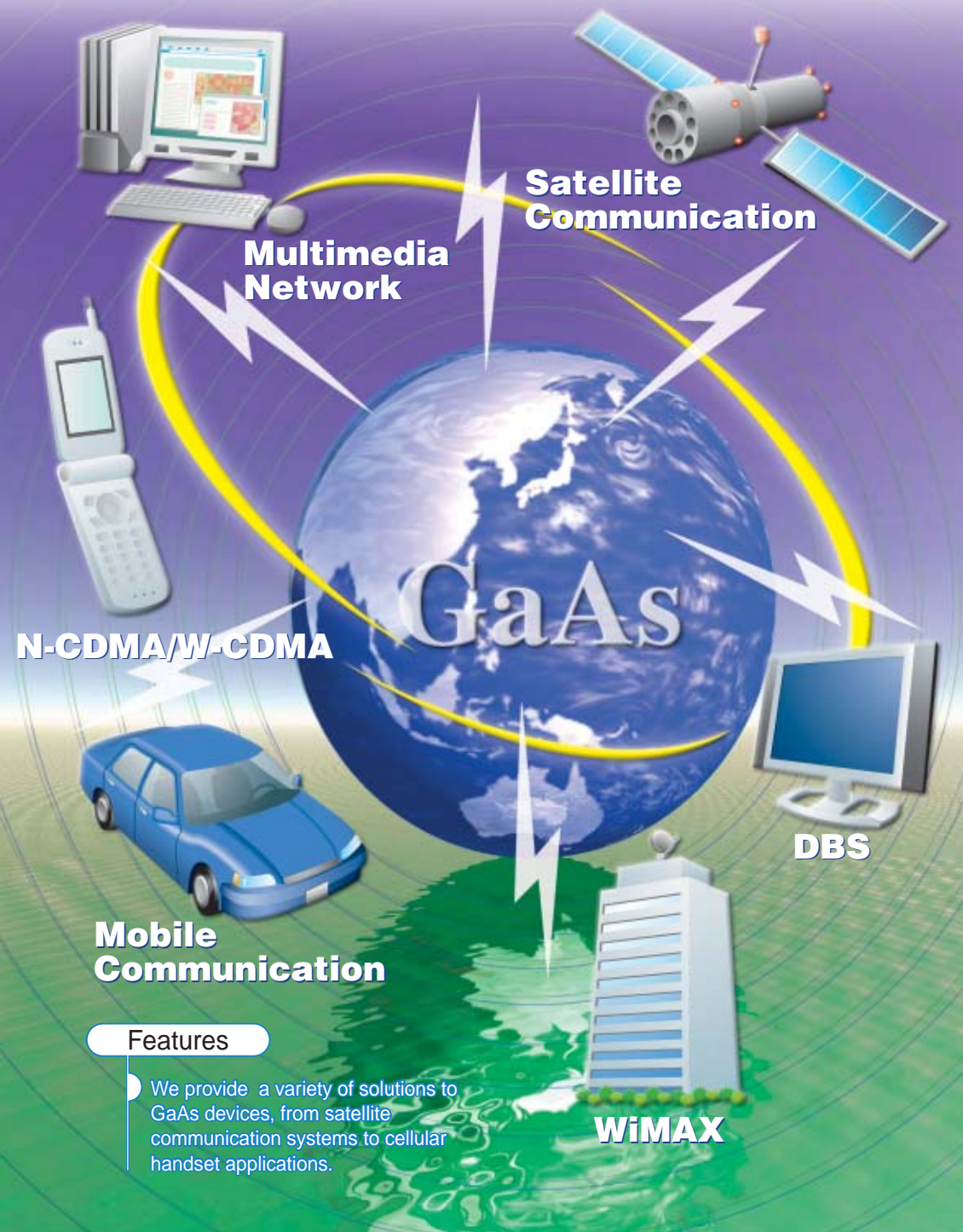


**MITSUBISHI GaAs solutions
for communication networks
in the information era.**



Features

We provide a variety of solutions to GaAs devices, from satellite communication systems to cellular handset applications.

MAP FOR SELECTION 1

PRODUCTS 3

APPLICATION 7

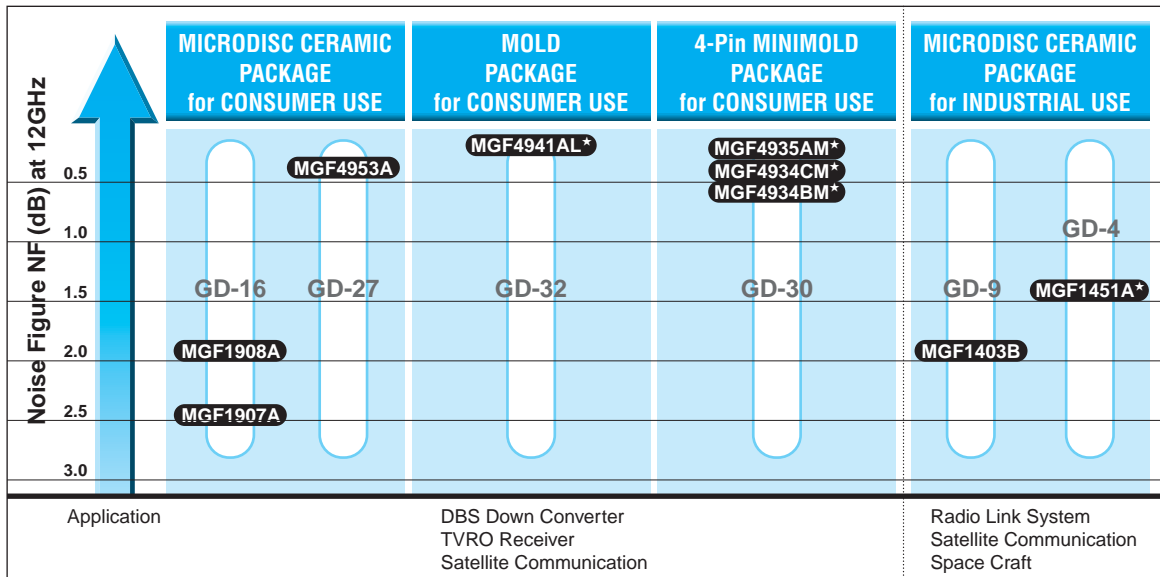
PACKAGE 9

MITSUBISHI GaAs devices: The best solution for realizing the information era.

Communication networks, such as high speed Internet, video-on-demand and high-speed data communication, are developing rapidly.

