Ordering number : ENA1113A

SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

NPN Epitaxial Planar Silicon Transistor

# 55GN01FA — UHF Wide-band Low-noise Amplifier Applications

## Features

- High cut-off frequency : $f_T$=5.5GHz typ
- High gain : $|S21e|^2$=11dB typ (f=1GHz)
  =19dB typ (f=400MHz)
- Ultrasmall package permitting applied sets to be small and slim
- Halogen free compliance

## Specifications

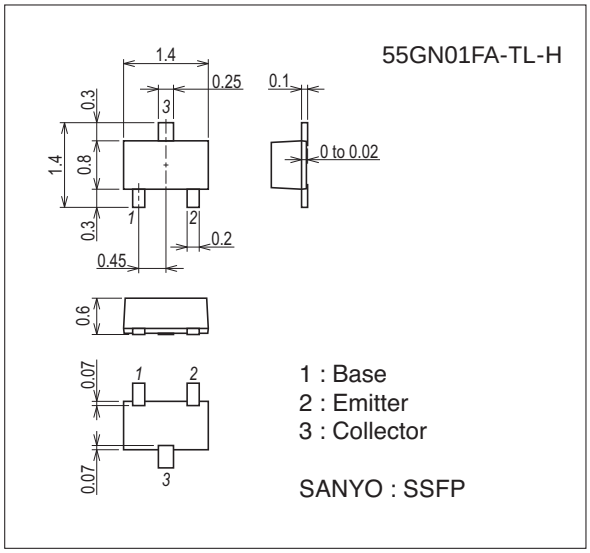
### Absolute Maximum Ratings at Ta=25°C

| Parameter | Symbol | Conditions | Ratings | Unit |
|---|---|---|---|---|
| Collector-to-Base Voltage | $V_{CBO}$ | | 20 | V |
| Collector-to-Emitter Voltage | $V_{CEO}$ | | 10 | V |
| Emitter-to-Base Voltage | $V_{EBO}$ | | 3 | V |
| Collector Current | $I_C$ | | 70 | mA |
| Collector Dissipation | $P_C$ | | 250 | mW |
| Junction Temperature | Tj | | 150 | °C |
| Storage Temperature | Tstg | | −55 to +150 | °C |

### Package Dimensions

unit : mm (typ)

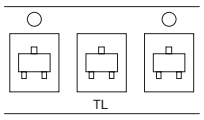
7029A-002



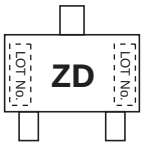

### Product & Package Information

- Package : SSFP
- JEITA, JEDEC : SC-81
- Minimum Packing Quantity : 8,000 pcs./reel

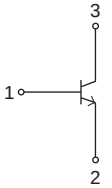
### Packing Type: TL




### Marking




### Electrical Connection

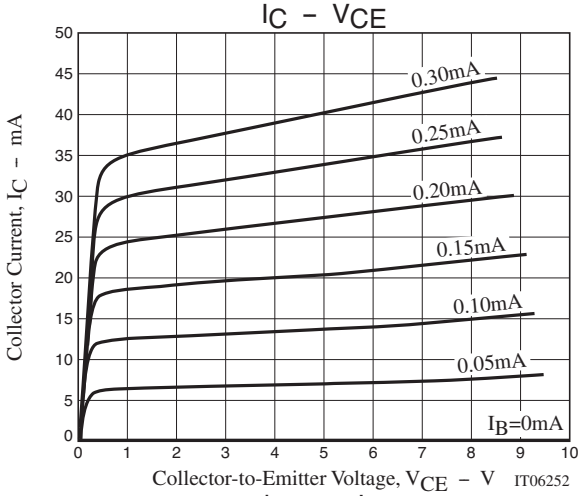


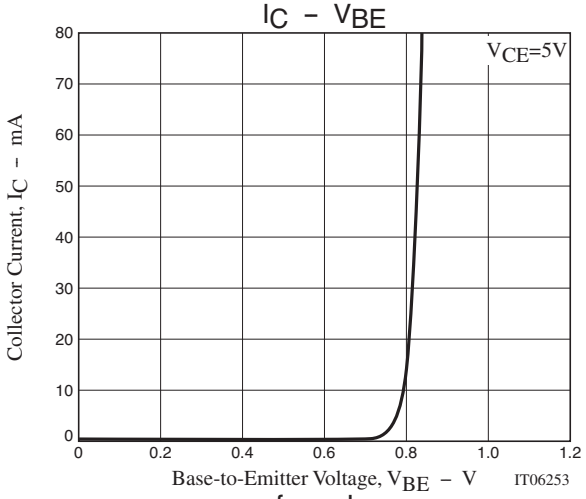
## Electrical Characteristics at Ta=25°C

