

<Low Noise GaAs HEMT>

## MITSUBISHI ELECTRIC GaAs HEMT & FET

4pin flat lead package, Micro-X type plastic package, Leadless ceramic package, Micro-X package

QL-1104E-F

## Marking manner of MITSUBISHI ELECTRIC GaAs HEMT & FET

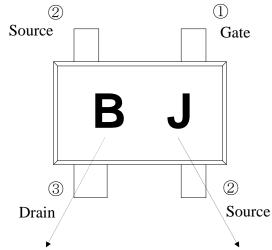
#### Contents:

- 1. 4pin flat lead package : GD-30 (MP)
- 2. Micro-X type plastic package : GD-32 (Not recommended)
- 3. Leadless ceramic package: GD-26,27 (EOL)
- 4. Micro-X package (EOL)
- 5. Micro-X package : GD-31 (EOL)

Publication Date : Jul./2020

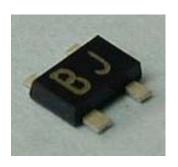
## 1. 4pin flat lead packaged device: GD-30 (MP)

## Top view



Electrodes direction:

- ① Gate
- ② Source
- 3 Drain



**Type** 

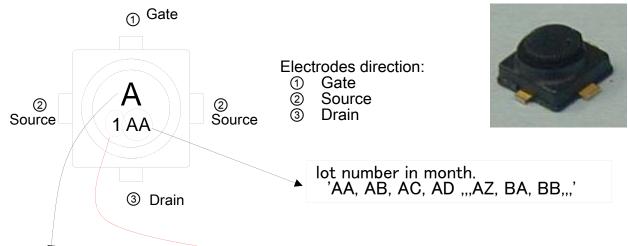
| -      |           |
|--------|-----------|
| Letter | Product   |
| В      | MGF4934BM |
| С      | MGF4921AM |
| D      | MGF4934CM |
| E      | MGF4935AM |
| Н      | MGF3022AM |
| J      | MGF4965BM |
| K      | MGF4937AM |
| Ĺ      | MGF4938AM |

#### The production year and month

|      | CY2017 | CY2018 | CY2019 | CY2020 | CY2021  |
|------|--------|--------|--------|--------|---------|
| Jan. | 9      | L      | Y      | s      | 9       |
| Feb. | 0      | M      | Z      | t      | 0       |
| Mar. | Α      | N      | a      | u      | Back to |
| Apr. | В      | Ρ      | b      | >      | "A"     |
| May  | C      | ø      | C      | 1      |         |
| Jun. | D      | R      | d      | 2      |         |
| Jul. | E      | S      | e      | 3      |         |
| Aug. | F      | Т      | h      | 4      |         |
| Sep. | G      | J      | k      | 5      |         |
| Oct. | Ξ      | ٧      | m      | 6      |         |
| Nov. | 7      | W      | n      | 7      |         |
| Dec. | K      | X      | r      | 8      |         |

Production year and month are indicated using numbers and alphabet. Right side character rounds once 4 years.

# 2. Micro-X type plastic package : GD-32 (Not recommended) <u>Top view</u>



#### Type

| Letter | Туре         |  |  |  |
|--------|--------------|--|--|--|
| Α      | MGF4941AL    |  |  |  |
| ш      | MGF4941CL-01 |  |  |  |
| Н      | MGF4964BL    |  |  |  |
| Р      | MGF4841CL-01 |  |  |  |
| S      | MGF4941CL-40 |  |  |  |
| Т      | MGF4841AL    |  |  |  |

#### The production year and month

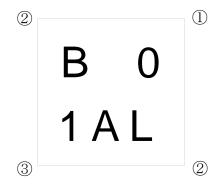
|      | CY2017 | CY2018 | CY2019 | CY2020 | CY2021  |
|------|--------|--------|--------|--------|---------|
| Jan. | 9      | L      | Y      | s      | 9       |
| Feb. | 0      | М      | Z      | t      | 0       |
| Mar. | Α      | N      | a      | u      | Back to |
| Apr. | В      | P      | b      | >      | " A"    |
| May  | C      | ø      | C      | 1      |         |
| Jun. | D      | R      | d      | 2      |         |
| Jul. | E      | S      | e      | 3      |         |
| Aug. | F      | T      | h      | 4      |         |
| Sep. | G      | J      | k      | 5      |         |
| Oct. | Н      | ٧      | m      | 6      |         |
| Nov. | 7      | W      | n      | 7      |         |
| Dec. | K      | X      | r      | 8      |         |

Production year and month are indicated using numbers and alphabet. Right side character rounds once 4 years.

## 3. Leadless ceramic package: GD-26,27 (EOL)

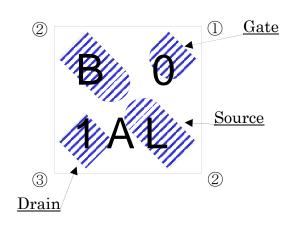
## Top view

# Terminal position (from top view)

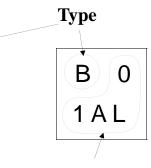


Electrodes direction:

- (1) Gate
- ② Source
- ③ Drain



| Letter | <u>Type</u>     |  |  |  |
|--------|-----------------|--|--|--|
| A      | MGF4951A/52A    |  |  |  |
| В      | MGF4953A/54A    |  |  |  |
| C      | <u>MGF1951A</u> |  |  |  |
| D      | MGF1952A        |  |  |  |
| E      | MGF1953A        |  |  |  |
| F      | MGF1954A        |  |  |  |
| G      | <u>MGF4851A</u> |  |  |  |
| J      | MGF4953B        |  |  |  |





