

# MA2S331

## Silicon epitaxial planar type

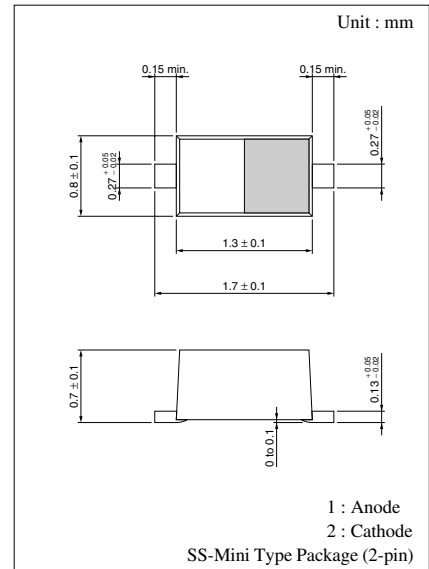
For VCO of an UHF radio

### ■ Features

- Small series resistance  $r_D$ ,  $r_D = 0.18 \Omega$  (typ.)
- Good linearity of  $C - V$  curve
- SS-mini package, optimum for down-sizing of equipment

### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

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



Marking Symbol: F

### ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse current (DC)	$I_R$	$V_R = 12 \text{ V}$			10	nA
Diode capacitance	$C_{D(1V)}$	$V_R = 1 \text{ V}, f = 1 \text{ MHz}$	17.0		20.0	pF
	$C_{D(2V)}$	$V_R = 2 \text{ V}, f = 1 \text{ MHz}$	14.0	15.0	16.0	pF
	$C_{D(4V)}$	$V_R = 4 \text{ V}, f = 1 \text{ MHz}$	10.0		12.4	pF
	$C_{D(10V)}$	$V_R = 10 \text{ V}, f = 1 \text{ MHz}$	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*	$r_D$	$C_D = 9 \text{ pF}, f = 470 \text{ MHz}$		0.18	0.22	$\Omega$

Note) 1. Rated input/output frequency: 470 MHz

2. \*:  $r_f$  measuring instrument: YHP MODEL 4191A RF IMPEDANCE ANALYZER

