TOSHIBA

MICROWAVE SEMICONDUCTOR
TECHNICAL DATA

MICROWAVE POWER GaAs FET

TPM2626-30-301

FEATURES :

- HIGH POWER
  P_{1dB} = 46 dBm at 2.6 GHz
- HIGH GAIN
  G_{1dB} = 12 dB at 2.6 GHz
- PARTIALLY MATCHED TYPE
- HERMETICALLY SEALED PACKAGE

RF PERFORMANCE SPECIFICATIONS (Ta = 25°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	45.0	46.0	–
Power Gain at 1dB Compression Point	G_{1dB}		dB	11.0	12.0	–
Drain Current	I_{DS}		A	–	8.0	9.0
Power Added Efficiency	η_{add}		%	–	47	–
Channel-Temperature Rise	ΔTch	NOTE 1	°C	–	–	90

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

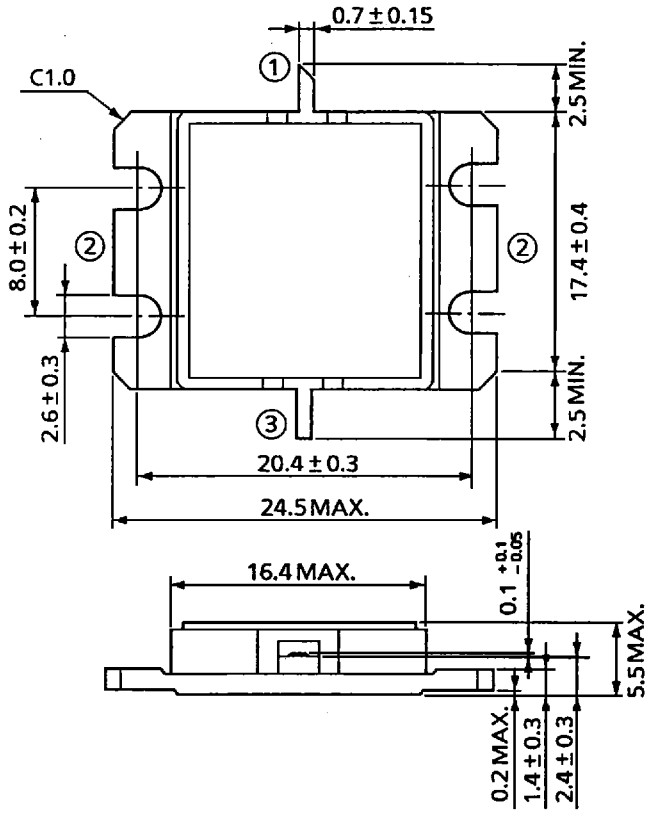
CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	V_{DS} = 3 V I_{DS} = 8.0 A	mS	–	8000	–
Pinch-off Voltage	V_{GSoff}	V_{DS} = 3 V I_{DS} = 140 mA	V	−1.0	−3.0	−4.0
Saturated Drain Current	I_{DSS}	V_{DS} = 3 V V_{GS} = 0 V	A	–	20	26
Gate-Source Breakdown Voltage	V_{GSO}	I_{GS} = −500 μA	V	−5	–	–
Thermal Resistance	$R_{th\ (c-c)}$	Channel to Case	°C/W	–	0.8	1.2

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

ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTICS	SYMBOL	UNIT	RATING
Drain-Source Voltage	V_{DS}	V	15
Gate-Source Voltage	V_{GS}	V	−5
Drain Current	I_{DS}	A	26
Total Power Dissipation (T_C = 25°C)	P_T	W	100
Channel Temperature	T_{ch}	°C	175
Storage Temperature	T_{stg}	°C	−65~175

PACKAGE OUTLINE (2-16G1B)



Unit in mm

① Gate
② Source
③ Drain

HANDLING PRECAUTIONS FOR PACKAGED TYPE

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