### **Manufacturing lot number**

#### "01AL":

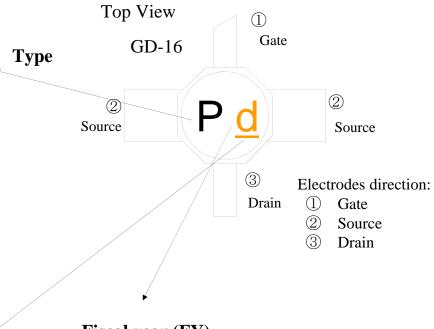
- '0' means year 2000 & 2010. (8: 2008, 9: 2009,,,1: 2011,,,)
- '1' means April (1:Apr. 2:May, ,,, 9:Dec., X:Jan, Y:Feb, Z:Mar.)
- 'AL' means lot number in month. 'AA, AB, AC, AD ,,,,AZ, BA,,,,'

## 4. Micro-X package (EOL)

Left side character indicates the type number.

Right side character, bottom bar and the color indicate manufacturing year and month.

| Туре      | Symbol | Outline |
|-----------|--------|---------|
| MGF1302   | A      |         |
| MGF1303B  | G      | GD-4    |
| MGF1451A  | Т      |         |
| MGF1402B  | J      | GD-9    |
| MGF1403B  | L      | GD-9    |
| MGF1601B  | Е      | CD 11   |
| MGF1801B  | D      | GD-11   |
| MGF1801BT | D      | GD-24   |
| MGF1907A  | P      | CD 16   |
| MGF1908A  | R      | GD-16   |



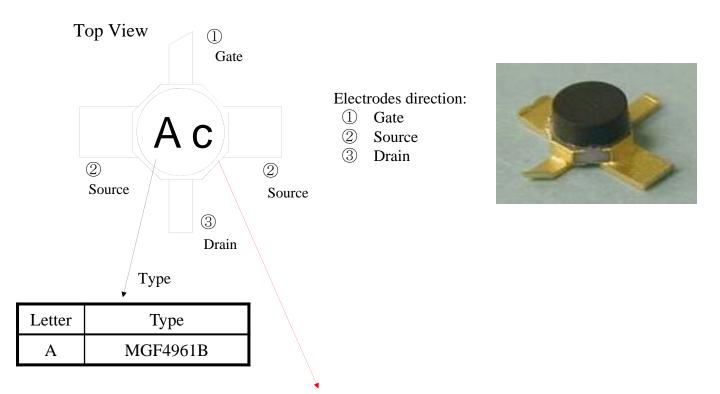
## Bottom bar and color indicate manufacturing month

|        | Without<br>bottom bar | With bottom bar |
|--------|-----------------------|-----------------|
| Blue   | Apr.                  | Oct.            |
| Orange | May                   | Nov.            |
| Black  | June                  | Dec.            |
| Red    | July                  | <u>Jan.</u>     |
| Green  | Aug.                  | <u>Feb.</u>     |
| Brown  | Sep.                  | <u>Mar.</u>     |

#### Fiscal year (FY)

| year | Symbol | year | Symbol | year        | Symbol |
|------|--------|------|--------|-------------|--------|
| ' 90 | g      | '00  | S      | '10         | С      |
| '91  | h      | '01  | t      | ' 11        | d      |
| ' 92 | j      | ' 02 | u      | 12          | e      |
| ' 93 | k      | '03  | v      | ' 13        | f      |
| ' 94 | 1      | ' 04 | W      | <b>'</b> 14 | g      |
| ' 95 | m      | ' 05 | X      | '15         | h      |
| '96  | n      | '06  | y      | back to     |        |
| ' 97 | p      | ' 07 | Z      |             | "j"    |
| ' 98 | q      | '08  | a      |             |        |
| '99  | r      | ' 09 | b      |             |        |

## 5. Micro-X package: GD-31 (EOL)



The production year and month

| CY2   | 2008   | CY2   | 2009   | CY2   | 2010   | CY    | 2011   | CY    | 2012          |
|-------|--------|-------|--------|-------|--------|-------|--------|-------|---------------|
| Month | Symbol        |
| Jan.  | S      | Jan.  | 9      | Jan.  | L      | Jan.  | Υ      | Jan.  | S             |
| Feb.  | t      | Feb.  | 0      | Feb.  | М      | Feb.  | Z      | Feb.  | t             |
| Mar   | u      | Mar   | Α      | Mar   | N      | Mar   | а      | Mar   | u             |
| Apr   | ٧      | Apr   | В      | Apr   | Р      | Apr   | b      | Apr   | V             |
| May   | 1      | May   | С      | May   | Q      | May   | С      | May   | la a a la 4 a |
| Jun   | 2      | Jun   | D      | Jun   | R      | Jun   | d      | Jun   | back to       |
| Jul   | 3      | Jul   | Е      | Jul   | S      | Jul   | е      | Jul   | I             |
| Aug   | 4      | Aug   | F      | Aug   | Т      | Aug   | h      | Aug   |               |
| Sep   | 5      | Sep   | G      | Sep   | U      | Sep   | k      | Sep   |               |
| Oct   | 6      | Oct   | Η      | Oct   | V      | Oct   | m      | Oct   |               |
| Nov   | 7      | Nov   | J      | Nov   | W      | Nov   | n      | Nov   |               |
| Dec   | 8      | Dec   | K      | Dec   | Χ      | Dec   | r      | Dec   |               |

Production year and month are indicated using numbers and alphabet. Right side character rounds once 4 years.

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