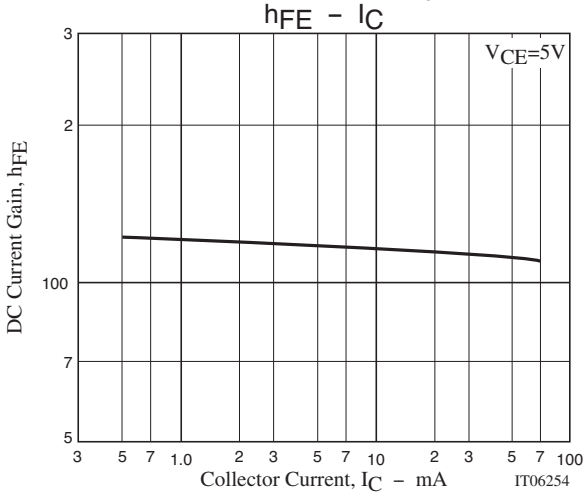
| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---|---|---|---|---|---|
| | | | min | typ | max | |
| Collector Cutoff Current | $I_{CBO}$ | $V_{CB}$=10V, $I_E$=0A | | | 0.1 | μA |
| Emitter Cutoff Current | $I_{EBO}$ | $V_{EB}$=2V, $I_C$=0A | | | 1 | μA |
| DC Current Gain | $h_{FE}$ | $V_{CE}$=5V, $I_C$=10mA | 100 | | 160 | |
| Gain-Bandwidth Product | $f_T1$ | $V_{CE}$=3V, $I_C$=5mA | 3.0 | 4.5 | | GHz |
| | $f_T2$ | $V_{CE}$=5V, $I_C$=20mA | | 5.5 | | GHz |
| Output Capacitance | Cob | $V_{CB}$=10V, f=1MHz | | 0.95 | 1.2 | pF |
| Reverse Transfer Capacitance | Cre | | | 0.6 | | pF |
| Forward Transfer Gain | $\|S21e\|^2 1$ | $V_{CE}$=5V, $I_C$=20mA, f=1GHz | 8 | 11 | | dB |
| | $\|S21e\|^2 2$ | $V_{CE}$=5V, $I_C$=20mA, f=400MHz | 16 | 19 | | dB |
| Noise Figure | NF | $V_{CE}$=3V, $I_C$=5mA, f=1GHz, $Z_S$=$Z_L$=50Ω | | 1.9 | | dB |

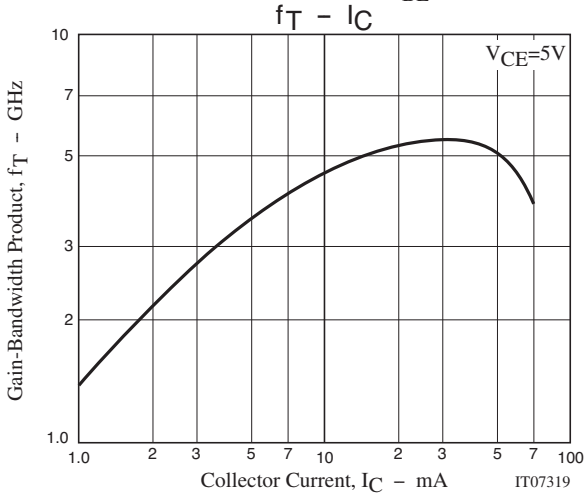
## Ordering Information

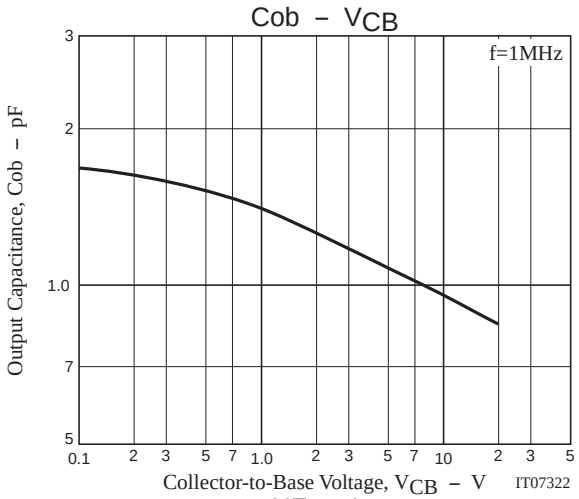
| Device | Package | Shipping | memo |
|---|---|---|---|
| 55GN01FA-TL-H | SSFP | 8,000pcs./reel | Pb Free and Halogen Free |

