

### FEATURES :

- HIGH POWER  
     $P_{1dB} = 42.0$  dBm at 2.6 GHz
- HIGH GAIN  
     $G_{1dB} = 12.0$  dB at 2.6 GHz
- PARTIALLY MATCHED TYPE
- 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	$P_{1dB}$	$V_{DS} = 10$ V $f = 2.6$ GHz	dBm	41.0	42.0	—
Power Gain at 1dB Compression Point	$G_{1dB}$		dB	11.0	12.0	—
Drain Current	$I_{DS}$		A	—	4.0	5.0
Power Added Efficiency	$\eta_{add}$		%	—	37	—
Channel-Temperature Rise	$\Delta T_{ch}$	NOTE 1	$^\circ\text{C}$	—	—	80

### ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	$V_{DS} = 3$ V $I_{DS} = 3.5$ A	mS	—	3200	—
Pinch-off Voltage	$V_{GSoff}$	$V_{DS} = 3$ V $I_{DS} = 70$ mA	V	-1.0	-3.0	-4.0
Saturated Drain Current	$I_{DSS}$	$V_{DS} = 3$ V $V_{GS} = 0$ V	A	—	10	13
Gate-Source Breakdown Voltage	$V_{GSO}$	$I_{GS} = -210$ $\mu\text{A}$	V	-5	—	—
Thermal Resistance	$R_{th(c-c)}$	Channel to Case	$^\circ\text{C/W}$	—	1.9	2.5

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

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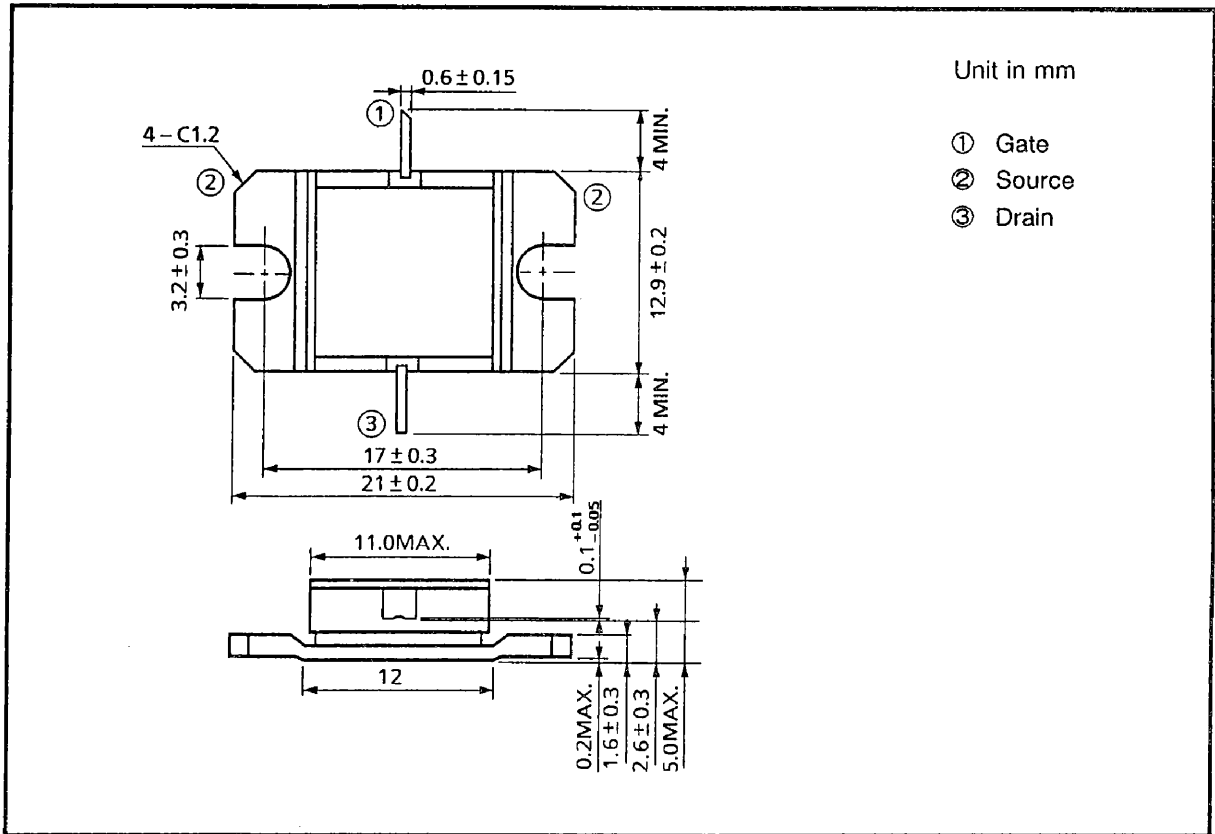


