TOSHIBA

MICROWAVE SEMICONDUCTOR
TECHNICAL DATA

MICROWAVE POWER MMIC AMPLIFIER

TMD1415-2B

PRELIMINARY

FEATURES

- High Power P1dB=34.0dBm(TYP.)
- High Gain G1dB=25dB(TYP.)
- High Power Added Efficiency η add=25%(TYP.)
- Broadband Operation f=14.4-15.4GHz.

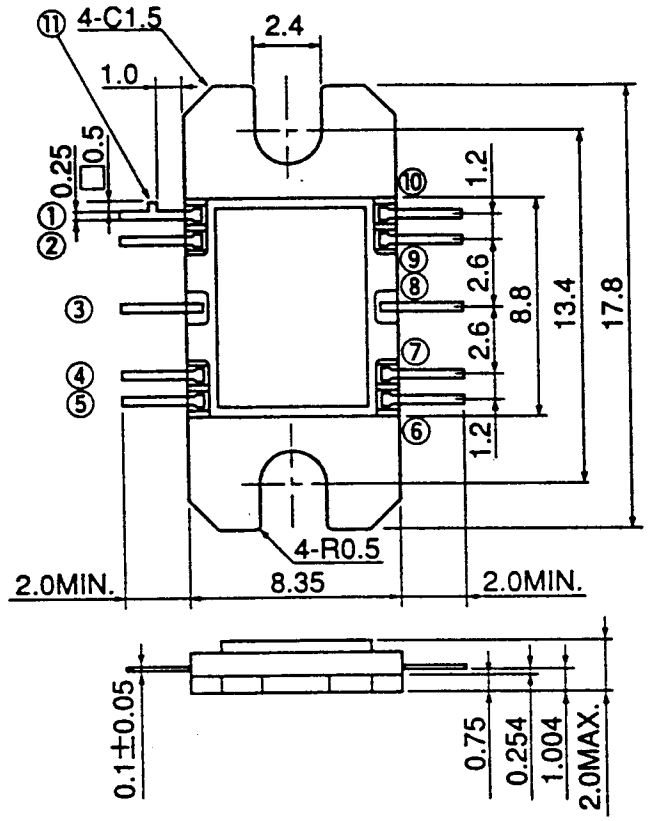
ABSOLUTE MAXIMUM RATINGS(Ta=25℃)

CHARACTERISTICS	SYMBOL	UNIT	RATINGS
DRAIN SUPPLY VOLTAGE	VDD	V	10
GATE SUPPLY VOLTAGE	VGG	V	-10
INPUT POWER	Pin	dBm	10
FLANGE TEMPERATURE	Tf	℃	-30～+80
STORAGE TEMPERATURE	Tstg	℃	-65～+175

RF PERFORMANCE SPECIFICATIONS (Ta=25℃)

CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Operating Frequency	f		GHz	14.4	—	15.4
Output Power at 1dB Gain Compression Point	P1dB	VDD= 7V VGG= -5V	dBm	32.0	34.0	—
Power Gain at 1dB Gain Compression Point	G1dB		dB	21.0	25.0	—
Gain Flatness	△G		dB	—	—	±1.25
Drain Current	IDD		A	—	1.4	1.8
Power Added Efficiency	η add		%	—	25	—
Third Order Intercept Point	IP3		dBm	—	40	—
VSWRin (small signal)	VSWRin		—	—	2.0 : 1	3.0 : 1
VSWRout (small signal)	VSWRout		—	—	2.0 : 1	3.0 : 1
Detector Output Voltage	Vdet	@Po=33dBm	V	—	3.0	—

Package Outline



①②⑤⑨⑩: GND
③: RF Input
④: VGG
⑥: VDD
⑦: Pmon
⑧: RF out
⑪: Orientation Tab

Recommended Bias Configuration