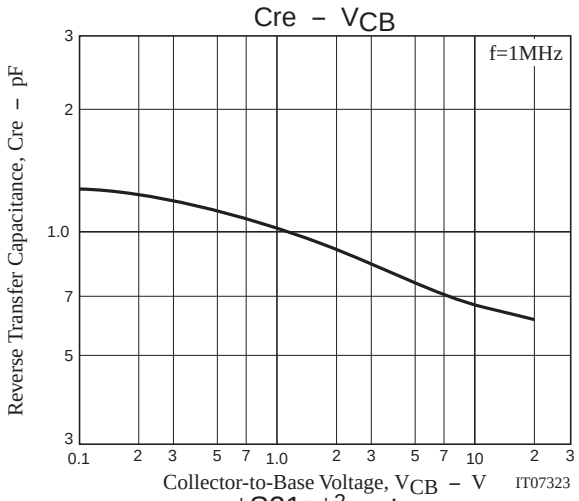


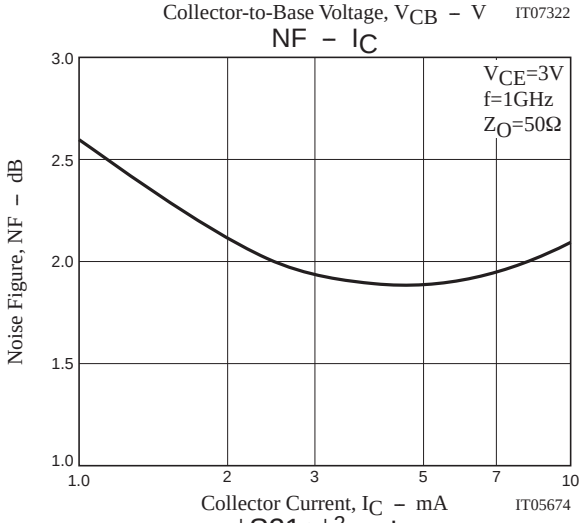



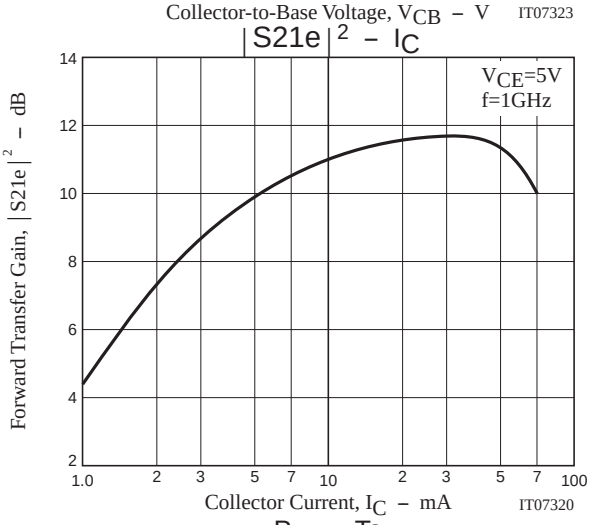



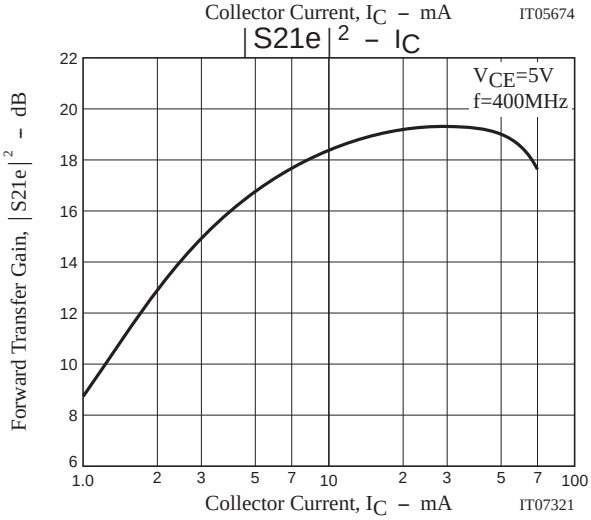



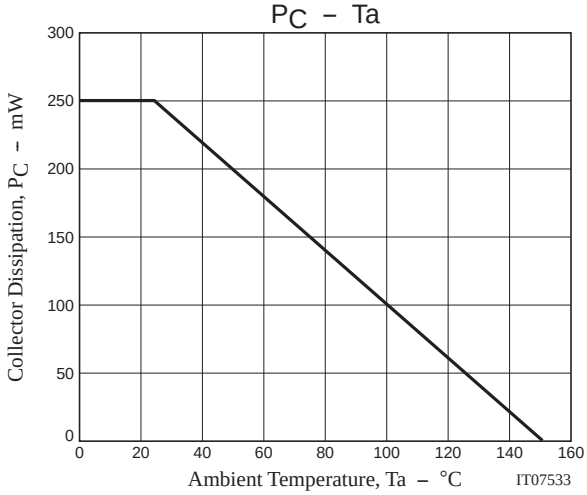

Cob – VCB
f=1MHz
Output Capacitance, Cob – pF
Collector-to-Base Voltage, VCB – V
IT07322


Cre – VCB
f=1MHz
Reverse Transfer Capacitance, Cre – pF
Collector-to-Base Voltage, VCB – V
IT07323


NF – IC
VCE=3V
f=1GHz
ZO=50Ω
Noise Figure, NF – dB
Collector Current, IC – mA
IT05674


|S21e|2 – IC
VCE=5V
f=1GHz
Forward Transfer Gain, |S21e|2 – dB
Collector Current, IC – mA
IT07320


|S21e|2 – IC
VCE=5V
f=400MHz
Forward Transfer Gain, |S21e|2 – dB
Collector Current, IC – mA
IT07321


