

**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

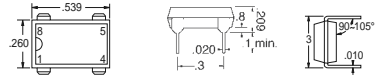
SG-51P, SG-531P, SG-51PH Specifications: Input Voltage: Operating: 5.0±0.5V. Temperature Range: Operating: -10 to +70°C. Frequency Stability: C:±100ppm. Current Consumption: 25mA Max. Typ. Output Voltage: VDD -0.4V Min., IOH = -400mA; 0.4V Max., IOL = 16mA. Input Voltage: VIH 2.0V Min., IOH = 1mA (VIH = VDD); VIL 0.8V Max., IIL = -100µA (VIL = GND). Output Rise Time: 8 nsec Max., 4 nsec Typ. Output Fall Time: 8 nsec Max., 5 nsec Typ. Oscillation Time: 4 msec Max., 0.3 msec.

SG-51KT, SG-51PT, SG-531PT, SG-531PTJ, SG-51PTJ Specifications: Input Voltage: Operating: 5.0±0.5V. Temperature Range: Operating: -10 to +70°C. Frequency Stability: C:±100ppm. Current Consumption: 25mA (32MHz) without load Typ. Output

Voltage: VDD -0.4V Min., IOH = -400 mA; 0.4V Max., IOL = 16mA. Input Voltage: VIH 2.0V Min., IIL = 1mA (VIH = VDD); VIL 0.8V Max., IIL = 100µA (VIL = GND). Output Rise Time: 10 nsec Max., 5 nsec Typ. Output Fall Time: 8 nsec Max., 3 nsec Typ. Oscillation Time: 10 msec Max., 5 msec.

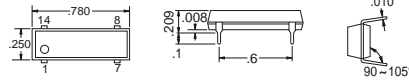
SG-531H, SG-531PH Specifications: Input Voltage: Operating: 5.0±0.5V. Temperature Range: Operating: -10 to +70°C. Frequency Stability: C:±100ppm. Current Consumption: 32mA Max. Typ. Output Voltage: VDD -0.37V Min., IOH = -4mA; 0.37V Max., IOL = 4mA. Output Rise Time: 7 nsec Max., 3.5 nsec Typ. Output Fall Time: 7 nsec Max., 3.5 nsec Typ. Oscillation Time: 10 msec Max., 3 msec Typ.