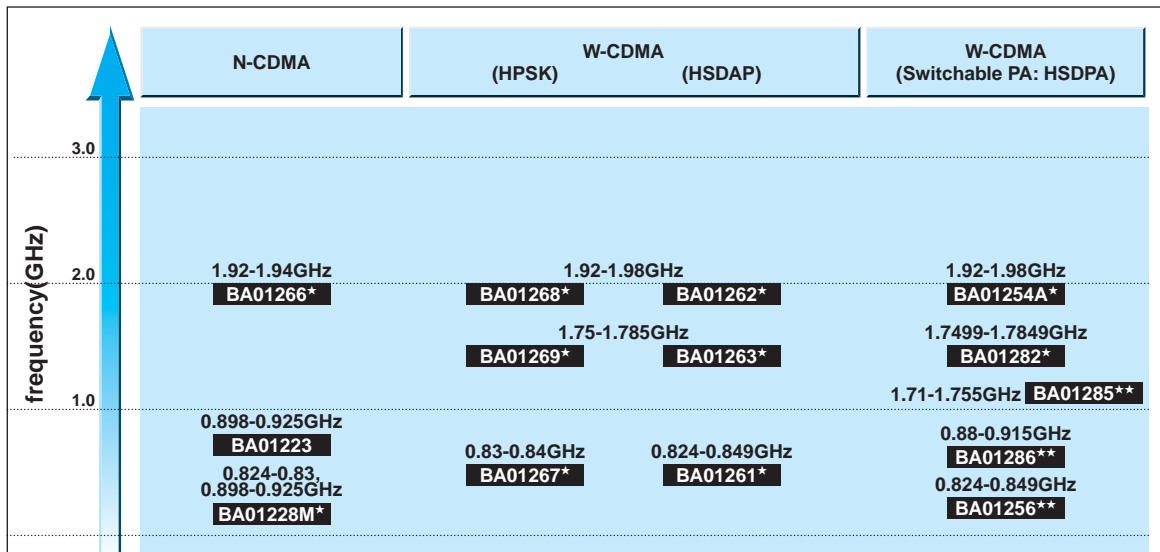
We are ready to offer the best solution to the systems for realizing the information era by providing a variety of GaAs products designed for satellite communication systems to base stations and cellular handset applications.

