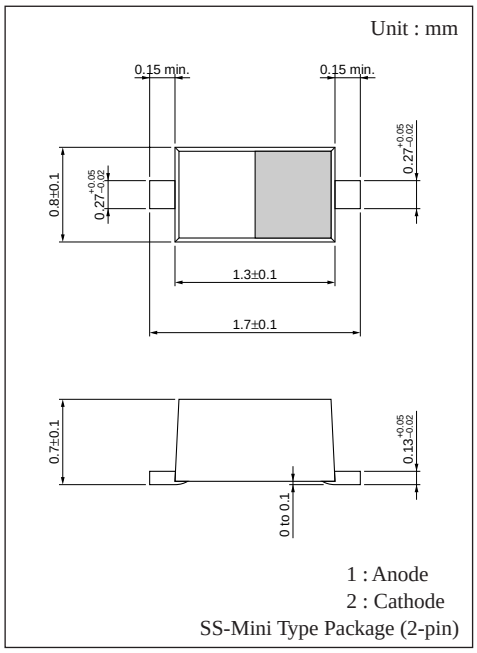
# MA2S331

## Silicon epitaxial planer type

For UHF wireless equipment VCO

### ■ Features

- Low series resistance $r_D$= 0.18Ω (typ.)
- Good linearity of C – V curve
- SS-Mini package, optimum for down-sizing of equipment




Marking Symbol : F

### ■ Absolute Maximum Ratings (Ta= 25˚C)

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Reverse voltage (DC) | $V_R$ | 12 | V |
| Forward current (DC) | $I_F$ | 20 | mA |
| Junction temperature | $T_j$ | 150 | ˚C |
| Storage temperature | $T_{stg}$ | – 55 to + 150 | ˚C |

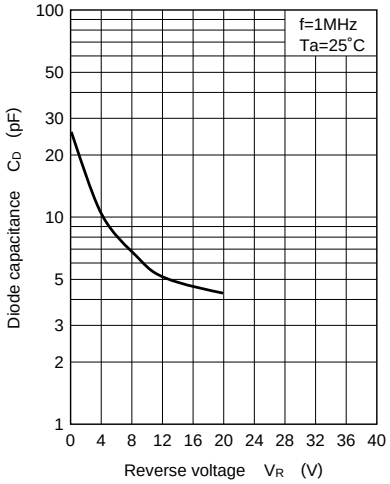
### ■ Electrical Characteristics (Ta= 25˚C)

| Parameter | Symbol | Condition | min | typ | max | Unit |
|---|---|---|---|---|---|---|
| Reverse current (DC) | $I_R$ | $V_R$= 12V | | | 10 | nA |
| Diode capacitance | $C_{D(1V)}$ | $V_R$= 1V, f= 1MHz | 17.0 | | 20.0 | pF |
| | $C_{D(2V)}$ | $V_R$= 2V, f= 1MHz | 14.0 | 15.0 | 16.0 | pF |
| | $C_{D(4V)}$ | $V_R$= 4V, f= 1MHz | 10.0 | | 12.4 | pF |
| | $C_{D(10V)}$ | $V_R$= 10V, f= 1MHz | 5.5 | 6.0 | 6.5 | pF |
| Capacitance ratio | $C_{D(1V)}/C_{D(4V)}$ | | 1.53 | 1.6 | 1.83 | — |
| | $C_{D(2V)}/C_{D(10V)}$ | | 2.25 | 2.5 | 2.75 | — |
| Series resistance | $r_D$* | $C_D$= 9pF, f= 470MHz | | 0.18 | 0.22 | Ω |

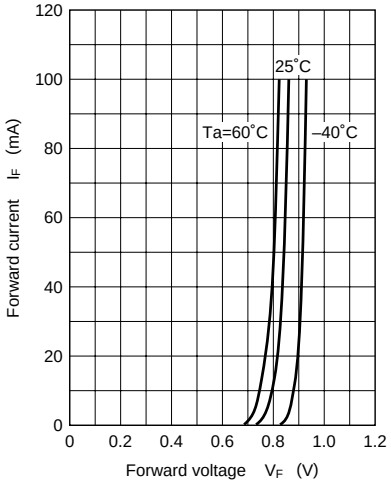
Note 1 : Rated input/output frequency : 470MHz
2 : * $r_f$ measurement device : YHP MODEL 4191A RF IMPEDANCE ANALYZER

### ■ Marking

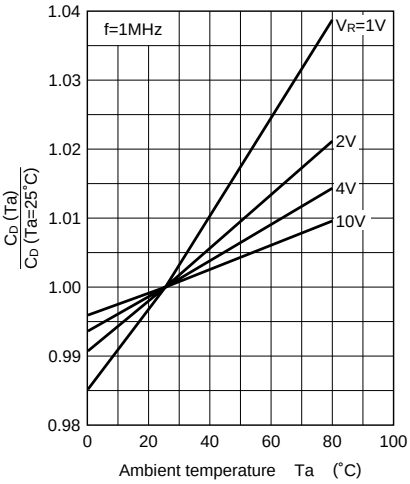
$C_D - V_R$




$I_F - V_F$




$C_D - Ta$




$I_R - Ta$