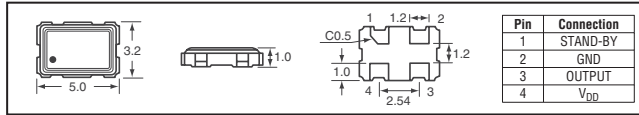


# NDK 2765E Series Spread Spectrum SMT Oscillators

**Electrical Characteristics:** • Supply Voltage: 3.3V ±0.3 • Output Level: CMOS • Frequency Stability: ±100ppm • Current Consumption: 30mA Maximum • Current Consumption (Standby): 30µA • Operating Temperature: -20°C ~ 70°C • Rise Time/Fall Time: 5ns Maximum • Duty Cycle: 40% - 60% at ½ VDD



Pin	Connection
1	STAND-BY
2	GND
3	OUTPUT
4	VDD

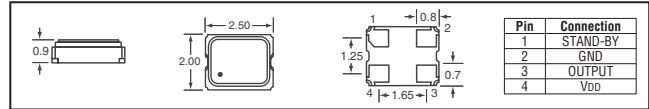
Frequency (MHz)	Digi-Key Part No.	Cut Tape Price Each			T & R Pricing †	NDK Part No.
		1	10	100		
25.00000	644-1071-1-ND	3.40	3.07	2.56	1702.00	2765E-25.000000MHZ
40.00000	644-1073-1-ND	3.40	3.07	2.56	1702.00	2765E-40.000000MHZ
50.00000	644-1074-1-ND	3.68	3.32	2.76	1839.00	2765E-50.000000MHZ
66.00000	644-1075-1-ND	3.68	3.32	2.76	1839.00	2765E-66.000000MHZ
66.66700	644-1076-1-ND	3.68	3.32	2.76	1839.00	2765E-66.667000MHZ
80.00000	644-1077-1-ND	3.68	3.32	2.76	1839.00	2765E-80.000000MHZ

† For Tape and Reel part number, change 1-ND to 2-ND.

# NZ2520SA Series SMT Oscillators



**Electrical Characteristics:** • Supply Voltage: 2.5V ±0.1 • Output Level: CMOS • Frequency Stability: ±30ppm • Current Consumption: 10.5mA Maximum • Current Consumption (Standby): 10µA • Operating Temperature: -10°C ~ 60°C • Rise Time/Fall Time: 5ns Maximum • Duty Cycle: 45% ~ 55% at ½ VDD



Pin	Connection
1	STAND-BY
2	GND
3	OUTPUT
4	VDD

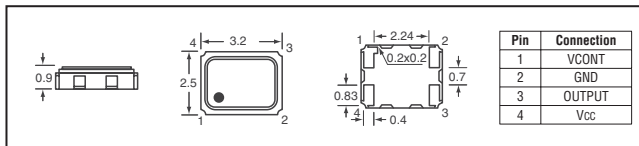
Frequency (MHz)	Digi-Key Part No.	Cut Tape Price Each			Tape & Reel Pricing		NDK Part No.
		1	10	100	Qty.	1,000	
2.75	644-1078-1-ND	2.32	2.09	1.74	3,000	1158.00/M	NZ2520SA-2.750000MHZ
5.00	644-1079-1-ND	2.32	2.09	1.74	3,000	1158.00/M	NZ2520SA-5.000000MHZ
7.60	644-1080-1-ND	2.32	2.09	1.74	3,000	1158.00/M	NZ2520SA-7.600000MHZ
10.00	644-1081-1-ND	2.32	2.09	1.74	3,000	1158.00/M	NZ2520SA-10.000000MHZ
19.20	644-1114-1-ND	2.32	2.09	1.74	1,000	1198.00	NZ2520SA-19.200000MHZ
20.00	644-1082-1-ND	2.32	2.09	1.74	3,000	1158.00/M	NZ2520SA-20.000000MHZ
22.00	644-1083-1-ND	2.32	2.09	1.74	3,000	1158.00/M	NZ2520SA-22.000000MHZ
25.50	644-1115-1-ND	2.40	2.16	1.80	1,000	1198.00	NZ2520SA-25.500000MHZ
38.90	644-1116-1-ND	2.40	2.16	1.80	1,000	1198.00	NZ2520SA-38.900000MHZ
40.00	644-1084-1-ND	2.40	2.16	1.80	3,000	1198.00/M	NZ2520SA-40.000000MHZ
41.35	644-1117-1-ND	2.40	2.16	1.80	1,000	1198.00	NZ2520SA-41.350000MHZ
44.00	644-1085-1-ND	2.40	2.16	1.80	3,000	1198.00/M	NZ2520SA-44.000000MHZ

