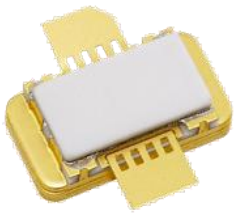
■ Features

- High Power GaN HEMT for DC to 5GHz
- High Power: 35W @ 5GHz
- High Efficiency: 53% @ 5GHz
- CW Operable
- Concurrent Broadband Operation up to 5GHz
- Small Flangeless Package



■ Description

Sumitomo Electric's GaN-HEMT SGCA030M1H offers high power, high efficiency, ease of matching and greater consistency for DC to 5GHz high power applications with 50V operation.

ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Condition	Rating	Unit
Operating-Voltage	V_{DS}		55	V
Drain-Source Voltage	V_{DS}	V_{GS}=-15V	200	V
Gate-Source Voltage	V_{GS}		-15	V
Total Power Dissipation	Pt	Tc=25deg.C	97.8	W
Storage Temperature	T_{stg}		-55 to +125	deg.C
Channel Temperature	T_{ch}		+250	deg.C

RECOMMENDED OPERATING CONDITION(Case Temperature T_c= 25deg.C)

Item	Symbol	Condition	Limit	Unit
DC Input Voltage	V_{DS}		<=50	V
Forward Gate Current	I_{GF}	R_G=100 ohm	<=22.5	mA
Reverse Gate Current	I_{GR}	R_G=100 ohm	>=-1.3	mA
Channel Temperature	T_{ch}		<+200	deg.C

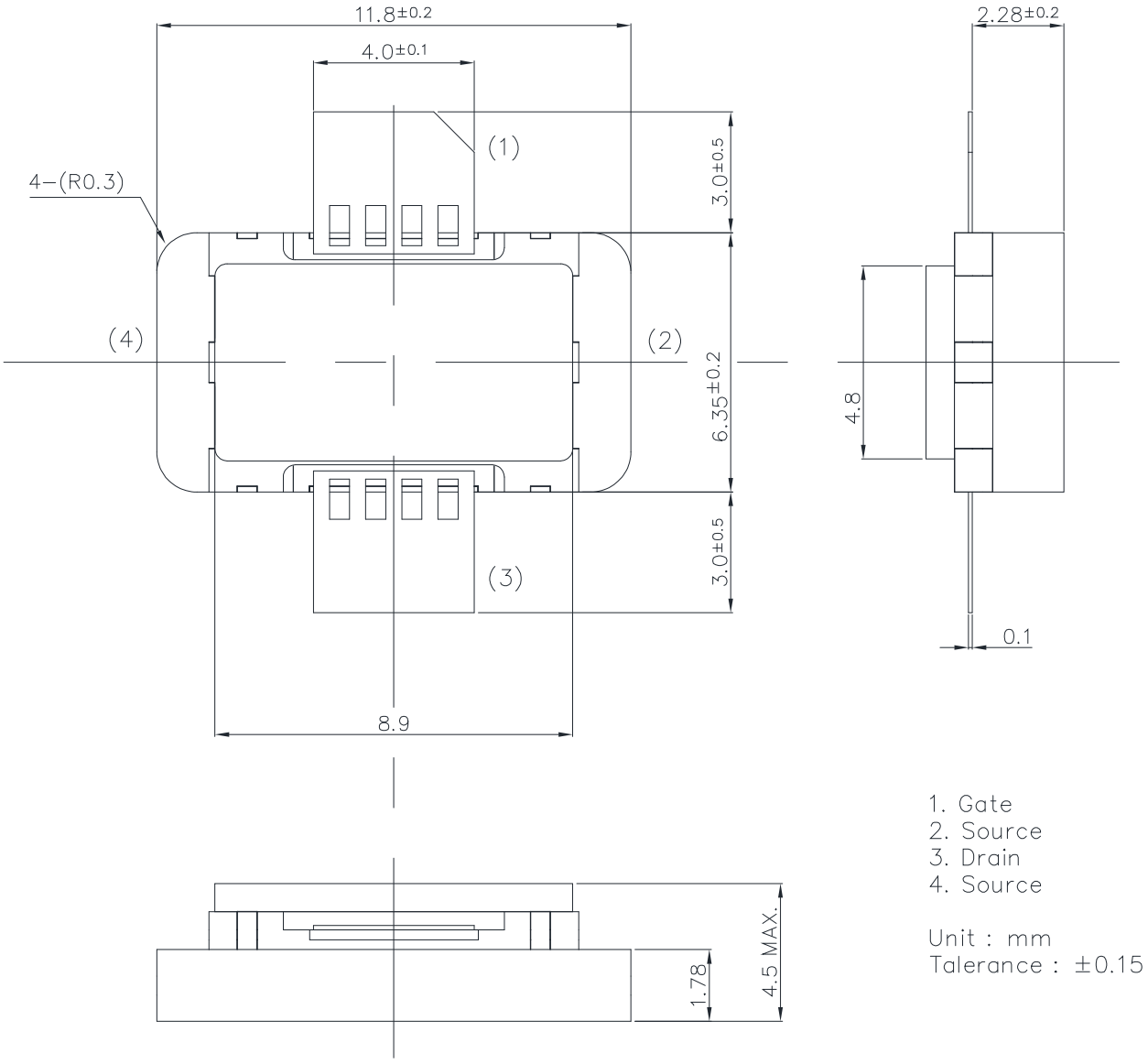
ELECTRICAL CHARACTERISTICS (Case Temperature T_c=25deg.C)

Item	Symbol	Condition	Limit			Unit
			Min.	Typ.	Max.	
Pinch-off Voltage	V_P	V_{DS}=50V, I_{DS}=2mA	-	-4.5	-	V
Saturated Power	P_{sat}	V_{DS}=50V , $I_{DS(DC)}$=200mA	44.8	45.5	-	dBm
Drain Efficiency	DE	f=5.0GHz , Pin=36dBm	-	53.0	-	%
Power Gain	Gp	PW=200µsec. , Duty=10%	-	9.5	-	dB
Thermal Resistance	R_{th}	Channel to Case at 30W PDC	-	2.0	2.3	deg.C/W

CASE STYLE	M1H
RoHS Compliance	YES

● Package Outline

Case Style : M1H
Metal-Ceramic Hermetic Package



1. Gate
2. Source
3. Drain
4. Source

Unit : mm
Talerance : ±0.15

For Safety, Observe the Following Procedures Environmental Management

- Do not put this product into the mouth.
- Do not alter the form of this product into a gas, powder, or liquid through burning, crushing, or chemical processing as these by-products are dangerous to the human body if inhaled, ingested, or swallowed.
- Respect all applicable laws of the country when discarding this product.
  This product must be disposed in accordance with methods specified by applicable hazardous waste procedures.

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