

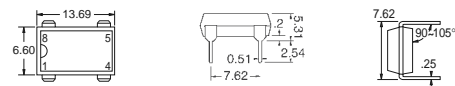
EPSON ELECTRONICS
AMERICA, INC.

CMOS/TTL Oscillators

- High reliability by cylinder type AT Crystal
- Automatic mountable
- Lower current consumption by C-MOS IC
- TTL-10 output load by using C-MOS IC
- DIP 14-PIN plastic package compatible with metal package oscillator
- DIP 8-PIN plastic package compatible with half size metal package oscillator

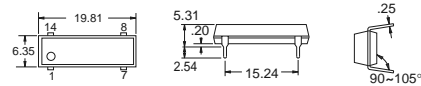
SG-51P, SG-531P, SG-51PH Specifications: Input Voltage: Operating: 5.0±0.5V. Temperature Range: Operating: -10°C to +70°C. Frequency Stability: C:±100ppm. Current Consumption: 25mA Max. Typ. Output Voltage: VDD -0.4V Min., IOH = -400mA; 0.4V Max., IOL = 16mA. Input Voltage: VIH 2.0V Min., IOH = 1mA (VIH = VDD); VIL 0.8V Max., IIL = -100µA (VIL = GND). Output Rise Time: 8 nsec Max., 4 nsec Typ. Output Fall Time: 8 nsec Max., 3 nsec Typ. Oscillation Time: 10 msec Max., 5 msec. **SG-531PH Specifications:** Input Voltage: Operating: 5.0±0.5V. Temperature Range: Operating: -10°C to +70°C. Frequency Stability: C:±100ppm. Current Consumption: 32mA Max. Typ. Output Voltage: VDD -0.37V Min., IOH = -4mA; 0.37V Max., IOL = 4mA. Output Rise Time: 7 nsec Max., 3.5 nsec Typ. Output Fall Time: 7 nsec Max., 3.5 nsec Typ. Oscillation Time: 10 msec Max., 3 msec Typ.

SG-531P, SG-531PTJ, SG-531PH (Half Size)



Pin	SG-531P, PH, PTJ
1	OE
4	GND
5	Out
8	VDD

SG-51P, SG-51KT, SG-51PTJ, SG-51PH (Full Size)