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



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

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



Pin	SG-51KT	Pin	51P, PT, PH, 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	1,000	
SG-531H	60.000	SE1110-ND	3.45	28.75	230.00	1725.00	SG-531H-60.0000MC
	32.000	SE1111-ND	3.15	26.25	210.00	1575.00	SG-531H-32.0000MC
	32.514	SE1112-ND	3.15	26.25	210.00	1575.00	SG-531PH-32.514MC
	32.768	SE1113-ND	3.15	26.25	210.00	1575.00	SG-531PH-32.768MC
	33.000	SE1114-ND	3.15	26.25	210.00	1575.00	SG-531PH-33.0000MC
	33.333	SE1115-ND	3.15	26.25	210.00	1575.00	SG-531PH-33.333MC
	36.000	SE1116-ND	3.15	26.25	210.00	1575.00	SG-531PH-36.0000MC
	38.000	SE1117-ND	3.15	26.25	210.00	1575.00	SG-531PH-38.0000MC
	40.000	SE1118-ND	3.15	26.25	210.00	1575.00	SG-531PH-40.0000MC
	42.000	SE1119-ND	3.15	26.25	210.00	1575.00	SG-531PH-42.0000MC
	44.900	SE1120-ND	3.15	26.25	210.00	1575.00	SG-531PH-44.9000MC
	SG-531PH (OE) (CMOS)	46.000	SE1121-ND	3.15	26.25	210.00	1575.00
48.000		SE1122-ND	3.15	26.25	210.00	1575.00	SG-531PH-48.0000MC
50.000		SE1123-ND	3.15	26.25	210.00	1575.00	SG-531PH-50.0000MC
55.000		SE1124-ND	3.15	26.25	210.00	1575.00	SG-531PH-55.0000MC
60.000		SE1125-ND	3.45	28.75	230.00	1725.00	SG-531PH-60.0000MC
64.000		SE1126-ND	3.45	28.75	230.00	1725.00	SG-531PH-64.0000MC
65.000		SE1127-ND	3.45	28.75	230.00	1725.00	SG-531PH-65.0000MC
66.000		SE1128-ND	3.45	28.75	230.00	1725.00	SG-531PH-66.0000MC
66.666		SE1129-ND	3.45	28.75	230.00	1725.00	SG-531PH-66.666MC
1.544		SE1216-ND	3.15	26.25	210.00	1575.00	SG-531P-1.544MC
1.8432		SE1201-ND	3.15	26.25	210.00	1575.00	SG-531P-1.8432MC
2.000		SE1217-ND	3.15	26.25	210.00	1575.00	SG-531P-2.0000MC
2.048	SE1218-ND	3.15	26.25	210.00	1575.00	SG-531P-2.048MC	
2.4576	SE1202-ND	3.15	26.25	210.00	1575.00	SG-531P-2.4576MC	
3.072	SE1219-ND	3.15	26.25	210.00	1575.00	SG-531P-3.072MC	
3.088	SE1220-ND	3.15	26.25	210.00	1575.00	SG-531P-3.088MC	
3.276	SE1221-ND	3.15	26.25	210.00	1575.00	SG-531P-3.276MC	
3.579	SE1222-ND	3.15	26.25	210.00	1575.00	SG-531P-3.579MC	
3.686	SE1223-ND	3.15	26.25	210.00	1575.00	SG-531P-3.686MC	
4.000	SE1203-ND	3.15	26.25	210.00	1575.00	SG-531P-4.0000MC	
4.096	SE1224-ND	3.15	26.25	210.00	1575.00	SG-531P-4.096MC	
4.9152	SE1204-ND	3.15	26.25	210.00	1575.00	SG-531P-4.9152MC	
5.000	SE1205-ND	3.15	26.25	210.00	1575.00	SG-531P-5.0000MC	
5.068	SE1225-ND	3.15	26.25	210.00	1575.00	SG-531P-5.068MC	
6.000	SE1206-ND	3.15	26.25	210.00	1575.00	SG-531P-6.0000MC	
6.144	SE1226-ND	3.15	26.25	210.00	1575.00	SG-531P-6.144MC	
7.372	SE1227-ND	3.15	26.25	210.00	1575.00	SG-531P-7.372MC	
8.000	SE1207-ND	3.15	26.25	210.00	1575.00	SG-531P-8.0000MC	
8.192	SE1228-ND	3.15	26.25	210.00	1575.00	SG-531P-8.192MC	
9.830	SE1229-ND	3.15	26.25	210.00	1575.00	SG-531P-9.830MC	
10.000	SE1208-ND	3.15	26.25	210.00	1575.00	SG-531P-10.0000MC	
10.240	SE1230-ND	3.15	26.25	210.00	1575.00	SG-531P-10.240MC	
11.000	SE1231-ND	3.15	26.25	210.00	1575.00	SG-531P-11.0000MC	
11.059	SE1232-ND	3.15	26.25	210.00	1575.00	SG-531P-11.059MC	
12.000	SE1209-ND	3.15	26.25	210.00	1575.00	SG-531P-12.0000MC	
12.288	SE1233-ND	3.15	26.25	210.00	1575.00	SG-531P-12.288MC	
14.31818	SE1210-ND	3.15	26.25	210.00	1575.00	SG-531P-14.31818MC	
14.745	SE1234-ND	3.15	26.25	210.00	1575.00	SG-531P-14.745MC	
15.000	SE1235-ND	3.15	26.25	210.00	1575.00	SG-531P-15.0000MC	
16.000	SE1211-ND	3.15	26.25	210.00	1575.00	SG-531P-16.0000MC	
16.257	SE1236-ND	3.15	26.25	210.00	1575.00	SG-531P-16.257MC	
18.000	SE1237-ND	3.15	26.25	210.00	1575.00	SG-531P-18.0000MC	
18.432	SE1238-ND	3.15	26.25	210.00	1575.00	SG-531P-18.432MC	
18.869	SE1239-ND	3.15	26.25	210.00	1575.00	SG-531P-18.869MC	
19.660	SE1240-ND	3.15	26.25	210.00	1575.00	SG-531P-19.660MC	
20.000	SE1212-ND	3.15	26.25	210.00	1575.00	SG-531P-20.0000MC	
20.480	SE1241-ND	3.15	26.25	210.00	1575.00	SG-531P-20.480MC	
22.118	SE1242-ND	3.15	26.25	210.00	1575.00	SG-531P-22.118MC	
24.000	SE1213-ND	3.15	26.25	210.00	1575.00	SG-531P-24.0000MC	
25.000	SE1214-ND	3.15	26.25	210.00	1575.00	SG-531P-25.0000MC	
25.175	SE1215-ND	3.15	26.25	210.00	1575.00	SG-531P-25.1750MC	
25.576	SE1243-ND	3.15	26.25	210.00	1575.00	SG-531P-25.576MC	
27.000	SE1817-ND	3.15	26.25	210.00	1575.00	SG-531PTJ-27.0000MC	
28.000	SE1818-ND	3.15	26.25	210.00	1575.00	SG-531PTJ-28.0000MC	
28.322	SE1819-ND	3.15	26.25	210.00	1575.00	SG-531PTJ-28.322MC	
28.636	SE1820-ND	3.15	26.25	210.00	1575.00	SG-531PTJ-28.636MC	
29.491	SE1821-ND	3.15	26.25	210.00	1575.00	SG-531PTJ-29.491MC	
30.000	SE1822-ND	3.15	26.25	210.00	1575.00	SG-531PTJ-30.0000MC	
32.000	SE1823-ND	3.15	26.25	210.00	1575.00	SG-531PTJ-32.0000MC	
32.514	SE1824-ND	3.15	26.25	210.00	1575.00	SG-531PTJ-32.514MC	
32.768	SE1825-ND	3.15	26.25	210.00	1575.00	SG-531PTJ-32.768MC	
33.000	SE1826-ND	3.15	26.25	210.00	1575.00	SG-531PTJ-33.0000MC	
33.333	SE1827-ND	3.15	26.25	210.00	1575.00	SG-531PTJ-33.333MC	
36.000	SE1828-ND	3.15	26.25	210.00	1575.00	SG-531PTJ-36.0000MC	
44.900	SE2901-ND	4.80	40.00	320.00	2400.00	SG-531PCV-44.9000MC	
48.000	SE2902-ND	4.80	40.00	320.00	2400.00	SG-531PCV-48.0000MC	
50.000	SE2903-ND	4.80	40.00	320.00	2400.00	SG-531PCV-50.0000MC	
55.000	SE2904-ND	4.80	40.00	320.00	2400.00	SG-531PCV-55.0000MC	
60.000	SE2905-ND	4.80	40.00	320.00	2400.00	SG-531PCV-60.0000MC	

