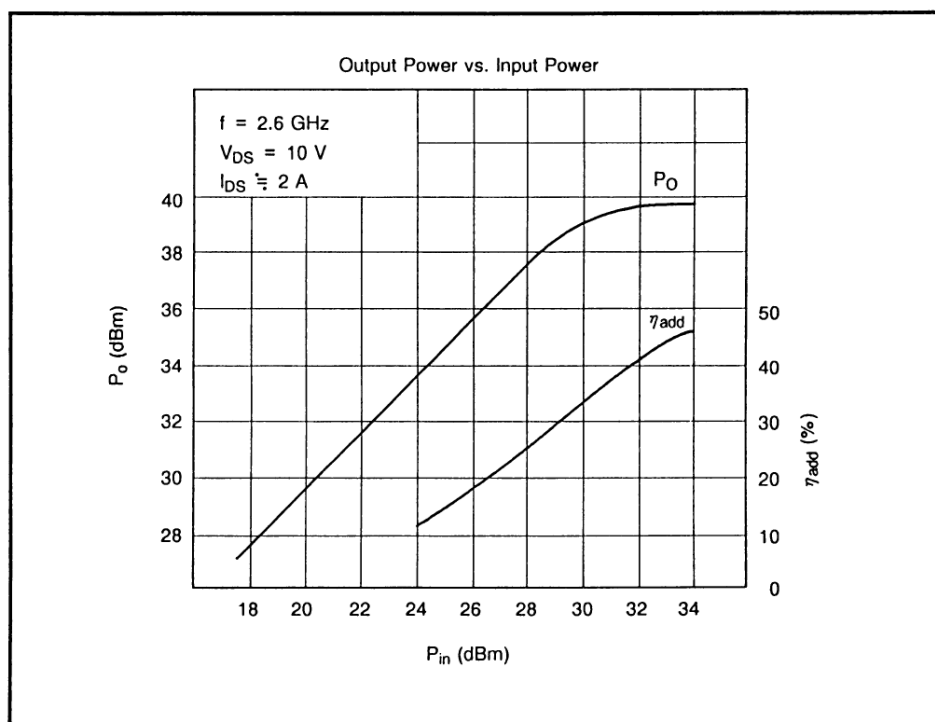
## Handling Precautions for Packaged Type

Soldering iron should be grounded and the operating time should not exceed 10 seconds at  $260^\circ\text{C}$ .

## Power Dissipation vs. Case Temperature

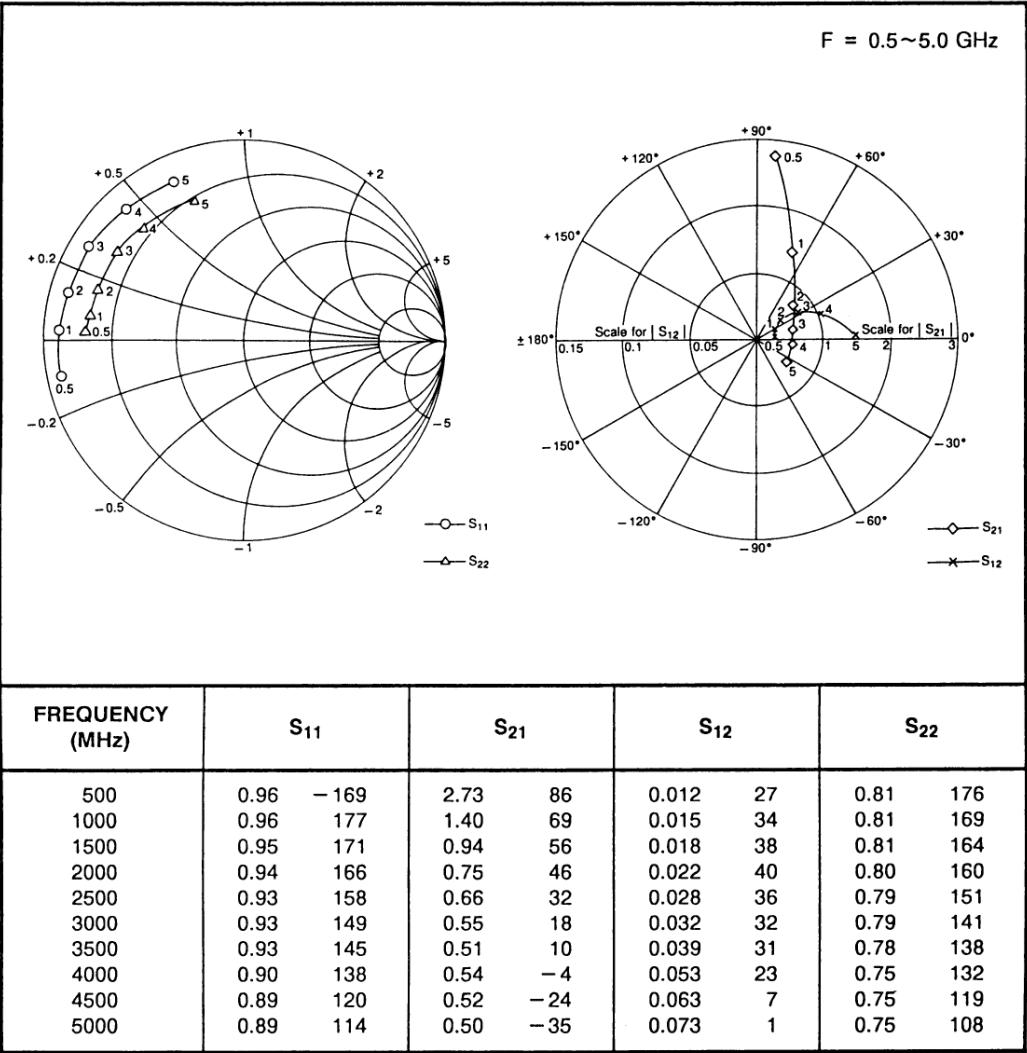


## RF Performances



TNM2600-7 S-Parameters  
(MAGN. and ANGLES)

$V_{DS} = 10\text{ V}$ ,  $I_{DS} = 1.8\text{ A}$



## Drawing of Matching Network for TNM2600-7