GaAs FET SERIES FOR MICROWAVE-BAND LOW-NOISE AMPLIFIERS



Note : MGF4xxx=HEMT MGF1xxx=MES FET
* : New Product

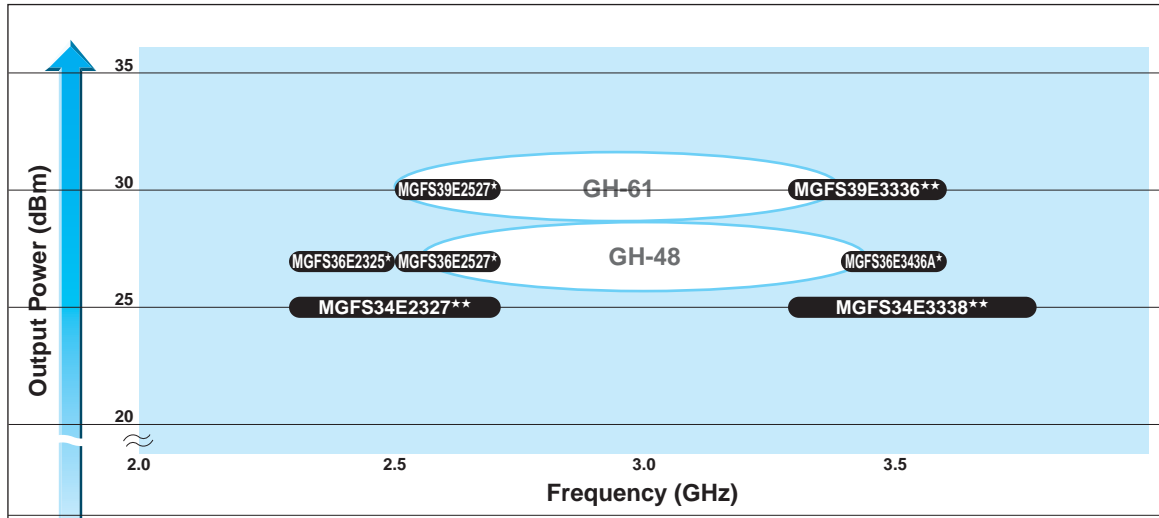
GaAs HYBRID IC FOR MOBILE PHONE



* : New Product ** : Under Development

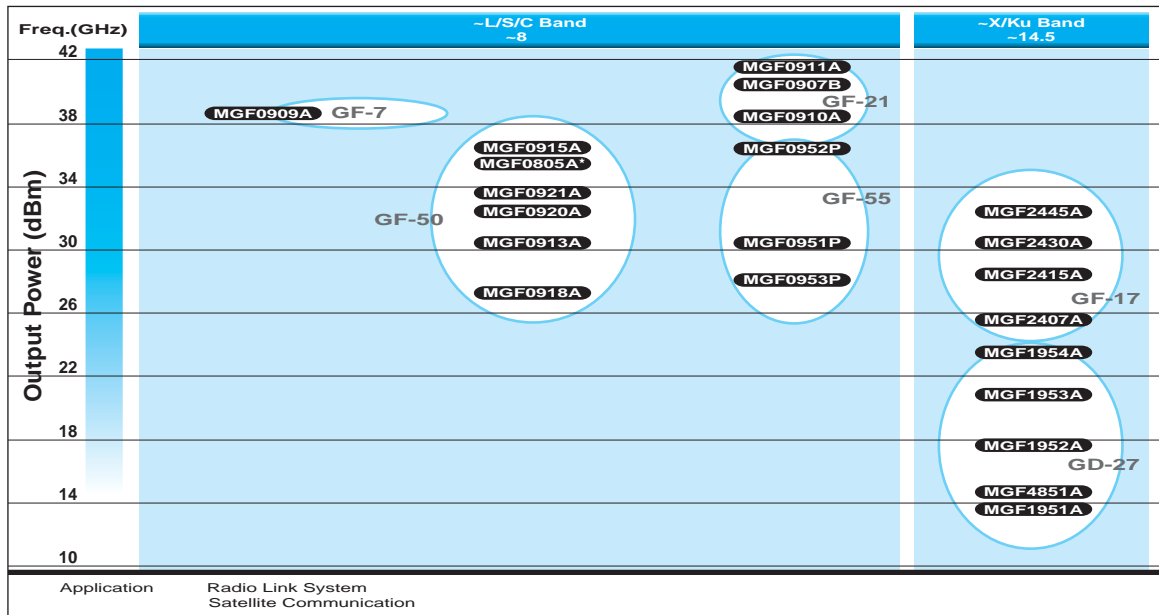
MAP For SELECTION

GaAs AMPLIFIER FOR WIRELESS ACCESS



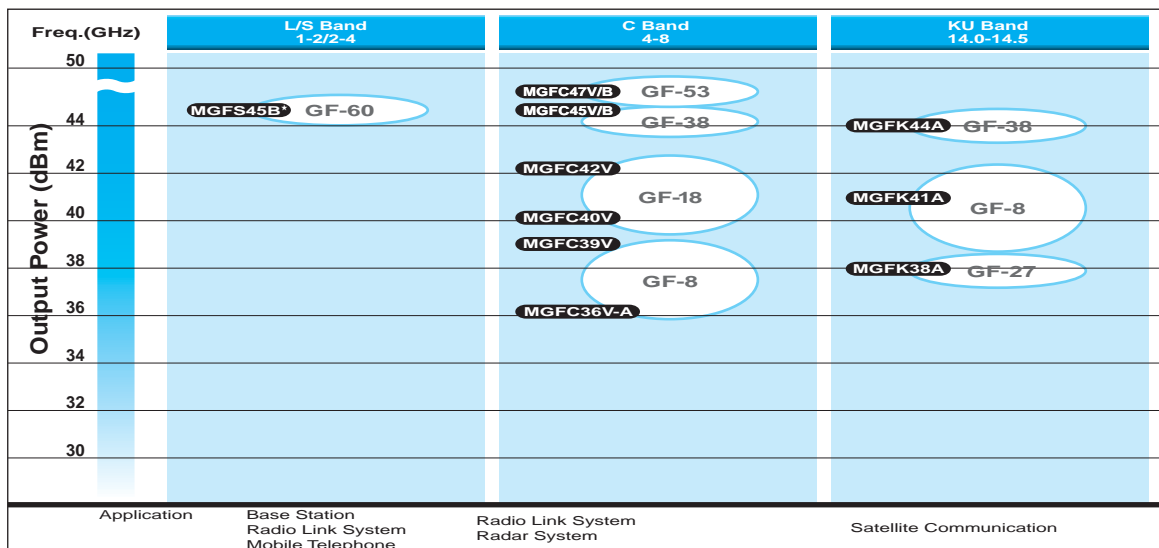
* : New Product ** : Under Development

GaAs FET FOR HIGH POWER DISCRETE



* : New Product

INTERNALLY MATCHED GaAs FET SERIES FOR MICROWAVE-BAND HIGH POWER AMPLIFIERS



* : New Product

GaAs FET SERIES FOR MICROWAVE- BAND LOW-NOISE AMPLIFIERS

Type Number	Noise Figure (dB)		Associated Gain (dB)		Frequency (GHz)	Drain-Source Voltage (V)	Drain Current (mA)	Package Outline
	Typ.	Max.	Min.	Typ.				
MGF1403B*	1.8	-	-	10.5	12	3	10	GD-9
MGF1907A	2.7	-	-	9	12	3	10	GD-16
MGF1908A	2	-	-	10.5	12	3	10	GD-16
MGF4941AL*	0.35	0.50	12.0	13.5	12	2	10	GD-32
MGF4953A	0.40	0.50	12.0	13.0	12	2	10	GD-27
MGF4931AM	0.60	0.80	10.0	11.5	12	2	7.5	GD-30
MGF4934BM*	0.50	0.80	11.5	12.5	12	2	10	GD-30
MGF4934CM*	0.50	0.75	11.5	13.0	12	2	10	GD-30
MGF4935AM*	0.45	0.65	11.0	12.0	12	2	10	GD-30
MGF4953B	0.55	0.80	9.0	10.5	20	2	10	GD-27
MGF4961B*	0.70	0.95	11.5	13.5	20	2	10	GD-31

Ta=25°C

* : Industrial Grade

* : New Product

GaAs FET SERIES FOR MICROWAVE- BAND HIGH-POWER AMPLIFIERS(Discrete Devices)

Type Number	Output Power at 1dB Gain Compression (dBm)		Output Power (dBm)	Linear Power Gain (dB)	3rd Order IM Distortion (dBc)		Power Added Efficiency (%)	Frequency (GHz)	Drain-Source Voltage (V)	Drain Current (A)	Thermal Resistance (°C/W)		Package Outline
	Min.	Typ.			Min.	Typ.					Typ.	Max.	
MGF0907B*	38.5	40	-	8	-	-	37	2.3	10	2.4	-	4	GF-21
MGF0909A	37	38	-	10	-	-	45	2.3	10	1.3	-	-	GF-7
MGF0910A*	37	38	-	10	-	-	37	2.3	10	1.3	-	6	GF-21
MGF0911A*	40	41	-	10	-	-	40	2.3	10	2.6	-	4.5	GF-21
MGF0913A	-	-	29.5	11	-	-	48	1.9	10	0.2	20	30	GF-50
MGF0915A	-	-	35	13	-	-	50	1.9	10	0.8	5	8	GF-50
MGF0918A	-	-	25	18	-	-	45	1.9	10	0.15	35	50	GF-50
MGF0920A	-	-	30	16	-	-	45	1.9	10	0.4	13	18	GF-50
MGF0921A	-	-	31	15	-	-	40	1.9	10	0.5	11	15	GF-50
MGF0805A*	-	-	36.5	14.5	-	-	55	1.9	10	0.4	5	7	GF-50
MGF0951P	-	-	31	11	-	-42	50	2.15	10	0.2	20	25	GF-55
MGF0952P	-	-	36.5	11	-	-42	50	2.15	10	0.7	5	6	GF-55
MGF0953P	-	-	28	18	-	-	40	2.15	10	0.15	14	20	GF-55
MGF1451A**	11	13	-	10.5	-	-	-	12	3	0.03	-	-	GD-4
MGF1951A	11	13	-	7	-	-	-	12	3	0.03	-	-	GD-27
MGF1952A	15	17	-	5	-	-	-	12	3	0.06	-	-	GD-27
MGF1953A	18	20	-	4	-	-	-	12	4	0.1	-	-	GD-27
MGF1954A	21	23	-	3	-	-	-	12	6	0.1	-	-	GD-27
MGF2407A*	23	24.5	-	7	-	-	30	14.5	10	0.075	-	100	GF-17
MGF2415A*	26	27.5	-	6.5	-	-	29	14.5	10	0.15	-	60	GF-17
MGF2430A*	29	30.5	-	5.5	-	-	27	14.5	10	0.3	-	30	GF-17
MGF2445A*	31	32	-	5.5	-	-	20	12	10	0.45	-	15	GF-17
MGF4851A	12	14.5	-	9	-	-	-	12	2.5	0.025	-	-	GD-27

Ta=25°C

* : Industrial Grade

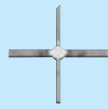
* : New Product

INTERNALLY MATCHED GaAs FET SERIES FOR WiMAX Base Station

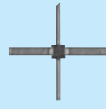
Type Number	Output Power at 1dB Gain Compression (dBm)		Output Power (dBm)	Linear Power Gain (dB)	3rd Order IM Distortion (dBc)		Power Added Efficiency (%)	Frequency (GHz)	Drain-Source Voltage (V)	Drain Current (A)	Thermal Resistance (°C/W)		Package Outline
	Min.	Typ.			Min.	Typ.					Typ.	Max.	
MGFC36V3436	35	37	-	11	-42	-45	32	3.4~3.6	10	1.2	5	6	GF-8
MGFC39V3436	38	39.5	-	10	-42	-45	32	3.4~3.6	10	2.4	3	3.5	GF-8
MGFC42V3436	41.5	42.5	-	12	-42	-45	37	3.4~3.6	10	4.5	-	1.9	GF-18
MGFC45B3436B*	-	-	45	11	-	-45	-	3.4~3.6	12	0.8	-	1.9	GF-60
MGFS45B2527B*	-	-	45	12	-	-45	-	2.5~2.7	12	0.9	-	1.9	GF-60
MGFC47B3436B*	-	-	47	10.5	-	-45	-	3.4~3.6	12	1.5	-	1.2	GF-60
MGFC47B3538B*	-	-	47	10.5	-	-45	-	3.5~3.8	12	1.5	-	1.2	GF-60