PC – Ta
Collector Dissipation, PC – mW
Ambient Temperature, Ta – °C
IT07533

**S Parameters (Common emitter)**

$V_{CE}$=5V, $I_C$=1mA, $Z_O$=50Ω

| Freq(MHz) | \|S11\| | ∠S11 | \|S21\| | ∠S21 | \|S12\| | ∠S12 | \|S22\| | ∠S22 |
|---|---|---|---|---|---|---|---|---|
| 100 | 0.960 | -21.33 | 3.404 | 164.99 | 0.046 | 77.57 | 0.986 | -9.38 |
| 200 | 0.943 | -40.21 | 3.215 | 151.43 | 0.085 | 64.91 | 0.938 | -18.56 |
| 400 | 0.888 | -72.87 | 2.700 | 128.23 | 0.139 | 46.91 | 0.838 | -31.44 |
| 600 | 0.853 | -97.36 | 2.288 | 110.64 | 0.167 | 34.66 | 0.757 | -40.30 |
| 800 | 0.816 | -115.67 | 1.926 | 96.26 | 0.179 | 26.17 | 0.706 | -46.95 |
| 1000 | 0.788 | -129.19 | 1.659 | 84.81 | 0.180 | 19.95 | 0.676 | -52.20 |
| 1200 | 0.767 | -140.35 | 1.451 | 74.89 | 0.174 | 16.50 | 0.664 | -56.92 |
| 1400 | 0.749 | -149.12 | 1.286 | 66.48 | 0.168 | 14.89 | 0.662 | -61.86 |
| 1600 | 0.734 | -156.38 | 1.162 | 59.19 | 0.160 | 14.19 | 0.668 | -66.10 |
| 1800 | 0.719 | -163.17 | 1.061 | 52.60 | 0.149 | 15.77 | 0.677 | -70.98 |
| 2000 | 0.705 | -169.31 | 0.977 | 46.28 | 0.141 | 19.10 | 0.683 | -75.24 |
| 2200 | 0.694 | -174.71 | 0.893 | 41.12 | 0.136 | 24.16 | 0.695 | -79.81 |
| 2400 | 0.683 | 179.60 | 0.825 | 36.38 | 0.135 | 30.74 | 0.705 | -84.33 |
| 2600 | 0.675 | 174.53 | 0.765 | 32.38 | 0.141 | 38.01 | 0.717 | -88.85 |
| 2800 | 0.664 | 169.68 | 0.709 | 29.26 | 0.149 | 45.42 | 0.729 | -93.41 |
| 3000 | 0.653 | 165.11 | 0.667 | 26.87 | 0.163 | 51.07 | 0.737 | -97.77 |

$V_{CE}$=5V, $I_C$=3mA, $Z_O$=50Ω

| Freq(MHz) | \|S11\| | ∠S11 | \|S21\| | ∠S21 | \|S12\| | ∠S12 | \|S22\| | ∠S22 |
|---|---|---|---|---|---|---|---|---|
| 100 | 0.897 | -35.17 | 8.858 | 157.25 | 0.044 | 71.22 | 0.940 | -17.73 |
| 200 | 0.846 | -64.07 | 7.795 | 138.86 | 0.073 | 55.30 | 0.816 | -31.57 |
| 400 | 0.761 | -104.22 | 5.532 | 114.15 | 0.100 | 39.30 | 0.626 | -45.72 |
| 600 | 0.727 | -127.47 | 4.177 | 99.10 | 0.110 | 33.80 | 0.530 | -52.62 |
| 800 | 0.698 | -142.65 | 3.306 | 87.99 | 0.115 | 31.00 | 0.483 | -57.50 |
| 1000 | 0.681 | -152.69 | 2.715 | 79.36 | 0.120 | 30.86 | 0.461 | -61.55 |
| 1200 | 0.670 | -160.54 | 2.308 | 72.11 | 0.121 | 33.53 | 0.456 | -65.03 |
| 1400 | 0.656 | -166.79 | 2.012 | 65.45 | 0.124 | 35.60 | 0.461 | -69.34 |
| 1600 | 0.647 | -172.10 | 1.793 | 59.66 | 0.130 | 38.30 | 0.468 | -72.55 |
| 1800 | 0.635 | -176.87 | 1.621 | 54.21 | 0.135 | 41.86 | 0.479 | -76.57 |
| 2000 | 0.628 | 178.54 | 1.481 | 48.73 | 0.144 | 45.68 | 0.490 | -80.11 |
| 2200 | 0.616 | 173.99 | 1.351 | 44.05 | 0.153 | 48.13 | 0.501 | -83.71 |
| 2400 | 0.611 | 169.80 | 1.246 | 39.67 | 0.167 | 50.77 | 0.518 | -87.42 |
| 2600 | 0.601 | 166.00 | 1.157 | 35.62 | 0.178 | 53.54 | 0.528 | -91.49 |
| 2800 | 0.597 | 162.06 | 1.079 | 32.28 | 0.196 | 55.92 | 0.543 | -95.09 |
| 3000 | 0.588 | 158.02 | 1.015 | 29.15 | 0.215 | 56.86 | 0.555 | -98.59 |

$V_{CE}$=5V, $I_C$=5mA, $Z_O$=50Ω

| Freq(MHz) | \|S11\| | ∠S11 | \|S21\| | ∠S21 | \|S12\| | ∠S12 | \|S22\| | ∠S22 |
|---|---|---|---|---|---|---|---|---|
| 100 | 0.842 | -46.44 | 13.174 | 151.15 | 0.040 | 64.28 | 0.891 | -24.16 |
| 200 | 0.777 | -81.34 | 10.723 | 130.44 | 0.062 | 50.01 | 0.716 | -39.59 |
| 400 | 0.699 | -121.57 | 6.861 | 106.89 | 0.080 | 39.73 | 0.508 | -52.96 |
| 600 | 0.679 | -141.39 | 4.942 | 94.02 | 0.089 | 37.45 | 0.424 | -58.67 |
| 800 | 0.661 | -153.84 | 3.830 | 84.43 | 0.096 | 38.27 | 0.390 | -62.90 |
| 1000 | 0.648 | -162.04 | 3.117 | 77.09 | 0.103 | 40.59 | 0.376 | -66.27 |
| 1200 | 0.641 | -168.02 | 2.643 | 70.51 | 0.111 | 43.94 | 0.374 | -69.52 |
| 1400 | 0.629 | -173.53 | 2.286 | 64.60 | 0.120 | 46.56 | 0.382 | -73.45 |
| 1600 | 0.620 | -177.70 | 2.039 | 59.33 | 0.130 | 48.48 | 0.390 | -76.69 |
| 1800 | 0.610 | 177.97 | 1.841 | 54.24 | 0.139 | 50.63 | 0.400 | -79.97 |
| 2000 | 0.603 | 173.76 | 1.676 | 49.26 | 0.153 | 53.08 | 0.413 | -83.21 |
| 2200 | 0.594 | 169.87 | 1.528 | 44.84 | 0.167 | 53.92 | 0.426 | -86.71 |
| 2400 | 0.588 | 166.14 | 1.413 | 40.43 | 0.181 | 55.16 | 0.441 | -89.93 |
| 2600 | 0.580 | 162.49 | 1.313 | 36.57 | 0.195 | 56.19 | 0.453 | -93.54 |
| 2800 | 0.576 | 158.82 | 1.231 | 33.47 | 0.213 | 57.85 | 0.466 | -96.88 |
| 3000 | 0.565 | 155.09 | 1.156 | 30.12 | 0.232 | 57.84 | 0.481 | -99.87 |