† For Tape and Reel part number, change 1-ND to 2-ND.

# NT3225SA Series SMT TCXO



**Electrical Characteristics:** • Supply Voltage: 3.0VDC • Load: 10KΩ/10pF • Current Consumption: 1.5mA Maximum • Frequency Stability: ±2.5ppm • Operating Temperature: -30°C ~ 75°C • Output Voltage: 0.8V(P-P), DC Coupling • AFC: ±9ppm ~ ±15ppm/1.5V ±1V



Pin	Connection
1	VCONT
2	GND
3	OUTPUT
4	VCC

Frequency (MHz)	Digi-Key Part No.	Cut Tape Price Each			T & R Pricing †	NDK Part No.
		1	10	50		
13.00	644-1086-1-ND	4.05	3.79	3.25	1513.00/M	NT3225SA-13.000000MHZ
19.20	644-1087-1-ND	4.05	3.79	3.25	1513.00/M	NT3225SA-19.200000MHZ
19.68	644-1088-1-ND	4.05	3.79	3.25	1513.00/M	NT3225SA-19.680000MHZ
26.00	644-1089-1-ND	4.05	3.79	3.25	1513.00/M	NT3225SA-26.000000MHZ

† For Tape and Reel part number, change 1-ND to 2-ND.

# NEW! Automotive Application Crystals



Frequency (MHz)	Load Cap. (pF)	Digi-Key Part No.	Cut Tape Price Each			Tape and Reel Pricing †		NDK Part No.
			1	50	100	1,000	5,000	
<b>Wide Temperature Range Automotive Applications</b>								
12.00	8.0	644-1128-1-ND	1.37	1.28	1.10	510.00	510.00	NX3225SA 12MHZ AT-W
16.00	8.0	644-1129-1-ND	1.37	1.28	1.10	510.00	510.00	NX3225SA 16MHZ AT-W
20.00	8.0	644-1130-1-ND	1.37	1.28	1.10	510.00	510.00	NX3225SA 20MHZ AT-W
40.00	8.0	644-1131-1-ND	1.44	1.35	1.16	539.00	539.00	NX3225SA 40MHZ AT-W
8.00	8.0	644-1132-1-ND	1.64	1.53	1.32	612.00	612.00	NX5032GA 8MHZ AT-W
10.00	8.0	644-1133-1-ND	1.64	1.53	1.32	612.00	612.00	NX5032GA 10MHZ AT-W
12.00	8.0	644-1134-1-ND	1.64	1.53	1.32	612.00	612.00	NX5032GA 12MHZ AT-W
16.00	8.0	644-1135-1-ND	1.64	1.53	1.32	612.00	612.00	NX5032GA 16MHZ AT-W
20.00	8.0	644-1136-1-ND	1.64	1.53	1.32	612.00	612.00	NX5032GA 20MHZ AT-W
40.00	8.0	644-1137-1-ND	1.64	1.53	1.32	612.00	612.00	NX5032GA 40MHZ AT-W
4.00	8.0	644-1138-1-ND	1.44	1.35	1.16	539.00	539.00	NX8045GB 4MHZ AT-W
<b>Automotive TPMS Applications</b>								
9.84375	8.0	644-1139-1-ND	1.64	1.53	1.32	612.00	612.00	NX5032GA 9.84375MHZ AT-TPMS
13.56	8.0	644-1140-1-ND	1.64	1.53	1.32	612.00	612.00	NX5032GA 13.56MHZ AT-TPMS
9.84375	12.0	644-1141-1-ND	1.76	1.64	1.41	655.00	655.00	NX5032SD 9.84375MHZ AT-TPMS
13.56	12.0	644-1142-1-ND	1.76	1.64	1.41	655.00	655.00	NX5032SD 13.56MHZ AT-TPMS

† For Tape and Reel part number, change 1-ND to 2-ND.