# TPM2626-14

## ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTICS	SYMBOL	UNIT	RATING
Drain-Source Voltage	V <sub>DS</sub>	V	15
Gate-Source Voltage	V <sub>GS</sub>	V	-5
Drain Current	I <sub>DS</sub>	A	13
Total Power Dissipation (T <sub>C</sub> = 25°C)	P <sub>T</sub>	W	60
Channel Temperature	T <sub>ch</sub>	°C	175
Storage Temperature	T <sub>stg</sub>	°C	-65~175

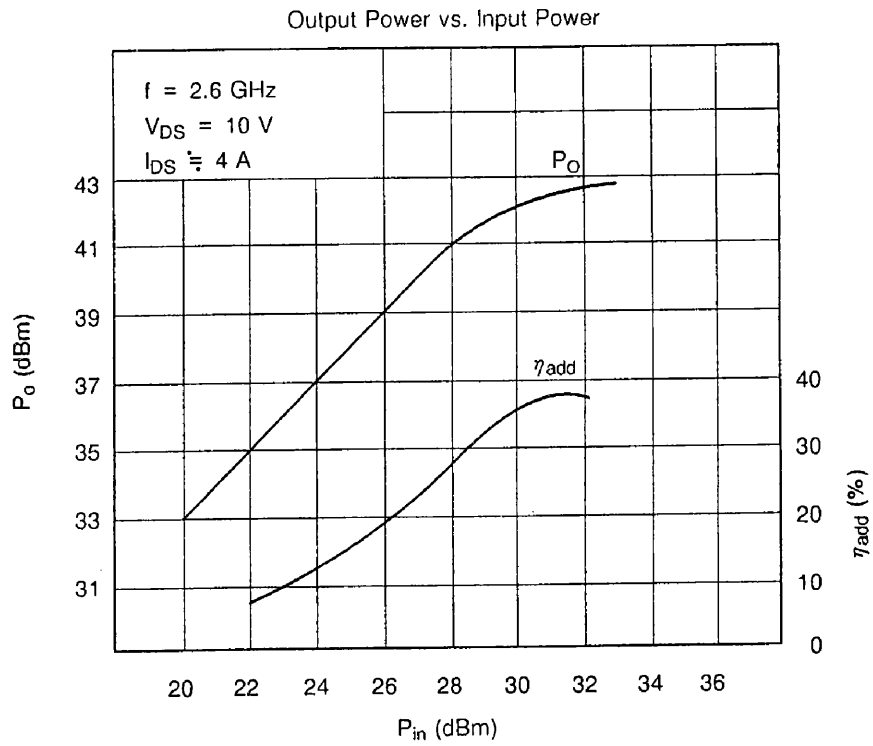
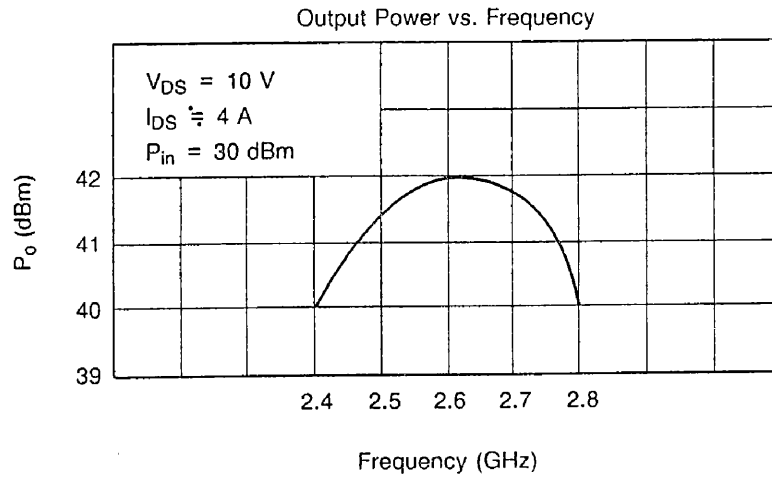
## PACKAGE OUTLINE (2-11D1B)



