TOSHIBA

MICROWAVE SEMICONDUCTOR

TECHNICAL DATA

FEATURES

n HIGH POWER

P1dB=33.0dBm at 9.5GHz to 12.0GHz

n HIGH GAIN

G1dB=25.0dB at 9.5GHz to 12.0GHz

MICROWAVE POWER MMIC AMPLIFIER TMD1013-1-431

n BROAD BAND INTERNALLY MATCHED

n HERMETICALLY SEALED PACKAGE

ABSOLUTE MAXIMUM RATINGS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	UNIT	RATING
Drain Supply Voltage	VDD	V	15
Gate Supply Voltage	VGG	V	-10
Input Power	Pin	dBm	15
Flange Temperature	Tf	۰C	-30 ~ +80
Storage Temperature	T _{stg}	٥C	-65 ~ +175

RF PERFORMANCE SPECIFICATIONS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	CONDITIONS	UNIT	MIN.	TYP.	MAX.
Output Power at 1dB Gain	P1dB		dBm	31.0	33.0	
Compression Point						
Power Gain at 1dB Gain	G1dB	VDD= 10V	dB	21.0	25.0	
Compression Point		VGG= -5V				
Gain Flatness	ΔG	f = 9.5 – 12.0GHz	dB			±2.5
Drain Current	IDD		А		1.4	1.8
Power Added Efficiency	<i>h</i> add		%		14	
3 rd Order Intermodulation	IM3	2 tone @	dBc	-42	-45	
Distortion		Po=19dBm(S.C.L.)				

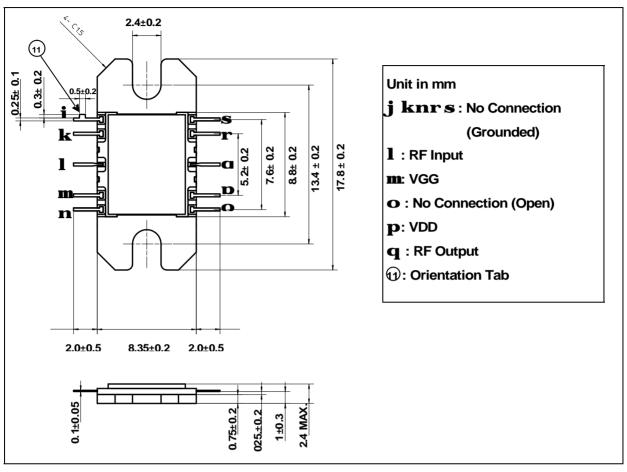
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The information contained herein is subject to change without prior notice. It is therefor advisable to contact TOSHIBA before proceeding with design of equipment incorporating this product.

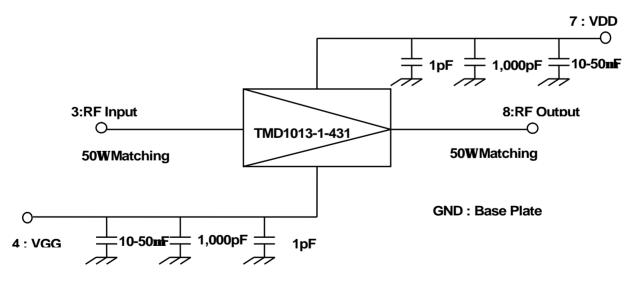
TOSHIBA CORPORATION

• TMD1013-1-431

PACKAGE OUTLINE (2-9E1D)



RECOMMENDED BIAS CONFIGURATION



HANDLING PRECAUTIONS FOR PACKAGE MODEL

Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C. Flanges of devices should be attached using screws and washers. Recommended torque is 0.18-0.20 N·m.