**S Parameters (Common emitter)**

$V_{CE}$=5V, $I_C$=10mA, $Z_O$=50Ω

| Freq(MHz) | \|S11\| | ∠S11 | \|S21\| | ∠S21 | \|S12\| | ∠S12 | \|S22\| | ∠S22 |
|---|---|---|---|---|---|---|---|---|
| 100 | 0.739 | -68.53 | 20.705 | 140.20 | 0.033 | 59.97 | 0.784 | -35.06 |
| 200 | 0.678 | -107.92 | 14.465 | 118.48 | 0.048 | 46.54 | 0.555 | -51.65 |
| 400 | 0.639 | -142.44 | 8.256 | 98.88 | 0.060 | 44.77 | 0.362 | -62.32 |
| 600 | 0.636 | -156.46 | 5.721 | 88.62 | 0.070 | 47.35 | 0.306 | -66.66 |
| 800 | 0.628 | -165.41 | 4.393 | 80.84 | 0.082 | 51.17 | 0.286 | -70.68 |
| 1000 | 0.620 | -171.30 | 3.549 | 74.44 | 0.094 | 53.84 | 0.280 | -73.86 |
| 1200 | 0.615 | -176.02 | 2.981 | 68.87 | 0.108 | 55.37 | 0.285 | -76.55 |
| 1400 | 0.606 | 179.70 | 2.584 | 63.58 | 0.121 | 57.13 | 0.297 | -80.44 |
| 1600 | 0.599 | 176.38 | 2.298 | 58.72 | 0.134 | 58.54 | 0.307 | -83.02 |
| 1800 | 0.589 | 173.12 | 2.065 | 54.21 | 0.149 | 58.63 | 0.319 | -86.36 |
| 2000 | 0.586 | 169.27 | 1.889 | 49.40 | 0.165 | 59.48 | 0.329 | -88.76 |
| 2200 | 0.573 | 165.75 | 1.719 | 45.30 | 0.179 | 59.22 | 0.344 | -91.59 |
| 2400 | 0.567 | 162.49 | 1.589 | 41.42 | 0.195 | 59.66 | 0.362 | -94.36 |
| 2600 | 0.562 | 158.91 | 1.481 | 37.55 | 0.211 | 59.11 | 0.374 | -97.29 |
| 2800 | 0.558 | 155.91 | 1.385 | 34.30 | 0.229 | 59.13 | 0.388 | -100.28 |
| 3000 | 0.548 | 152.46 | 1.310 | 31.07 | 0.248 | 58.50 | 0.400 | -102.49 |

$V_{CE}$=5V, $I_C$=15mA, $Z_O$=50Ω

| Freq(MHz) | \|S11\| | ∠S11 | \|S21\| | ∠S21 | \|S12\| | ∠S12 | \|S22\| | ∠S22 |
|---|---|---|---|---|---|---|---|---|
| 100 | 0.680 | -83.50 | 24.897 | 133.56 | 0.029 | 56.21 | 0.704 | -41.82 |
| 200 | 0.639 | -122.13 | 16.056 | 112.77 | 0.040 | 47.85 | 0.468 | -57.53 |
| 400 | 0.621 | -151.34 | 8.769 | 95.48 | 0.052 | 50.10 | 0.300 | -67.15 |
| 600 | 0.623 | -162.54 | 6.015 | 86.49 | 0.064 | 53.63 | 0.258 | -70.98 |
| 800 | 0.620 | -170.29 | 4.606 | 79.25 | 0.079 | 57.27 | 0.244 | -74.71 |
| 1000 | 0.611 | -175.21 | 3.708 | 73.36 | 0.093 | 58.61 | 0.243 | -78.49 |
| 1200 | 0.606 | -179.14 | 3.121 | 67.87 | 0.107 | 60.22 | 0.249 | -80.66 |
| 1400 | 0.599 | 176.96 | 2.697 | 63.02 | 0.122 | 61.45 | 0.262 | -84.17 |
| 1600 | 0.593 | 174.14 | 2.394 | 58.44 | 0.138 | 61.14 | 0.275 | -86.76 |
| 1800 | 0.584 | 170.85 | 2.158 | 54.02 | 0.153 | 61.15 | 0.287 | -89.61 |
| 2000 | 0.577 | 167.75 | 1.973 | 49.36 | 0.168 | 61.74 | 0.298 | -91.80 |
| 2200 | 0.569 | 164.22 | 1.790 | 45.54 | 0.184 | 61.18 | 0.314 | -94.29 |
| 2400 | 0.564 | 160.80 | 1.659 | 41.46 | 0.201 | 60.23 | 0.330 | -97.05 |
| 2600 | 0.556 | 157.53 | 1.542 | 37.83 | 0.216 | 60.12 | 0.342 | -99.52 |
| 2800 | 0.552 | 154.68 | 1.446 | 34.40 | 0.234 | 59.34 | 0.352 | -101.94 |
| 3000 | 0.543 | 151.47 | 1.361 | 31.44 | 0.253 | 58.86 | 0.366 | -103.99 |