A462-ND NEW! Aries Full-Size Socket for a 4-Pin Oscillator \$55/1; \$11.60/25; \$38.94/100
A463-ND NEW! Aries Half-Size Socket for a 4-Pin Oscillator \$53/1; \$11.03/25; \$37.00/100

Case	Frequency (MHz)	Digi-Key Part No.	Pricing				Epson Part No.
			1	10	100	1,000	
SG-531PCV (OE) (CMOS)	64.000	SE2906-ND	4.80	40.00	320.00	2400.00	SG-531PCV-64.0000MC
	65.000	SE2907-ND	4.80	40.00	320.00	2400.00	SG-531PCV-65.0000MC
	66.000	SE2908-ND	4.80	40.00	320.00	2400.00	SG-531PCV-66.0000MC
	66.666	SE2909-ND	4.80	40.00	320.00	2400.00	SG-531PCV-66.666MC
	70.000	SE2910-ND	5.85	48.75	390.00	2925.00	SG-531PCV-70.0000MC
	75.000	SE2911-ND	5.85	48.75	390.00	2925.00	SG-531PCV-75.0000MC
	80.000	SE2912-ND	5.85	48.75	390.00	2925.00	SG-531PCV-80.0000MC
	90.000	SE2913-ND	5.85	48.75	390.00	2925.00	SG-531PCV-90.0000MC
	100.000	SE2914-ND	5.85	48.75	390.00	2925.00	SG-531PCV-100.0000MC
	106.250	SE2915-ND	7.95	66.25	530.00	3975.00	SG-531PCV-106.250MC
	120.000	SE2916-ND	7.95	66.25	530.00	3975.00	SG-531PCV-120.0000MC
	SG-51KT (TTL)	28.322	SE1602-ND	3.45	28.75	230.00	1725.00
36.000		SE1605-ND	3.45	28.75	230.00	1725.00	SG-51KT-36.0000MC
1.544		SE1716-ND	3.15	26.25	210.00	1575.00	SG-51P-1.544MC
1.8432		SE1701-ND	3.15	26.25	210.00	1575.00	SG-51P-1.8432MC
2.000		SE1717-ND	3.15	26.25	210.00	1575.00	SG-51P-2.0000MC
2.048		SE1718-ND	3.15	26.25	210.00	1575.00	SG-51P-2.048MC
2.4576		SE1702-ND	3.15	26.25	210.00	1575.00	SG-51P-2.4576MC
3.072		SE1719-ND	3.15	26.25	210.00	1575.00	SG-51P-3.072MC
3.088		SE1720-ND	3.15	26.25	210.00	1575.00	SG-51P-3.088MC
3.276		SE1721-ND	3.15	26.25	210.00	1575.00	SG-51P-3.276MC
3.579		SE1722-ND	3.15	26.25	210.00	1575.00	SG-51P-3.579MC
3.686		SE1723-ND	3.15	26.25	210.00	1575.00	SG-51