Note: For additional specifications please reference the manufacturer's data sheets.

# Chip Set TCXOs and Crystals



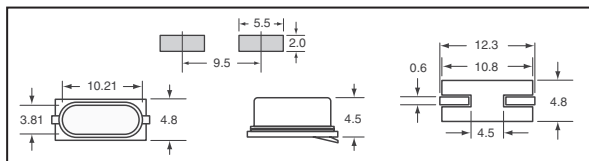
Type	Frequency (MHz)	Digi-Key Part No.	Cut Tape Price Each			Tape and Reel †		NDK Part No.	Compatible Chip Sets and Applications
			1	10	50	Qty.	Pricing		
TCXO	26.00	644-1113-1-ND	4.05	3.79	3.25	1,000	1513.00	NT2520SA-26.000000MHZ-A1	NXP (Philips), GSM
	19.20	644-1111-1-ND	2.97	2.44	2.17	1,000	1513.00	NT3225SA-19.200000MHZ-T3	QUALCOMM, CDMA (MSM6000)
	19.20	644-1090-1-ND	2.97	2.44	2.17	1,000	1513.00	NT3225SA-19.200000MHZ-T2	NXP (Philips), TV ON MOBILE
	26.00	644-1091-1-ND	2.97	2.44	2.17	1,000	1513.00	NT3225SA-26.000000MHZ-G5	NXP (Philips), 3G UMTS/CDMA
	26.00	644-1092-1-ND	2.97	2.44	2.17	1,000	1513.00	NT3225SA-26.000000MHZ-G7	ADI, GSM
	26.00	644-1110-1-ND	2.97	2.44	2.17	1,000	1513.00	NT3225SA-26.000000MHZ-G8	ADI, GSM (AD6548)
	52.00	644-1112-1-ND	2.97	2.44	2.17	1,000	1513.00	NT3225SA-52.000000MHZ-S1	FREESCALE, GSM (PYTHON)
	16.00	644-1093-1-ND	1.62	1.33	1.18	3,000	826.00/M	NX2520SA-16.000000MHZ-W1	FREESCALE, ZIGBEE
Crystal	24.00	644-1094-1-ND	1.62	1.33	1.18	3,000	826.00/M	NX2520SA-24.000000MHZ-B8	NXP (Philips), Bluetooth
	26.00	644-1095-1-ND	1.62	1.33	1.18	3,000	826.00/M	NX2520SA-26.000000MHZ-B9	NXP (Philips), Bluetooth
	40.00	644-1096-1-ND	1.62	1.33	1.18	3,000	826.00/M	NX2520SA-40.000000MHZ-W2	STEPMIND, WLAN-WIFI
	40.00	644-1097-1-ND	1.62	1.33	1.18	3,000	826.00/M	NX2520SA-40.000000MHZ-W3	NXP (Philips), WLAN-WIFI
	16.00	644-1099-1-ND	.92	.76	.67	3,000	467.00/M	NX3225SA-16.000000MHZ-B3	Cambridge Silicon Radio, Bluetooth
	16.00	644-1100-1-ND	.92	.76	.67	3,000	467.00/M	NX3225SA-16.000000MHZ-T1	NXP (Philips), TV ON MOBILE
	20.00	644-1098-1-ND	.92	.76	.67	3,000	467.00/M	NX3225SA-20.000000MHZ-B2	Cambridge Silicon Radio, Bluetooth
	26.00	644-1101-1-ND	.92	.76	.67	3,000	467.00/M	NX3225SA-26.000000MHZ-B1	Broadcom, Bluetooth
	26.00	644-1109-1-ND	.92	.76	.67	3,000	467.00/M	NX3225SA-26.000000MHZ-G2	Atheros, GSM
	26.00	644-1102-1-ND	.92	.76	.67	3,000	467.00/M	NX3225SA-26.000000MHZ-G3	Atheros, GSM
	26.00	644-1103-1-ND	.92	.76	.67	3,000	467.00/M	NX3225SA-26.000000MHZ-G4	INFINEON, GSM
	39.00	644-1104-1-ND	.92	.76	.67	3,000	467.00/M	NX3225SA-39.000000MHZ-B4	XEMICS-SEMITECH, Bluetooth
	13.00	644-1105-1-ND	1.04	.86	.76	3,000	531.00/M	NX4025DA-13.000000MHZ-B6	NXP (Philips), Bluetooth
	15.36	644-1106-1-ND	1.04	.86	.76	3,000	531.00/M	NX4025DA-15.360000MHZ-B7	FREESCALE, Bluetooth
	16.00	644-1107-1-ND	1.04	.86	.76	3,000	531.00/M	NX4025DA-16.000000MHZ-B5	Cambridge Silicon Radio, Bluetooth
	13.00	644-1108-1-ND	.92	.76	.67	5,000	467.00/M	NX5032SA-13.000000MHZ-G1	Atheros, GSM