Ta=25°C

* : New Product



GD-4



GD-9



GD-16



GD-27



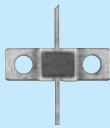
GD-30



GD-31



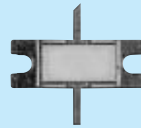
GD-32



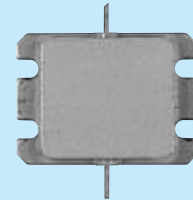
GF-7



GF-17



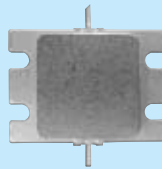
GF-21



GF-38



GF-50



GF-60



GF-55

INTERNALLY MATCHED GaAs FET SERIES FOR C BAND HIGH POWER AMPLIFIERS

Type Number	Output Power at 1dB Gain Compression(dBm)		Linear Power Gain(dB)	3rd Order IM Distortion(dBc)		Power Added Efficiency(%)	Frequency (GHz)	Drain-Source Voltage(V)	Drain Current (A)	Thermal Resistance (C/W)		Package Outline	Available Spec. No.
	Min.	Typ.		Min.	Typ.					Typ.	Max.		
MGFC36V4450A	35	37	9	-42	-45	32	4.4~5.0	10	1.2	5	6	GF-8	-51
MGFC36V5258	35	36	9	-42	-45	33	5.2~5.8	10	1.2	-	6	GF-8	-51
MGFC36V5964A	35	37	9	-42	-45	30	5.9~6.4	10	1.2	5	6	GF-8	-51
MGFC36V6472A	35	37	8	-42	-45	30	6.4~7.2	10	1.2	5	6	GF-8	-51
MGFC40V4450	39.5	40.5	9	-42	-45	32	4.4~5.0	10	2.4	-	3.5	GF-18	-51
MGFC40V5258	39.5	40.5	8	-42	-45	32	5.2~5.8	10	2.4	-	3.5	GF-18	-51
MGFC40V5964	39.5	40.5	8	-42	-45	30	5.9~6.4	10	2.4	3	3.5	GF-18	-51
MGFC40V6472	39.5	40.5	7	-42	-45	32	6.4~7.2	10	2.4	-	3.5	GF-18	-51
MGFC42V4450	41.5	42.5	9	-42	-45	32	4.4~5.0	10	4.5	-	1.9	GF-18	-51
MGFC42V5258	41.5	42.5	8	-	-	31	5.2~5.8	10	4.5	-	1.9	GF-18	-01
MGFC42V5964A	41.5	42.5	8	-42	-45	33	5.9~6.4	10	4.5	-	1.6	GF-38	-51
MGFC45V4450A	44	45	9	-	-45	34	4.4~5.0	10	8	0.8	1	GF-38	-01
MGFC45V5964A	44	45	8	-42	-45	33	5.9~6.4	10	8	0.8	1	GF-38	-51
MGFC47V5864	46	47	8.5	-	-	35	5.8~6.4	10	9.8	0.8	0.9	GF-53	-01
MGFC47A4450	46	47	9.5	-	-	40	4.4~5.0	10	9.8	0.8	0.9	GF-53	-01

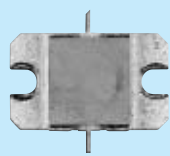
Ta=25°C

INTERNALLY MATCHED GaAs FET SERIES FOR X/Ku BAND HIGH POWER AMPLIFIERS

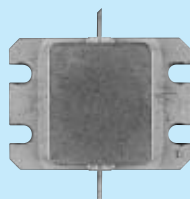
Type Number	Output Power at 1dB Gain Compression(dBm)		Linear Power Gain(dB)	Power Added Efficiency(%)	Frequency (GHz)	Drain-Source Voltage(V)	Drain Current (A)	Thermal Resistance (C/W)		Package Outline	Available Spec. No.
	Min.	Typ.						Typ.	Max.		
MGFK38A3745	37	38	7	30	13.75~14.5	10	1.5	3.6	4	GF-27	-01
MGFK41A4045	40	41	6	25	14.0~14.5	10	3	1.8	2.2	GF-8	-01
MGFK44A4045	43	44	5	17	14.0~14.5	10	6	1.2	1.5	GF-38	-01

Ta=25°C

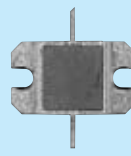
PRODUCT LIST



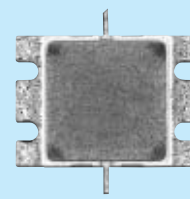
GF-8



GF-18



GF-27



GF-53



Type Number	Application	frequency (MHz)	Po(dBm)	Vcc(V)	Vref(V)	PAE(%)	Pin(dBm)	Package Outline
BA01223	N-CDMA	898~925	27.5	3.5	2.85	40	0	GH-46
BA01228M*	N-CDMA	824-830,898-925	28.0	3.5	2.85	37	1.0	GH-46
BA01266*	N-CDMA	1920~1940	27.5	3.5	2.85	42	1.0	GH-44
BA01267*	W-CDMA	830~840	26.5	3.5	2.90	47	-0.5	GH-44
BA01268*	W-CDMA	1920~1980	26.5	3.5	2.90	47	-1.5	GH-44
BA01269*	W-CDMA	1750~1785	26.5	3.5	2.90	47	-1.0	GH-44
BA01261*	W-CDMA(HSDPA)	824~849	26.5	3.5	2.90	39	-1.0	GH-44
BA01262*	W-CDMA(HSDPA)	1920~1980	26.5	3.5	2.90	42	-1.0	GH-44
BA01263*	W-CDMA(HSDPA)	1750~1785	26.5	3.5	2.90	43	-0.5	GH-44
BA01256**	W-CDMA(HSDPA)	824~849	27.5/16/8	3.4	-	38.5/24/7	2/-7/-14	GH-52
BA01286**	W-CDMA(HSDPA)	880~915	28.5/16/8	3.4	-	38/24/7	1.5/-6.5/-14	GH-52
BA01285**	W-CDMA(HSDPA)	1710~1755	27/16/8	3.4	-	37/22/6.5	0/-6.5/-14	GH-51
BA01282*	W-CDMA(HSDPA)	1749.9-1784.9	27/16/8	3.4	-	35/21/6	0/-6/-13.5	GH-51
BA01254A*	W-CDMA(HSDPA)	1920~1980	27/16/8	3.4	-	38/24/7	0/-5.5/-13	GH-51

