Low 1/f (Flicker) Noise Diodes

Part Number 5082-	Package Outline	Min. Breakdown Voltage V_{BR} (V)	Max. Forward Voltage V_F (mV)	V_F = 1 V Max. at Forward Current I_F (mA)	Max. Reverse Leakage Current I_R (nA) at V_R (V)		Max. Capacitance C_T (pF)
2303	15	20	400	35	500	15	1.0
2900	15	10	400	20	100	5	1.2
Test Conditions		I_R = 10 µA	I_F = 1 mA				V_R = 0 V f = 1.0 MHz

Note: Effective Carrier Lifetime (τ) for all these diodes is 100 ps maximum measured with Krakauer method at 20 mA.

Matched Pairs and Quads

Basic Part Number 5082-	Matched Pair Unconnected	Matched Quad Unconnected	Batch Matched[1]	Test Conditions
2900				ΔV_F at I_F = 1.0, 10 mA
2800	5082-2804 ΔV_F = 20 mV	5082-2805 ΔV_F = 20 mV		ΔV_F at I_F = 0.5, 5 mA *I_F = 10 mA ΔC_O at f = 1.0 MHz
2811			5082-2826 ΔV_F = 10 mV ΔC_O = 0.1 pF	ΔV_F at I_F = 10 mA ΔC_O at f = 1.0 MHz
2835			5082-2080 ΔV_F = 10 mV ΔC_O = 0.1 pF	ΔV_F at I_F = 10 mA ΔC_O at f = 1.0 MHz

Note:
1. Batch matched devices have a minimum batch size of 50 devices.

SPICE Parameters

Parameter	Units	5082-2800	5082-2810	5082-2811	5082-2835	5082-2303	5082-2900
B_V	V	75	25	18	9	25	10
C_{J0}	pF	1.6	0.8	1.0	0.7	0.7	1.1
E_G	eV	0.69	0.69	0.69	0.69	0.69	0.69
I_{BV}	A	10E-5	10E-5	10E-5	10E-5	10E-5	10E-5
I_S	A	2.2 x 10E-9	1.1 x 10E-9	0.3 x 10E-8	2.2 x 10E-8	7 x 1.0E-9	10E-8
N		1.08	1.08	1.08	1.08	1.08	1.08
R_S	Ω	25	10	10	5	10	15
P_B	V	0.6	0.6	0.6	0.56	0.64	0.64
P_T		2	2	2	2	2	2
M		0.5	0.5	0.5	0.5	0.5	0.5