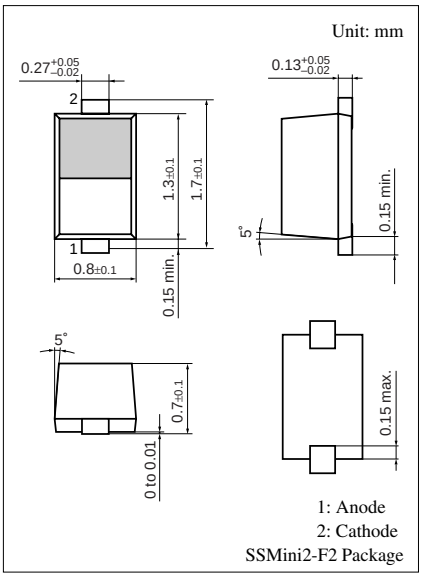
MA2S331

Silicon epitaxial planar type

For VCO of an UHF radio



Marking Symbol: F

■ Features

- Small series resistance: r_D = 0.18 Ω (typ.)
- Good linearity of C – V curve
- SS-Mini type package, optimum for downsizing of equipment

■ Absolute Maximum Ratings T_a = 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

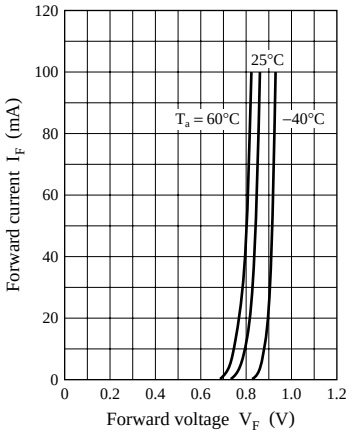
■ Electrical Characteristics T_a = 25°C

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse current (DC)	I_R	V_R = 12 V			10	nA
Diode capacitance	$C_{D(1V)}$	V_R = 1 V, f = 1 MHz	17.0		20.0	pF
	$C_{D(2V)}$	V_R = 2 V, f = 1 MHz	14.0	15.0	16.0	
	$C_{D(4V)}$	V_R = 4 V, f = 1 MHz	10.0		12.4	
	$C_{D(10V)}$	V_R = 10 V, f = 1 MHz	5.5	6.0	6.5	
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 pF, f = 470 MHz		0.18	0.22	Ω

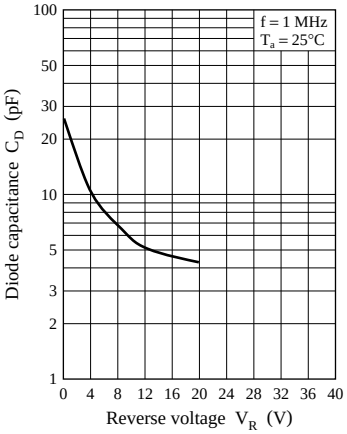
Note) 1. Rated input/output frequency: 470 MHz

2. *: Measuring instrument; YHP MODEL 4191A RF IMPEDANCE ANALYZER

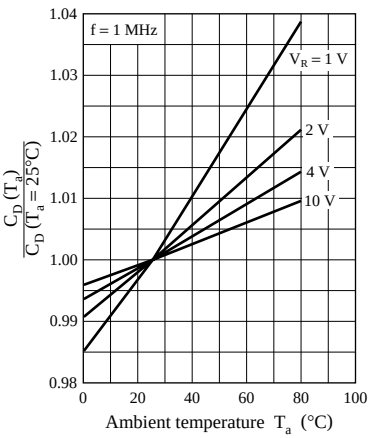
I_F — V_F



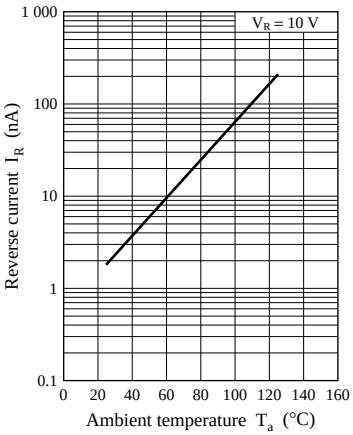
C_D — V_R



C_D — T_a



I_R — T_a



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