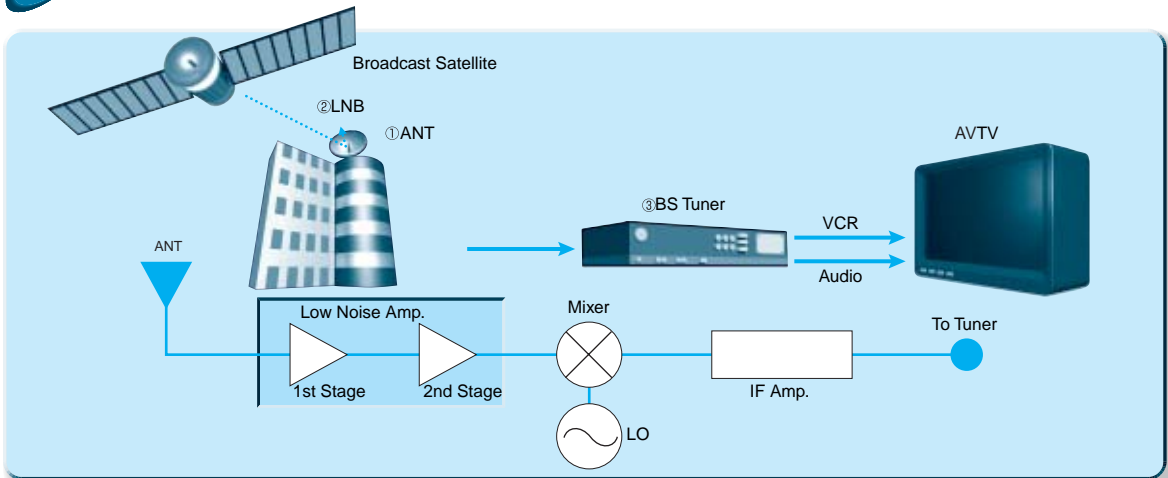
* : New Product ** : Under Development



Type Number	Frequency (MHz)	Pout & EVM	Gain(dB)	Vcc(V)	Vref(V)	PAE(%)	Package Outline
MGFS34E2327**	2.3~2.7	25dBm@2.5%	35	3.3	2.85	20	-
MGFS34E3338**	3.3~3.8	25dBm@2.5%	30	3.3	2.85	20	-
MGFS36E2325*	2.3~2.5	27dBm@2.5%	33	6	2.85	11	GH-48
MGFS36E2527*	2.5~2.7	27dBm@2.5%	33	6	2.85	12	GH-48
MGFS36E3436A*	3.4~3.6	27dBm@4.0%	30	6	2.85	11	GH-48
MGFS39E2527*	2.5~2.7	30dBm@2.5%	43	6	2.85	12	GH-61
MGFS39E3336**	3.3~3.6	30dBm@2.5%	40	6	2.85	13	GH-61

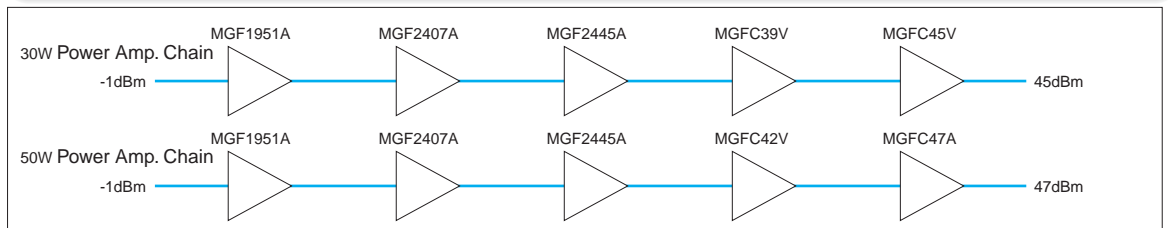
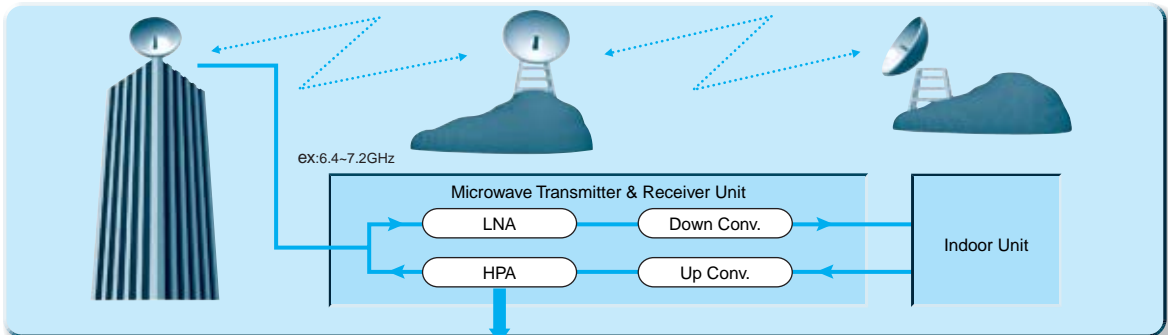
* : New Product ** : Under Development

Lineup for 12GHz -Band LNB

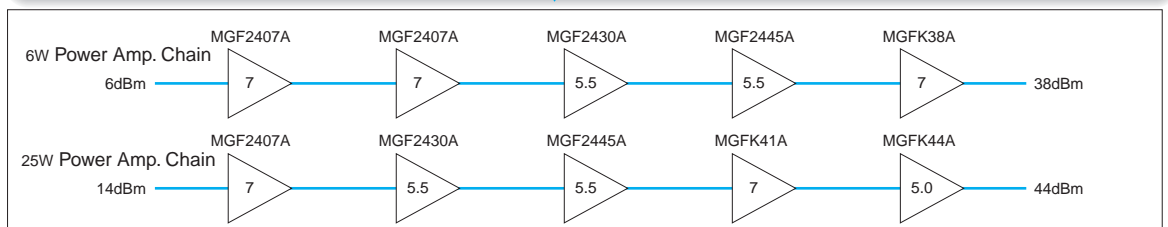
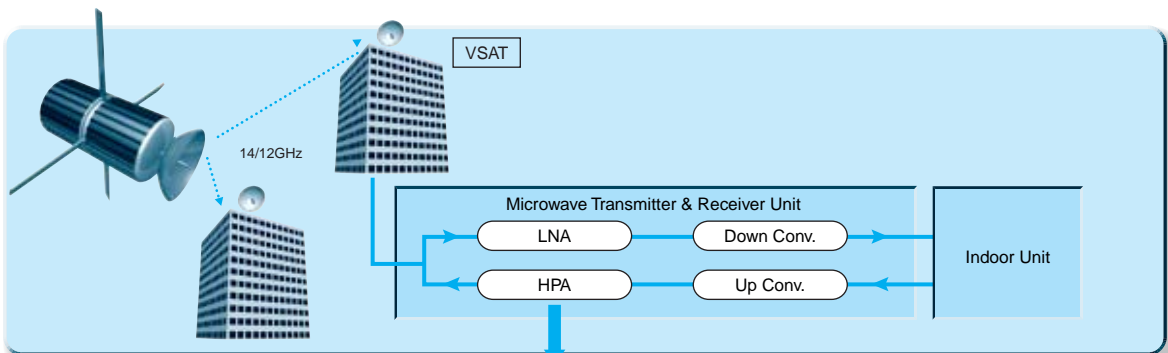


Performance of LNB	1st Stage	2nd Stage	Mixer
Low Noise Model	MGF4941AL	MGF4941AL	MGF4934CM
Standard Model	MGF4935AM	MGF4934CM	MGF4934CM