Pin	SG-51KT	Pin	51P, PTJ
1	NC	1	OE
7	GND	7	GND
8	Out	8	Out
14	VDD	14	VDD

Case	Frequency (MHz)	Digi-Key Part No.	Pricing			Epson Part No.
			1	10	100	
SG-531PH (OE) (CMOS)	32.000	SE1111-ND	3.00	25.00	87.00	158.00
	32.514	SE1112-ND	3.00	25.00	87.00	158.00
	32.768	SE1113-ND	3.00	25.00	87.00	158.00
	33.000	SE1114-ND	3.00	25.00	87.00	158.00
	33.333	SE1115-ND	3.00	25.00	87.00	158.00
	36.000	SE1116-ND	3.00	25.00	87.00	158.00
	38.000	SE1117-ND	3.00	25.00	87.00	158.00
	40.000	SE1118-ND	3.00	25.00	87.00	158.00
	42.000	SE1119-ND	3.00	25.00	87.00	158.00
	44.900	SE1120-ND	3.00	25.00	87.00	158.00
	46.000	SE1121-ND	3.00	25.00	87.00	158.00
	48.000	SE1122-ND	3.00	25.00	87.00	158.00
50.000	SE1123-ND	3.00	25.00	87.00	158.00	
55.000	SE1124-ND	3.00	25.00	87.00	158.00	
60.000	SE1125-ND	3.18	26.50	92.50	167.00	
64.000	SE1126-ND	3.18	26.50	92.50	167.00	
65.000	SE1127-ND	3.18	26.50	92.50	167.00	
66.000	SE1128-ND	3.18	26.50	92.50	167.00	
66.666	SE1129-ND	3.18	26.50	92.50	167.00	
SG-51P (OE) (CMOS/TTL)	1.544	SE1216-ND	3.00	25.00	87.00	158.00
	1.8432	SE1201-ND	3.00	25.00	87.00	158.00
	2.000	SE1217-ND	3.00	25.00	87.00	158.00
	2.048	SE1218-ND	3.00	25.00	87.00	158.00
	2.4576	SE1202-ND	3.00	25.00	87.00	158.00
	3.072	SE1219-ND	3.00	25.00	87.00	158.00
	3.088	SE1220-ND	3.00	25.00	87.00	158.00
	3.276	SE1221-ND	3.00	25.00	87.00	158.00
	3.579	SE1222-ND	3.00	25.00	87.00	158.00
	3.686	SE1223-ND	3.00	25.00	87.00	158.00
	4.000	SE1203-ND	3.00	25.00	87.00	158.00
	4.096	SE1224-ND	3.00	25.00	87.00	158.00
4.9152	SE1204-ND	3.00	25.00	87.00	158.00	
5.000	SE1205-ND	3.00	25.00	87.00	158.00	
5.068	SE1225-ND	3.00	25.00	87.00	158.00	
6.000	SE1206-ND	3.00	25.00	87.00	158.00	
6.144	SE1226-ND	3.00	25.00	87.00	158.00	
7.372	SE1227-ND	3.00	25.00	87.00	158.00	
8.000	SE1207-ND	3.00	25.00	87.00	158.00	
8.192	SE1228-ND	3.00	25.00	87.00	158.00	
9.830	SE1229-ND	3.00	25.00	87.00	158.00	
10.000	SE1208-ND	3.00	25.00	87.00	158.00	
10.240	SE1230-ND	3.00	25.00	87.00	158.00	
11.000	SE1231-ND	3.00	25.00	87.00	158.00	
11.059	SE1232-ND	3.00	25.00	87.00	158.00	
12.000	SE1209-ND	3.00	25.00	87.00	158.00	
12.288	SE1233-ND	3.00	25.00	87.00	158.00	
14.31818	SE1210-ND	3.00	25.00	87.00	158.00	
14.745	SE1234-ND	3.00	25.00	87.00	158.00	
15.000	SE1235-ND	3.00	25.00	87.00	158.00	
16.000	SE1211-ND	3.00	25.00	87.00	158.00	
16.257	SE1236-ND	3.00	25.00	87.00	158.00	
18.000	SE1237-ND	3.00	25.00	87.00	158.00	
18.432	SE1238-ND	3.00	25.00	87.00	158.00	
18.869	SE1239-ND	3.00	25.00	87.00	158.00	
19.660	SE1240-ND	3.00	25.00	87.00	158.00	
20.000	SE1212-ND	3.00	25.00	87.00	158.00	
20.480	SE1241-ND	3.00	25.00	87.00	158.00	
22.118	SE1242-ND	3.00	25.00	87.00	158.00	
24.000	SE1213-ND	3.00	25.00	87.00	158.00	
25.000	SE1214-ND	3.00	25.00	87.00	158.00	
25.175	SE1215-ND	3.00	25.00	87.00	158.00	
25.576	SE1243-ND	3.00	25.00	87.00	158.00	
27.000	SE1817-ND	3.00	25.00	87.00	158.00	
28.000	SE1818-ND	3.00	25.00	87.00	158.00	
28.322	SE1819-ND	3.00	25.00	87.00	158.00	
28.636	SE1820-ND	3.00	25.00	87.00	158.00	
29.491	SE1821-ND	3.00	25.00	87.00	158.00	
30.000	SE1822-ND	3.00	25.00	87.00	158.00	
32.000	SE1823-ND	3.00	25.00	87.00	158.00	
32.514	SE1824-ND	3.00	25.00	87.00	158.00	
32.768	SE1825-ND	3.00	25.00	87.00	158.00	
33.000	SE1826-ND	3.00	25.00	87.00	158.00	
33.333	SE1827-ND	3.00	25.00	87.00	158.00	
36.000	SE1828-ND	3.00	25.00	87.00	158.00	
44.900	SE2901-ND	4.80	40.00	142.50	255.00	
48.000	SE2902-ND	4.80	40.00	142.50	255.00	
50.000	SE2903-ND	4.80	40.00	142.50	255.00	
55.000	SE2904-ND	4.80	40.00	142.50	255.00	
60.000	SE2905-ND	4.80	40.00	142.50	255.00	