### HANDLING PRECAUTIONS FOR PACKAGED TYPE

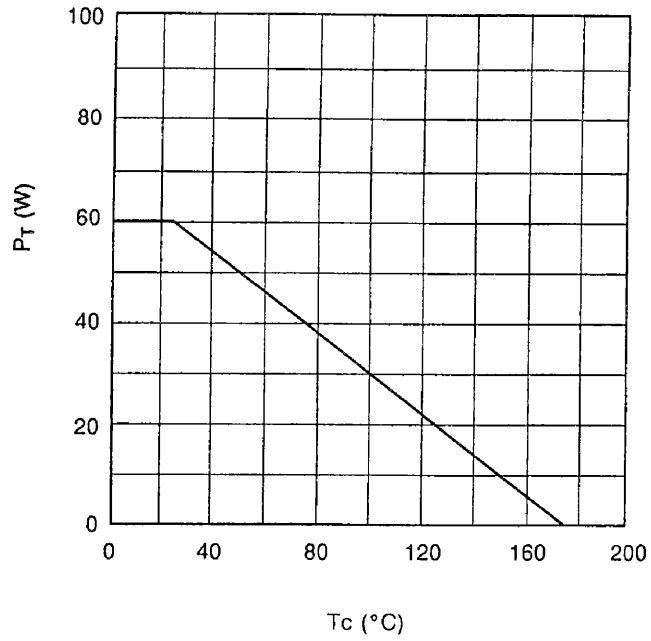
Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C.

RF PERFORMANCES

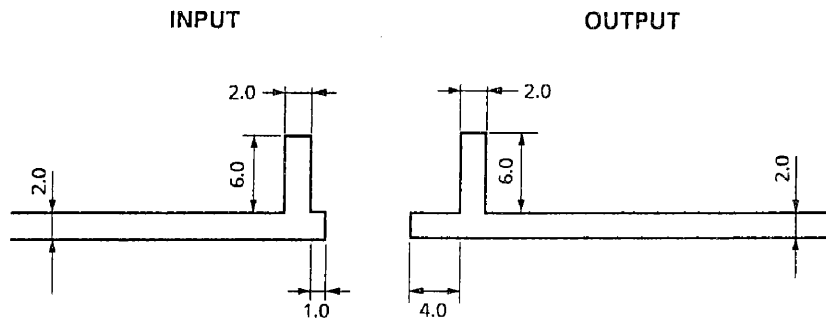


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## POWER DISSIPATION VS. CASE TEMPERATURE