Lineup for Microwave Links



Lineup for Satellite Communication



Application Note

		Title	Date
GaAs Transistors	f=1.9GHzband	RF characteristics data of MGF0915A for Freq=1.85-1.95GHz band	May./2005
		RF characteristics data of MGF0921A for Freq=1.85-1.95GHz band	May./2005
		RF characteristics data of MGF0951P for Freq=1.85-1.95GHz band	May./2005
		RF characteristics data of MGF0952P for Freq=1.85-1.95GHz band	May./2005
	f=2.1GHzband	RF characteristics data of MGF0906B for Freq.=2.11-2.17GHz band	Apr./2005
		RF characteristics data of MGF0907B for Freq.=2.11-2.17GHz band	Apr./2005
		RF characteristics data of MGF0915A for Freq=2.11-2.17GHz band	May./2005
		RF characteristics data of MGF0921A for Freq=2.11-2.17GHz band	May./2005
		RF characteristics data of MGF0951P for Freq=2.11-2.17GHz band	May./2005
		RF characteristics data of MGF0952P for Freq=2.11-2.17GHz band	May./2005
	f=2.35GHz band	RF characteristics data of MGF0915A for Freq=2.3-2.4GHz band	May./2005
		RF characteristics data of MGF0921A for Freq=2.3-2.4GHz band	May./2005
		RF characteristics data of MGF0951P for Freq=2.3-2.4GHz band	May./2005
		RF characteristics data of MGF0952P for Freq=2.3-2.4GHz band	May./2005
	f=2.6GHzband	RF characteristics data of MGF0915A for Freq=2.5-2.6GHz band	May./2005
		RF characteristics data of MGF0921A for Freq=2.5-2.6GHz band	May./2005
RF characteristics data of MGF0951P for Freq=2.5-2.6GHz band		May./2005	
RF characteristics data of MGF0952P for Freq=2.5-2.6GHz band		May./2005	

High Frequency Devices Naming System

■ GaAs FET(Discrete)
MGF 1403 BX

- Quality Grade X : IGX
V : IGV

■ Internally Matched GaAs FET
MGF C 36 V 5964

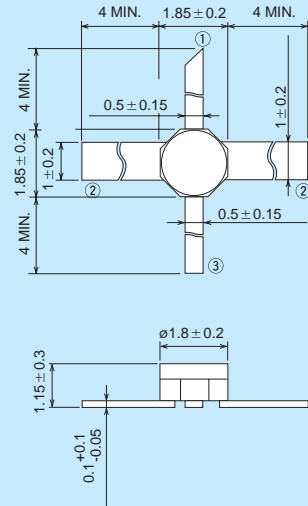
- Freq. Band : L, S, C, X, K, Ku
- Typical Output power in dBm
ex.36=36dBm=4W(typ.)
- Internally Matched : V, A
Multi Stage FET Amp : H
Multi Stage HBT Amp : E
- Freq. Band in GHz
ex.5964=5.9~6.4GHz

■ GaAs Hybrid IC
FA 01 2 34

- Device Structure : FA(FET), BA(Bipolar Transistor)
- Freq. Band in GHz
- Stage Number
- Series Number