$V_{CE}$=5V, $I_C$=20mA, $Z_O$=50Ω

| Freq(MHz) | \|S11\| | ∠S11 | \|S21\| | ∠S21 | \|S12\| | ∠S12 | \|S22\| | ∠S22 |
|---|---|---|---|---|---|---|---|---|
| 100 | 0.641 | -94.49 | 27.471 | 128.94 | 0.027 | 55.26 | 0.649 | -46.11 |
| 200 | 0.620 | -130.76 | 16.818 | 109.44 | 0.036 | 46.79 | 0.413 | -61.30 |
| 400 | 0.615 | -156.41 | 9.019 | 93.57 | 0.048 | 53.11 | 0.265 | -70.11 |
| 600 | 0.619 | -165.97 | 6.162 | 85.24 | 0.062 | 57.92 | 0.228 | -73.77 |
| 800 | 0.615 | -172.83 | 4.701 | 78.51 | 0.078 | 61.14 | 0.223 | -77.54 |
| 1000 | 0.608 | -177.23 | 3.787 | 72.80 | 0.092 | 61.33 | 0.223 | -81.02 |
| 1200 | 0.605 | 179.19 | 3.189 | 67.44 | 0.108 | 63.68 | 0.231 | -83.24 |
| 1400 | 0.597 | 175.70 | 2.755 | 62.79 | 0.123 | 63.07 | 0.245 | -86.33 |
| 1600 | 0.590 | 172.88 | 2.442 | 58.12 | 0.138 | 62.89 | 0.255 | -88.33 |
| 1800 | 0.581 | 169.98 | 2.201 | 53.81 | 0.156 | 63.03 | 0.272 | -91.87 |
| 2000 | 0.578 | 166.61 | 2.013 | 49.41 | 0.172 | 62.58 | 0.281 | -93.44 |
| 2200 | 0.567 | 163.21 | 1.834 | 45.29 | 0.187 | 61.81 | 0.298 | -95.50 |
| 2400 | 0.564 | 160.39 | 1.691 | 41.48 | 0.204 | 61.15 | 0.311 | -98.00 |
| 2600 | 0.556 | 157.07 | 1.572 | 37.96 | 0.218 | 61.01 | 0.326 | -100.45 |
| 2800 | 0.552 | 153.99 | 1.478 | 34.76 | 0.239 | 59.99 | 0.337 | -102.57 |
| 3000 | 0.544 | 151.04 | 1.389 | 31.49 | 0.256 | 58.80 | 0.349 | -104.89 |

**S Parameters (Common emitter)**

$V_{CE}$=5V, $I_C$=30mA, $Z_O$=50Ω

| Freq(MHz) | \|S11\| | ∠S11 | \|S21\| | ∠S21 | \|S12\| | ∠S12 | \|S22\| | ∠S22 |
|---|---|---|---|---|---|---|---|---|
| 100 | 0.606 | -108.75 | 29.954 | 123.54 | 0.022 | 52.56 | 0.574 | -51.26 |
| 200 | 0.604 | -140.73 | 17.448 | 105.68 | 0.031 | 50.23 | 0.355 | -64.86 |
| 400 | 0.610 | -161.95 | 9.185 | 91.52 | 0.044 | 57.91 | 0.229 | -71.81 |
| 600 | 0.617 | -169.73 | 6.244 | 83.80 | 0.061 | 62.49 | 0.202 | -74.91 |
| 800 | 0.612 | -175.60 | 4.752 | 77.41 | 0.077 | 64.49 | 0.201 | -79.23 |
| 1000 | 0.608 | -179.42 | 3.833 | 71.88 | 0.091 | 66.02 | 0.204 | -82.01 |
| 1200 | 0.604 | 177.51 | 3.213 | 66.72 | 0.108 | 65.81 | 0.214 | -84.26 |
| 1400 | 0.598 | 174.16 | 2.786 | 62.07 | 0.124 | 64.91 | 0.229 | -87.74 |
| 1600 | 0.591 | 171.45 | 2.465 | 57.60 | 0.141 | 64.74 | 0.242 | -89.81 |
| 1800 | 0.584 | 168.71 | 2.221 | 53.24 | 0.156 | 64.27 | 0.255 | -92.03 |
| 2000 | 0.582 | 165.57 | 2.027 | 48.84 | 0.173 | 63.95 | 0.266 | -93.76 |
| 2200 | 0.569 | 162.47 | 1.842 | 44.77 | 0.189 | 62.96 | 0.281 | -96.01 |
| 2400 | 0.566 | 159.27 | 1.707 | 41.02 | 0.205 | 62.39 | 0.298 | -98.15 |
| 2600 | 0.560 | 156.39 | 1.589 | 37.71 | 0.221 | 61.62 | 0.312 | -100.74 |
| 2800 | 0.555 | 153.39 | 1.489 | 34.29 | 0.241 | 60.71 | 0.324 | -103.01 |
| 3000 | 0.546 | 150.41 | 1.401 | 31.06 | 0.260 | 59.58 | 0.339 | -104.84 |