† For Tape and Reel part number, change 1-ND to 2-ND. Note: For additional specifications please reference the manufacturer's data sheets.

# AVX CX49GFWB Series SMT Crystals



**Features:** • Crystal unit for audio-visual and office equipment • Metal package • Hermetic sealed resonance weld  
**Applications:** • Digital electronics • Audio-visual • Office equipment • Specifications: • Frequency Tolerance: ±50ppm • Frequency Temperature Characteristics: ±50ppm • Load Capacitance: 12pF • Operating Temperature Range: -10°C ~ 70°C • Storage Temperature Range: -40°C ~ 85°C



Frequency (MHz)	Digi-Key Part No.	Cut Tape Price Each		Digi-Key Part No.	Tape & Reel Pricing 1,000	AVX Part No.
		1	100			
3.579545	478-4339-1-ND	1.00	.63	478-4339-2-ND	400.00	CX49GFWB03579H0PESZ
4.000000	478-4340-1-ND	1.00	.63	478-4340-2-ND	400.00	CX49GFWB04000H0PESZ
4.194304	478-4341-1-ND	1.00	.63	478-4341-2-ND	400.00	CX49GFWB04194H0PESZ
4.332000	478-4342-1-ND	1.00	.63	478-4342-2-ND	400.00	CX49GFWB04332H0PESZ
4.433619	478-4343-1-ND	1.00	.63	478-4343-2-ND	400.00	CX49GFWB04433H0PESZ
4.915200	478-4344-1-ND	1.00	.63	478-4344-2-ND	400.00	CX49GFWB04915H0PESZ
6.000000	478-4345-1-ND	1.00	.63	478-4345-2-ND	400.00	CX49GFWB06000H0PESZ
7.200000	478-4346-1-ND	1.00	.63	478-4346-2-ND	400.00	CX49GFWB07200H0PESZ
8.000000	478-4347-1-ND	1.00	.63	478-4347-2-ND	400.00	CX49GFWB08000H0PESZ
10.000000	478-4348-1-ND	1.00	.63	478-4348-2-ND	400.00	CX49GFWB10000H0PESZ
12.000000	478-4349-1-ND	1.00	.63	478-4349-2-ND	400.00	CX49GFWB12000H0PESZ
14.318180	478-4350-1-ND	1.00	.63	478-4350-2-ND	400.00	CX49GFWB14318H0PESZ
16.000000	478-4351-1-ND	1.00	.63	478-4351-2-ND	400.00	CX49GFWB16000H0PESZ
16.934000	478-4352-1-ND	1.00	.63	478-4352-2-ND	400.00	CX49GFWB16934H0PESZ
18.432000						