GD-4

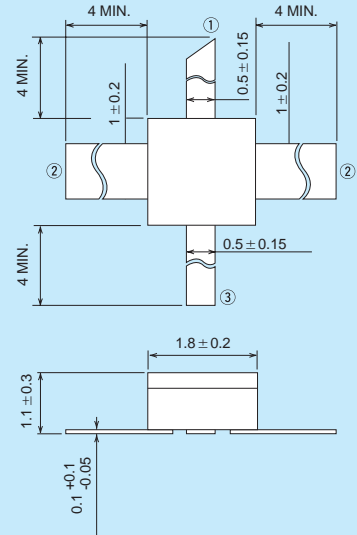
- ① Gate ③ Drain
- ② Source



Unit:mm

GD-9

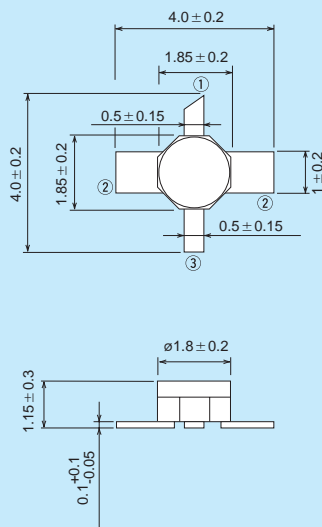
- ① Gate ③ Drain
- ② Source



Unit:mm

GD-16

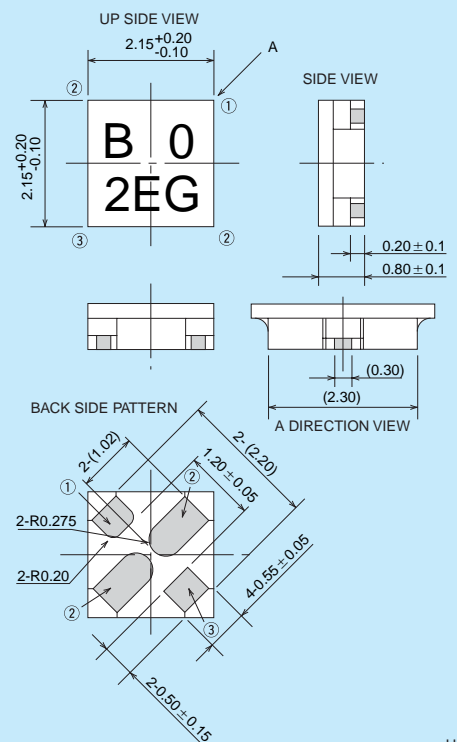
- ① Gate ③ Drain
- ② Source



Unit:mm

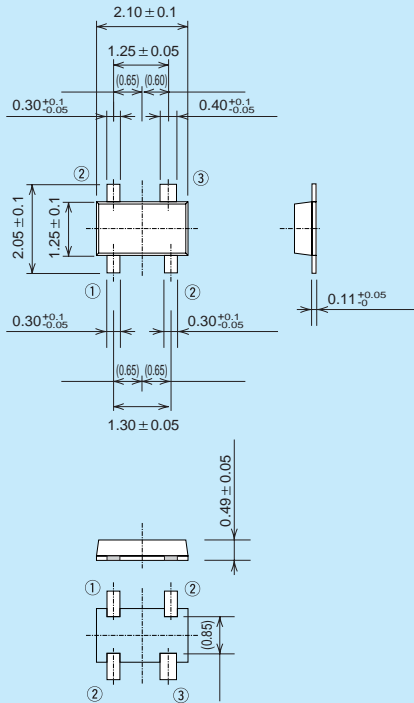
GD-27

- ① Gate ③ Drain
- ② Source



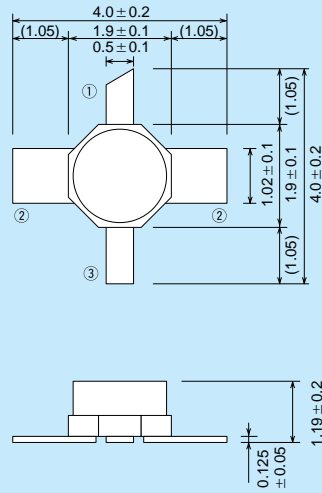
Unit:mm

GD-30 ①Gate ③Drain ②Source



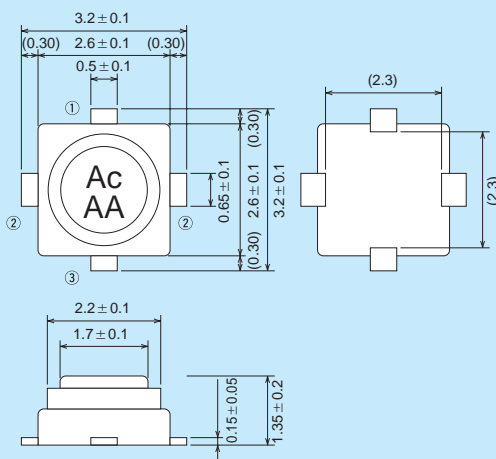
Unit:mm

GD-31 ①Gate ③Drain ②Source



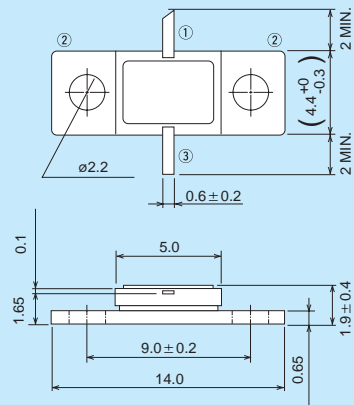
Unit:mm

GD-32 ①Gate ③Drain ②Source



Unit:mm

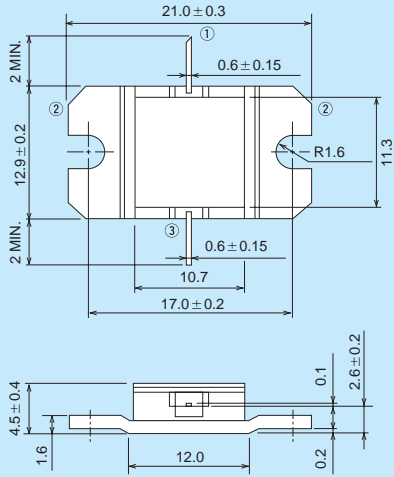
GF-7 ①Gate ③Drain ②Source



Unit:mm

GF-8

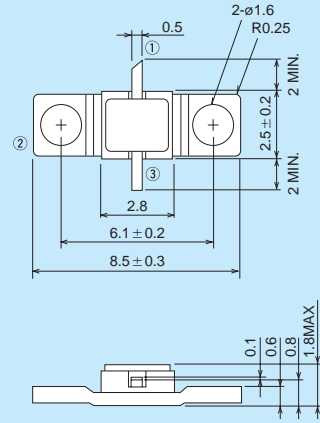
① Gate ③ Drain
② Source



Unit:mm

GF-17

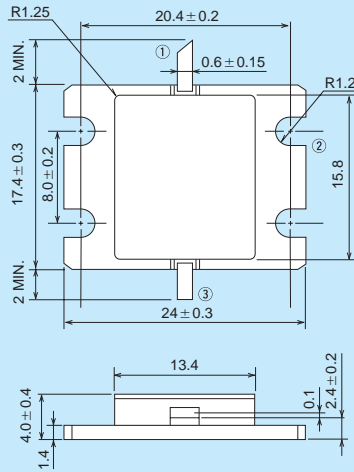
① Gate ③ Drain
② Source



Unit:mm

GF-18

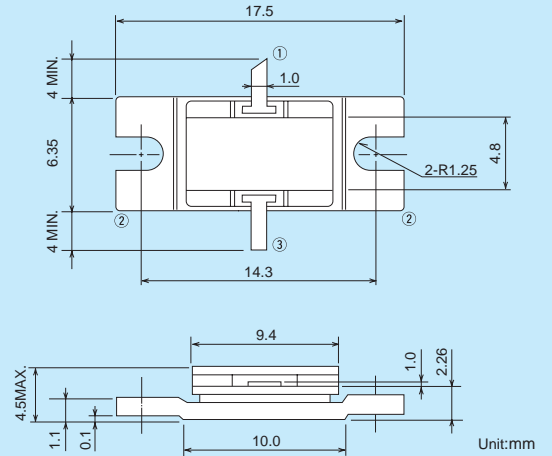
① Gate ③ Drain
② Source



Unit:mm

GF-21

