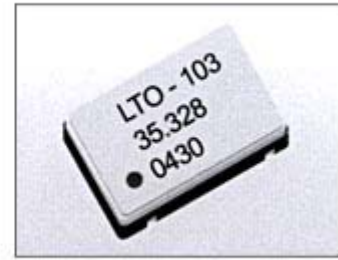


## Ceramic SMD Oscillator (LTO-10, 53, 32 SERIES)

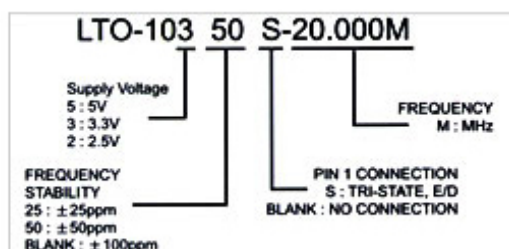
- Ceramic SMD package
- Ultra small package
- Stability to  $\pm 20\text{ppm}$
- Tri-state function available
- Reflow soldering is possible
- Available on tape and reel



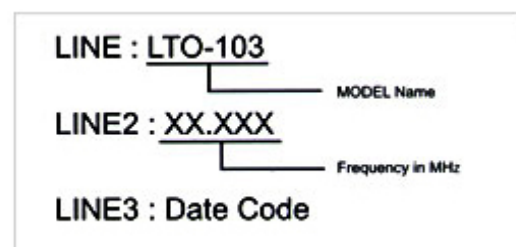
### ELECTRICAL SPECIFICATIONS

		LTO-10	LTO-53	LTO-32
Frequency Range		1.000~156.250 MHz		1.000~48.000 MHz
Operating Temperature Range		-10°C~ +70°C or -40 to +85°C(Option)		
Storage Temperature Range		-55 to +125°C		
Frequency Tolerance/Stability	Inclusive of Operating Temperature Range, Supply Voltage, and Load	$\pm 100, \pm 50$ ppm or $\pm 25, \pm 20$ ppm Max		
Supply Voltage(VDD)		5.0VDC $\pm 10\%$ , 3.3VDC $\pm 10\%$ 2.8VDC $\pm 10\%$ , 2.5VDC $\pm 10\%$		
Input Current	1.000~34.999 MHz 35.000~60.000 MHz 60.001~99.999 MHz 100.000~106.250 MHz	16mA Max 25mA Max 50mA Max 60mA Max		
Output Voltage Logic High(VOH)	w/HCMOS Load	90% of VDD Min		
Output Voltage Logic Low(VOL)	w/HCMOS Load	10% of VDD Max		
Rise / Fall Time	10~90% VDD (CMOS Load)	10 ns Max (Option available)		
Duty Cycle	at 50% of Waveform w/HCMOS Load	50 $\pm 10\%$ (STD) 50 $\pm 5\%$ (Optional)		
Output Load Condition		10TTL Load or 15pF HCMOS Load		
Pin 1 Tri-State Input Voltage	No Connection	Enables Output		
	2.0V (MIN)	Enables Output		
	0.8V (MAX)	Disables Output: High Impedance		
Aging (at 25°C)		$\pm 3$ ppm, $\pm 5$ ppm/year Max		
Start up Time		10ms Max		

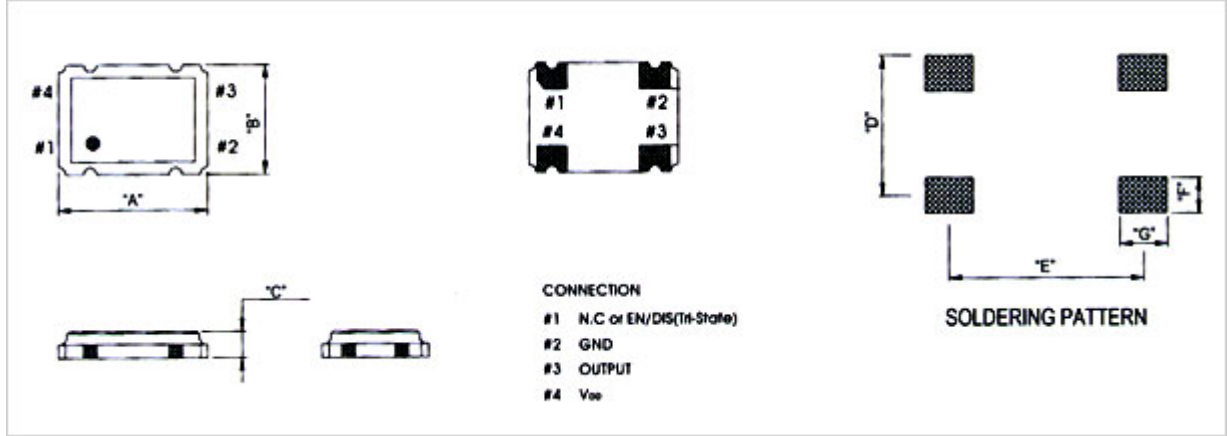
### PART NUMBERING GUIDE



### MARKING SPECIFICATIONS

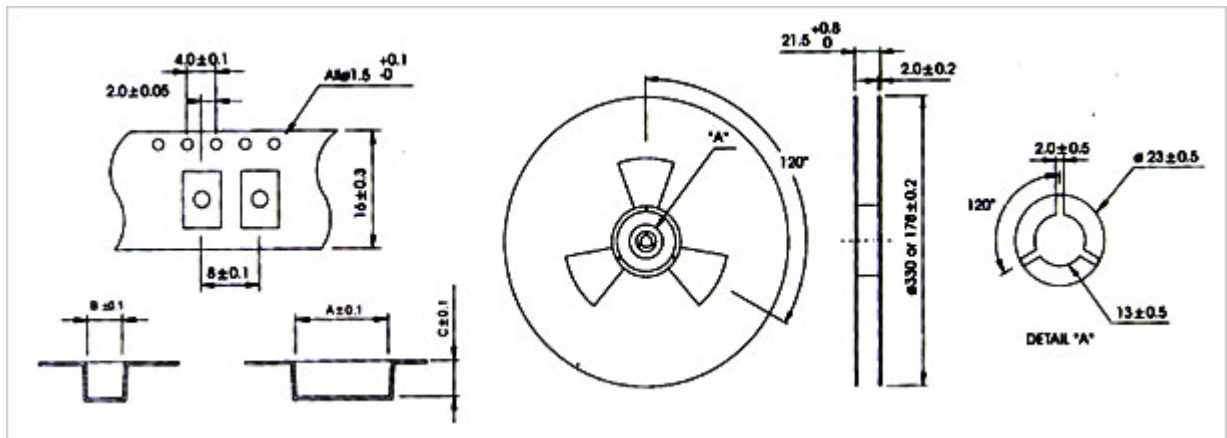


### MECHANICAL DIMENSIONS



LTO	A	B	C	D	E	F	G
103(5)	7.0	5.0	1.7	3.7	5.1	1.5	2.4
533(5)	5.0	3.2	1.2	3.4	3.9	1.2	1.5
323(5)	3.2	2.5	1.0	2.3	1.9	1.1	1.3

■ TAPE AND REEL DIMENSIONS



Type	"A"	"B"	"C"
LTO-10	7.7	5.3	1.8
LTO-53	5.5	3.8	1.4
LTO-32	3.7	3.2	1.2