Case	Frequency (MHz)	Digi-Key Part No.	Pricing			Epson Part No.
			1	10	100	
SG-531PCV (OE) (CMOS)	64.000	SE2906-ND	4.80	40.00	142.50	255.00
	65.000	SE2907-ND	4.80	40.00	142.50	255.00
	66.000	SE2908-ND	4.80	40.00	142.50	255.00
	66.666	SE2909-ND	4.80	40.00	142.50	255.00
	70.000	SE2910-ND	5.85	48.75	172.50	310.00
	75.000	SE2911-ND	5.85	48.75	172.50	310.00
	80.000	SE2912-ND	5.85	48.75	172.50	310.00
	90.000	SE2913-ND	5.85	48.75	172.50	310.00
	100.000	SE2914-ND	5.85	48.75	172.50	310.00
	106.250	SE2915-ND	7.95	66.25	232.50	420.00
	120.000	SE2916-ND	7.95	66.25	232.50	420.00
	SG-51KT (TTL)	28.322	SE1602-ND	3.45	28.75	—
36.000	SE1605-ND	3.45	28.75	—	230.00	
SG-51P (OE) (CMOS/TTL)	1.544	SE1716-ND	3.00	25.00	87.00	158.00
	1.8432	SE1701-ND	3.00	25.00	87.00	158.00
	2.000	SE1717-ND	3.00	25.00	87.00	158.00
	2.048	SE1718-ND	3.00	25.00	87.00	158.00
	2.4576	SE1702-ND	3.00	25.00	87.00	158.00
	3.072	SE1719-ND	3.00	25.00	87.00	158.00
	3.088	SE1720-ND	3.00	25.00	87.00	158.00
	3.276	SE1721-ND	3.00	25.00	87.00	158.00
	3.579	SE1722-ND	3.00	25.00	87.00	158.00
	3.686	SE1723-ND	3.00	25.00	87.00	158.00
	4.000	SE1703-ND	3.00	25.00	87.00	158.00
	4.096	SE1724-ND	3.00	25.00	87.00	158.00
4.9152	SE1704-ND	3.00	25.00	87.00	158.00	
5.000	SE1705-ND	3.00	25.00	87.00	158.00	
5.068	SE1725-ND	3.00	25.00	87.00	158.00	
6.000	SE1706-ND	3.00	25.00	87.00	158.00	
6.144	SE1726-ND	3.00	25.00	87.00	158.00	
7.372	SE1727-ND	3.00	25.00	87.00	158.00	
8.000	SE1707-ND	3.00	25.00	87.00	158.00	
8.192	SE1728-ND	3.00	25.00	87.00	158.00	
9.830	SE1729-ND	3.00	25.00	87.00	158.00	
10.000	SE1708-ND	3.00	25.00	87.00	158.00	
10.240	SE1730-ND	3.00	25.00	87.00	158.00	
11.000	SE1731-ND	3.00	25.00	87.00	158.00	
11.059	SE1732-ND	3.00	25.00	87.00	158.00	
12.000	SE1709-ND	3.00	25.00	87.00	158.00	
12.288	SE1733-ND	3.00	25.00	87.00	158.00	
14.31818	SE1710-ND	3.00	25.00	87.00	158.00	
14.745	SE1734-ND	3.00	25.00	87.00	158.00	
15.000	SE1735-ND	3.00	25.00	87.00	158.00	
16.000	SE1711-ND	3.00	25.00	87.00	158.00	
16.257	SE1736-ND	3.00	25.00	87.00	158.00	
18.000	SE1737-ND	3.00	25.00	87.00	158.00	
18.432	SE1738-ND	3.00	25.00	87.00	158.00	
18.869	SE1739-ND	3.00	25.00	87.00	158.00	
19.660	SE1740-ND	3.00	25.00	87.00	158.00	
20.000	SE1712-ND	3.00	25.00	87.00	158.00	
20.480	SE1741-ND	3.00	25.00	87.00	158.00	
22.118	SE1742-ND	3.00	25.00	87.00	158.00	
24.000	SE1713-ND	3.00	25.00	87.00	158.00	
24.576	SE1743-ND	3.00	25.00	87.00	158.00	
25.000	SE1714-ND	3.00	25.00	87.00	158.00	
25.175	SE1715-ND	3.00	25.00	87.00	158.00	
28.000	SE1806-ND	3.00	25.00	87.00	158.00	
28.322	SE1807-ND	3.00	25.00	87.00	158.00	
28.636	SE1808-ND	3.00	25.00	87.00	158.00	
29.491	SE1809-ND	3.00	25.00	87.00	158.00	
30.000	SE18					