$V_{CE}$=5V, $I_C$=50mA, $Z_O$=50Ω

| Freq(MHz) | \|S11\| | ∠S11 | \|S21\| | ∠S21 | \|S12\| | ∠S12 | \|S22\| | ∠S22 |
|---|---|---|---|---|---|---|---|---|
| 100 | 0.587 | -124.93 | 30.667 | 118.01 | 0.020 | 53.81 | 0.493 | -53.52 |
| 200 | 0.607 | -151.01 | 17.135 | 101.95 | 0.027 | 56.26 | 0.302 | -62.86 |
| 400 | 0.618 | -167.42 | 8.863 | 89.36 | 0.042 | 61.87 | 0.204 | -65.99 |
| 600 | 0.625 | -173.36 | 6.015 | 82.09 | 0.057 | 67.05 | 0.188 | -69.08 |
| 800 | 0.625 | -178.39 | 4.579 | 75.84 | 0.073 | 68.51 | 0.192 | -73.08 |
| 1000 | 0.621 | 178.24 | 3.676 | 70.38 | 0.090 | 67.50 | 0.200 | -76.57 |
| 1200 | 0.617 | 175.49 | 3.102 | 65.41 | 0.106 | 67.96 | 0.213 | -79.88 |
| 1400 | 0.611 | 172.50 | 2.675 | 60.74 | 0.123 | 67.75 | 0.228 | -83.13 |
| 1600 | 0.605 | 170.02 | 2.371 | 56.11 | 0.138 | 67.29 | 0.245 | -85.73 |
| 1800 | 0.598 | 167.32 | 2.131 | 51.76 | 0.155 | 65.91 | 0.261 | -88.36 |
| 2000 | 0.594 | 164.43 | 1.944 | 47.33 | 0.173 | 65.72 | 0.273 | -90.18 |
| 2200 | 0.587 | 161.08 | 1.771 | 43.20 | 0.189 | 64.76 | 0.291 | -93.08 |
| 2400 | 0.582 | 158.20 | 1.636 | 39.59 | 0.204 | 63.82 | 0.308 | -95.85 |
| 2600 | 0.575 | 155.22 | 1.517 | 36.00 | 0.222 | 63.08 | 0.325 | -98.58 |
| 2800 | 0.571 | 151.88 | 1.420 | 32.74 | 0.241 | 62.62 | 0.341 | -100.91 |
| 3000 | 0.564 | 149.04 | 1.345 | 29.50 | 0.259 | 61.30 | 0.351 | -102.73 |

**Embossed Taping Specification**

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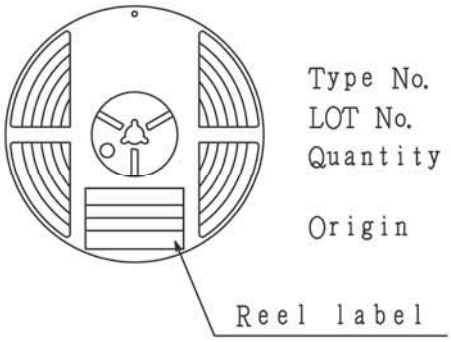
## 1. Packing Format

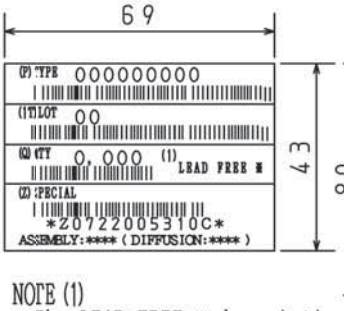
| Package Name | Carrier Tape Type | Maximum Number of devices contained (pcs) | | | Packing format | |
|---|---|---|---|---|---|---|
| | | Reel | Inner box | Outer box | Inner BOX (C-1) | Outer BOX (A-7) |
| SSFP | SSFP | 8,000 | 40,000 | 240,000 | 5 reels contained<br>Dimensions:mm (external)<br>183×72×185 | 6 inner boxes contained<br>Dimensions:mm (external)<br>440×195×210 |

Packing method



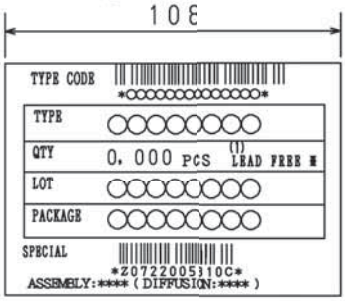

Reel label, Inner box label

(unit:mm)




Outer box label

It is a label at the time of factory shipments. The form of a label may change in physical distribution process.



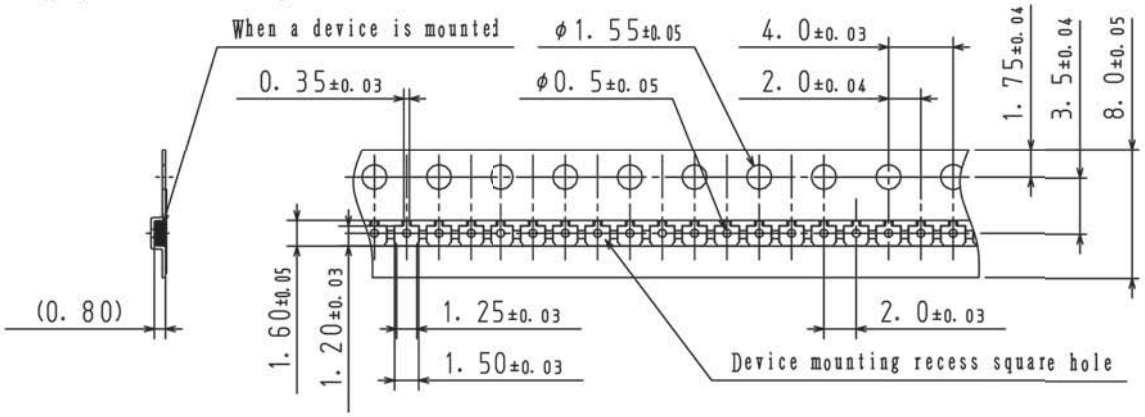

NOTE (1)

The LEAD FREE ※ description shows that the surface treatment of the terminal is lead free.