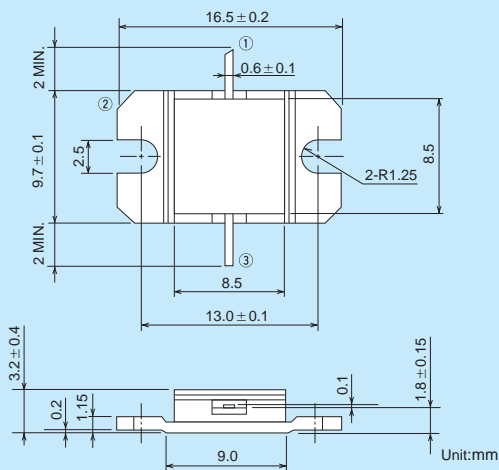
① Gate ③ Drain
② Source



Unit:mm

GF-27

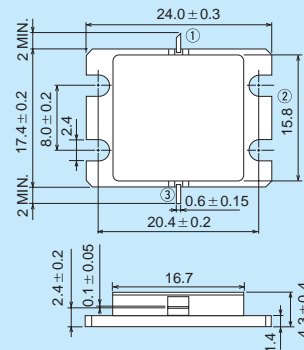
① Gate ③ Drain
② Source



Unit:mm

GF-38

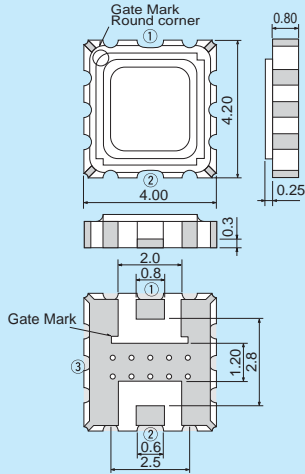
① Gate ③ Drain
② Source



Unit:mm

GF-50

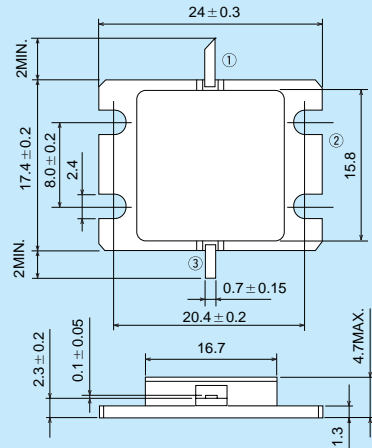
① Gate ③ Drain
② Source



Unit:mm

GF-53

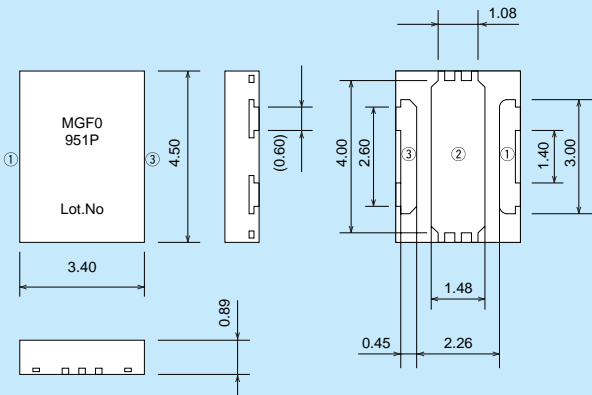
① Gate ③ Drain
② Source



Unit:mm

GF-55

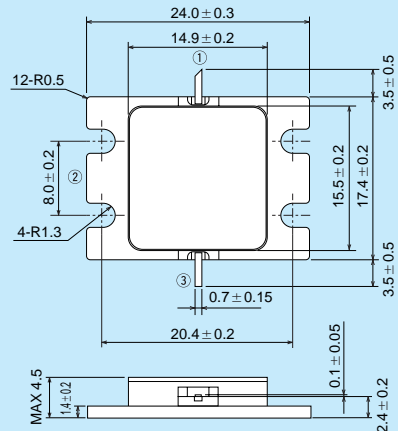
① Gate ③ Drain
② Source



Unit:mm

GF-60

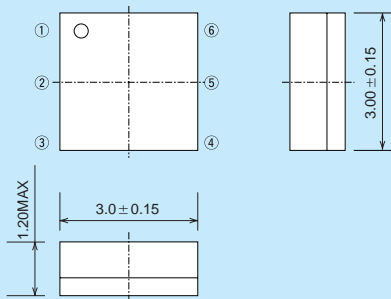
① Gate ③ Drain
② Source



Unit:mm

GH-44

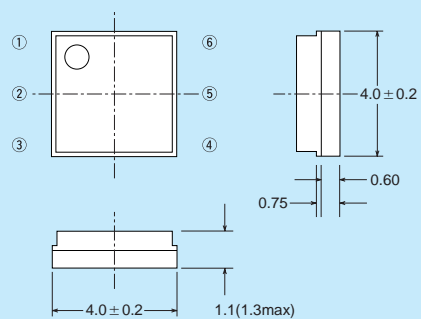
① Pin ③ Vc2 ⑤ Vcb ⑦ GND
② Vc1 ④ Pout ⑥ Vref



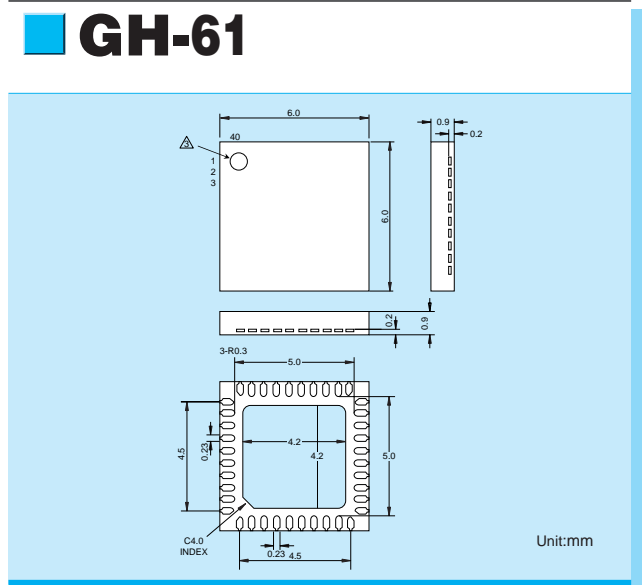
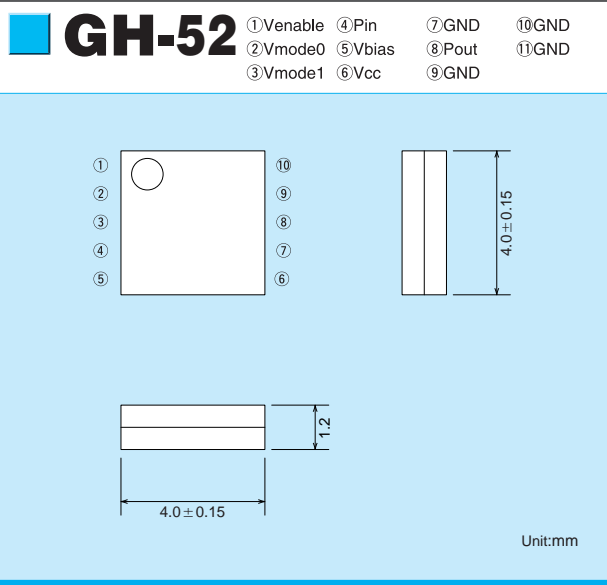
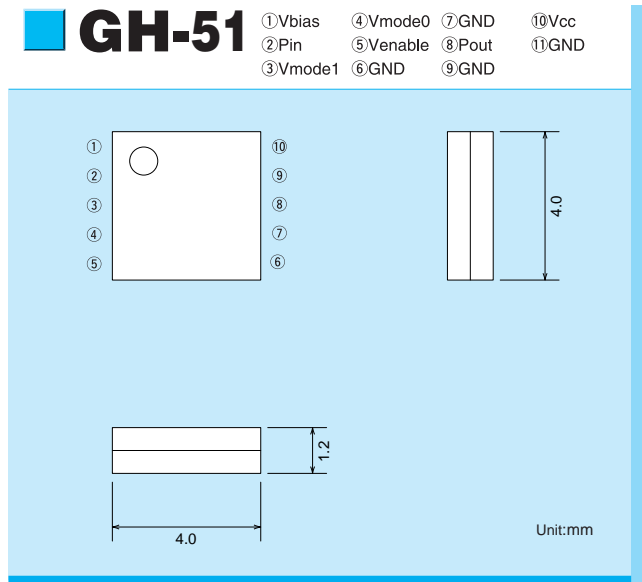
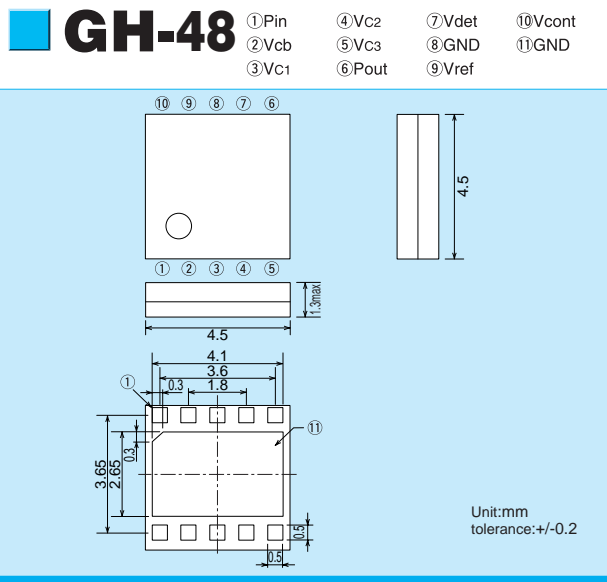
Unit:mm

GH-46

① Pin ③ Vc2 ⑤ Vcb ⑦ GND
② Vc1 ④ Pout ⑥ Vref



Unit:mm



MEMO

A series of horizontal dashed lines for writing.