## DRAWING OF MATCHING NETWORK



Unit in mm

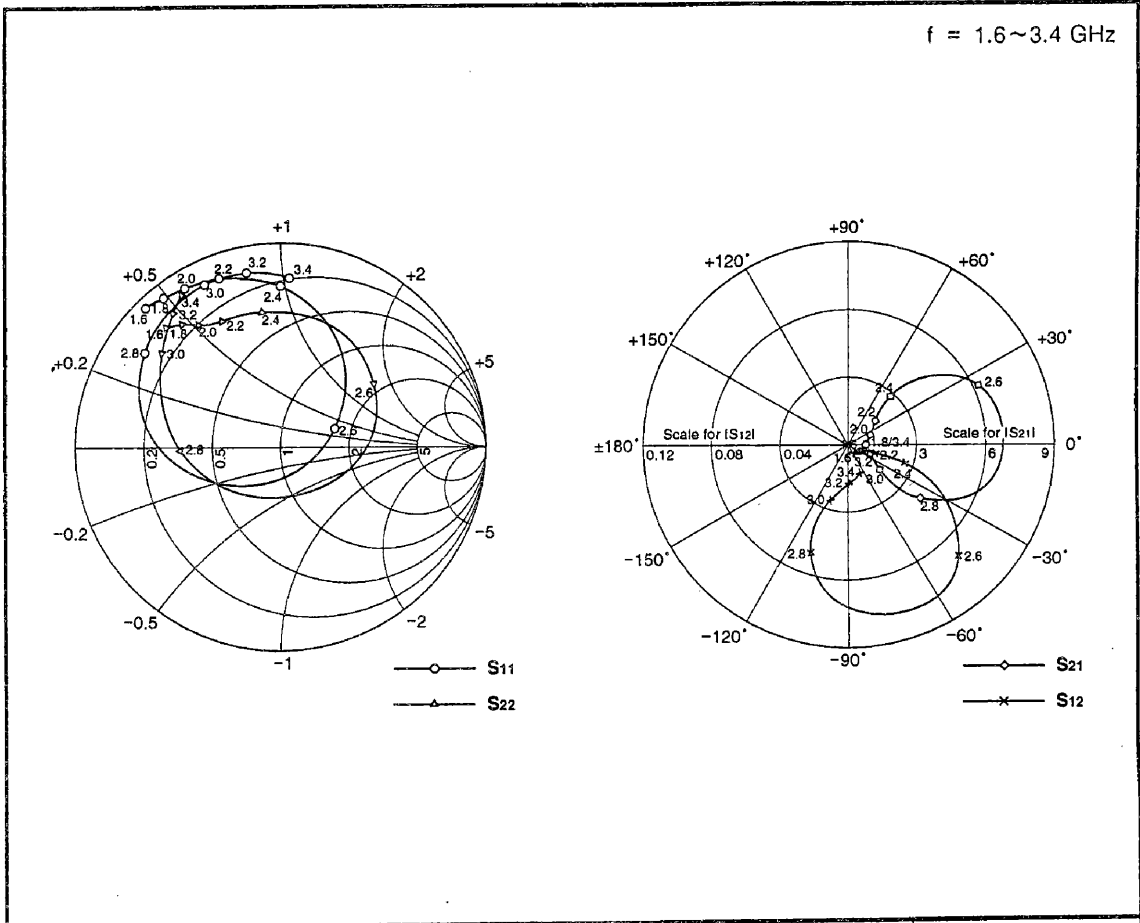
Substrate Material : Teflon ( $\epsilon_r = 2.8$ )

Thickness : 0.76 mm

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## TPM2626-14 S-PARAMETERS (MAGN. and ANGLES)

$V_{DS} = 10\text{ V}$ ,  $I_{DS} = 4\text{ A}$



Frequency (GHz)	S <sub>11</sub>		S <sub>21</sub>		S <sub>12</sub>		S <sub>22</sub>	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
1.60	0.95	134	0.64	-26	0.006	-52	0.81	134
1.80	0.93	128	0.80	1	0.007	-32	0.77	129
2.00	0.91	121	1.08	24	0.010	-21	0.72	124
2.20	0.88	110	1.63	41	0.017	-17	0.68	115
2.40	0.79	90	2.86	49	0.035	-18	0.67	98
2.60	0.28	19	6.29	25	0.091	-46	0.56	34
2.80	0.81	145	3.99	-37	0.067	-109	0.52	-177
3.00	0.88	115	1.80	-38	0.034	-107	0.74	142
3.20	0.87	101	1.09	-21	0.023	-88	0.84	129
3.40	0.83	87	0.81	1	0.018	-66	0.89	123