#### TOSHIBA

# MICROWAVE SEMICONDUCTOR TECHNICAL DATA

# MICROWAVE POWER GAAS FET TIM8596-15 PRELIMINARY

#### **FEATURES**

**■ HIGH POWER** 

P1dB=42.0dBm at 8.5GHz to 9.6GHz

**■ HIGH GAIN** 

G1dB=7.0dB at 8.5GHz to 9.6GHz

■ BROAD BAND INTERNALLY MATCHED

**■ HERMETICALLY SEALED PACKAGE** 

#### RF PERFORMANCE SPECIFICATIONS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Output Power at 1dB	P1dB		dBm	41.0	42.0	_
Compression Point						
Power Gain at 1dB	G1dB	VDS=9V	dB	6.0	7.0	_
Compression Point		f = 8.5 - 9.6 GHz				
Drain Current	IDS		Α		4.5	5.5
Power Added Efficiency	ηadd		%		31	_
Channel Temperature Rise	ΔTch	VDS×IDS×Rth(c-c)	°C	_	_	100

#### ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	VDS= 2V	mS	_	3000	_
		IDS= 4.8A				
Pinch-off Voltage	VGSoff	VDS=2V	V	-1.5	-3.0	-4.5
		IDS= 145mA				
Saturated Drain Current	IDSS	VDS=3V	Α	_	10.0	11.5
		VGS= 0V				
Gate-Source Breakdown	VGSO	IGS= -145μA	V	-5	_	_
Voltage						
Thermal Resistance	Rth(c-c)	Channel to Case	°C/W	_	2.0	2.5

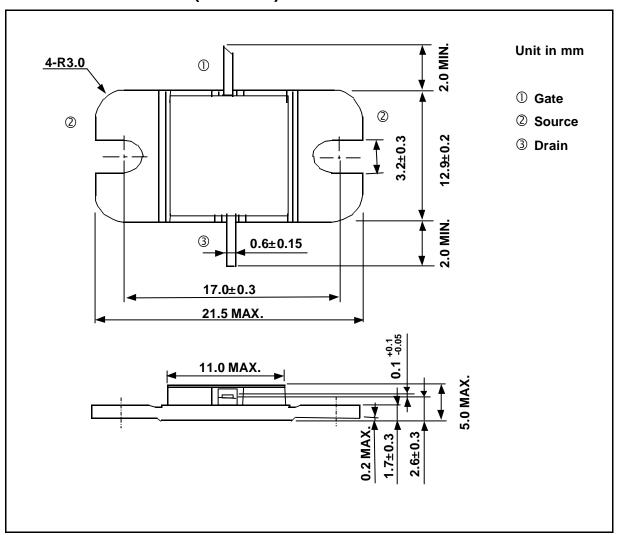
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## ABSOLUTE MAXIMUM RATINGS (Ta= 25°C)

CHARACTERISTICS	SYMBOL	UNIT	RATING
Drain-Source Voltage	VDS	V	15
Gate-Source Voltage	VGS	V	-5
Drain Current	IDS	Α	11.5
Total Power Dissipation (Tc= 25 °C)	РТ	W	60
Channel Temperature	Tch	°C	175
Storage	Tstg	°C	-65 ~ <b>+</b> 175

## **PACKAGE OUTLINE (2-11C1B)**



#### **HANDLING PRECAUTIONS FOR PACKAGED TYPE**

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