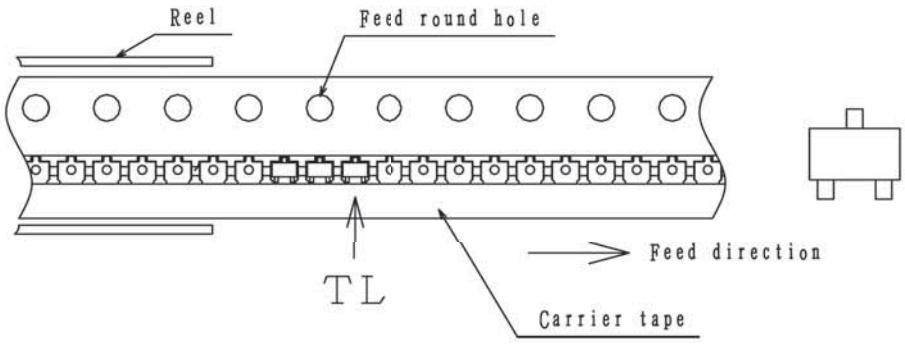
| Label | JEITA Phase |
|---|---|
| LEAD FREE 3 | JEITA Phase 3A |
| LEAD FREE 4 | JEITA Phase 3 |

## 2. Taping configuration

### 2-1. Carrier tape size (unit:mm)



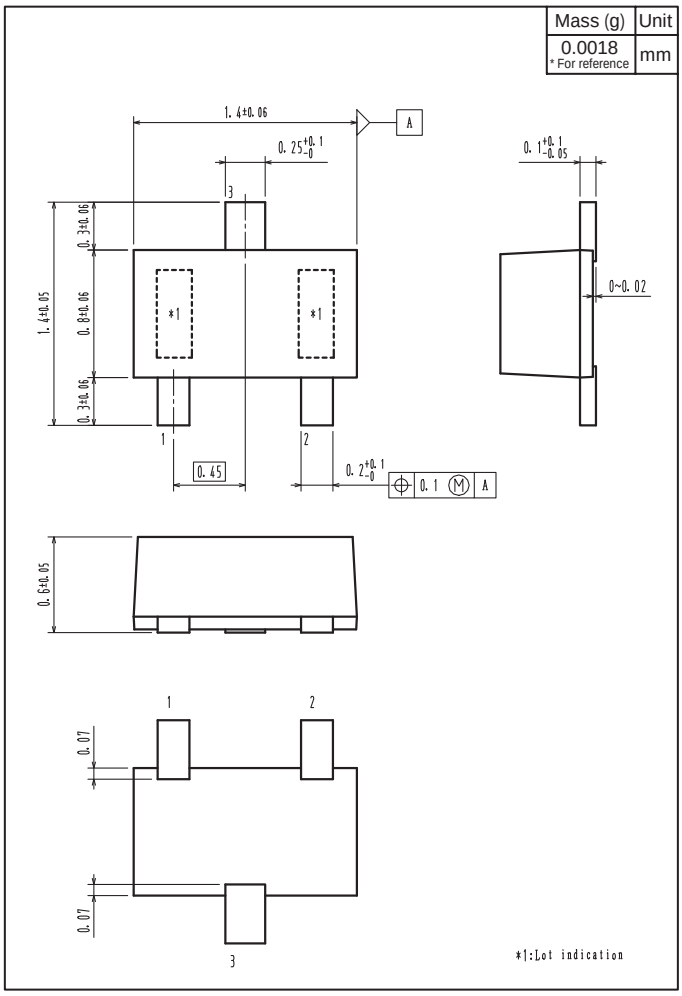

### 2-2. Device placement direction



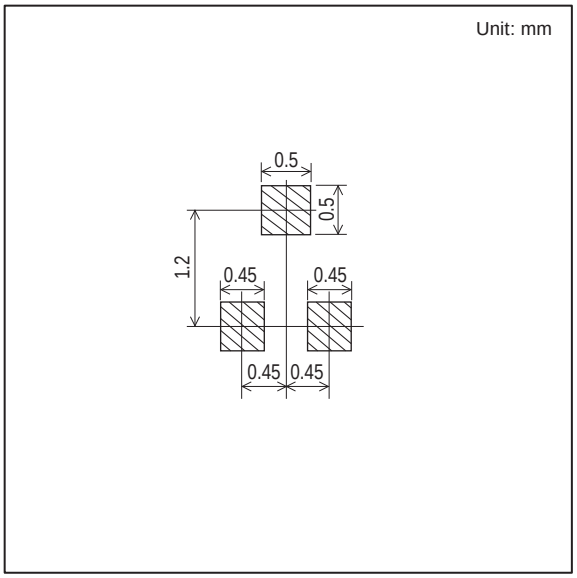

Those with pin 1 index on the feed hole side·····TL

## Outline Drawing

55GN01FA-TL-H




## Land Pattern Example



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