

ACT9353

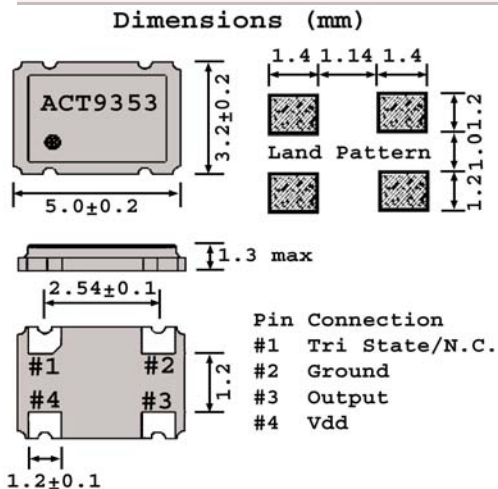
Compatible with Eu Directive
2002/EC - RoHS

The ACT9353 is a miniature low profile Clock Oscillator, housed in a ceramic leadless chip carrier with a SMD seam welded metal lid for high reliability and long term stability. The metal lid is grounded via the package to assist with EMI emission control. This 5x3.2mm packaged device is available in 1.8 ~ 5.0 volt supply voltages and with stabilities from $\pm 20\text{ppm}$ to $\pm 100\text{ppm}$. It is suitable for a wide range of applications. Taped and reeled packaging and loose quantities are available for purchase, to suit high and low volume requirements. The pads are gold plated on all surfaces to allow a variety of assembly processes, including reflow and wire bonding.



Specification

Parameter	Symbol	Specification			
Frequency Range	f ₀	1.000 to 50.000MHz			Please specify
Frequency Stability	Δf/f ₀	±20, ±25, ±50 or ±100ppm (Inclusive of Operating Temperature,range,Supply Voltage & Load)			Please specify
Operating Temperature Range	T _{opr}	0 ~ +70°C & -40 ~ +85°C			Please specify
Storage Temperature Range	T _{stg}	-55 to +125°C			
Supply Voltage	V _{DD}	1.8V, 2.5V, 3.3V & 5.0V			Please specify
Duty Cycle	Tw/t	40/60% Std, (Option 45/55%) (At 50% of Waveform w/HCMOS Load or 1.4DC w/TTL Load)			Please specify
		1.8VDC±10%	2.5VDC±10%	3.3VDC ±10%	5.0VDC±10%
Supply Current (max)1-12.9999MHz	I _{DD}	5mA	7mA	7mA	10mA
Supply Current (max)13-34.999MHz	I _{DD}	7mA	8mA	15mA	20mA
Supply Current (max)35-50MHz	I _{DD}	10mA	15mA	25mA	30mA
Output Level '0'	V _{OL}	10% V _{DD} max (HCMOS)			
Output Level '1'	V _{OH}	90% V _{DD} min (HCMOS)			
Rise & Fall Time (max)	T _r /T _f	10nS max			
Output Load	N/CL	10TTL Load or 15pF HCMOS Load (Std)			
Start-up Time	T _{osc}	10mS max			
Tri-state Input Voltage		No Connection	Enable output		
		V _{IH} : ≥0.7 V _{DD}	Enable output		
		V _{IL} : ≤0.3 V _{DD}	Disable output : High Impedance		
Aging	F _a	±5 ppm p/yr. max @25°C			(±3ppm Available to "custom" order)
Reflow Profile		10 secs @ 260°C Max			(See page 2 for full profile)
Jitter		Please refer to table below			



f_0 MHz	Jitter Parameter	Typical(pS)	Max(pS)
1 ~ 12.999	Phase 12kHz~20MHz	8	10
	Period (rms)	10	15
	Period (pk-pk)	56	70
13 ~ 34.999	Phase 12kHz~20MHz	5	7
	Period (rms)	7	10
	Period (pk-pk)	45	60
35 ~ 50.000	Phase 12kHz~20MHz	5	7
	Period (rms)	6	8
	Period (pk-pk)	35	50

Pad finish: Au

APPLICATIONS

- Microprocessor clock
- Audio
- PDA/Notebook
- Ethernet
- Wireless applications
- Fibre channel
- Instrumentation

Please note that all parameters can not necessarily be specified in the same device

Customer to Specify : Frequency, Frequency Stability, Operating Temperature Range, Voltage, Duty Cycle

In line with our ongoing policy of product evolution and improvement, the above specification may be subject to change without notice.

ISO9001: 2000 Registered

For quotations or further information please contact us at:

3 The Business Centre, Molly Millars Lane, Wokingham, Berks, RG41 2EY, UK

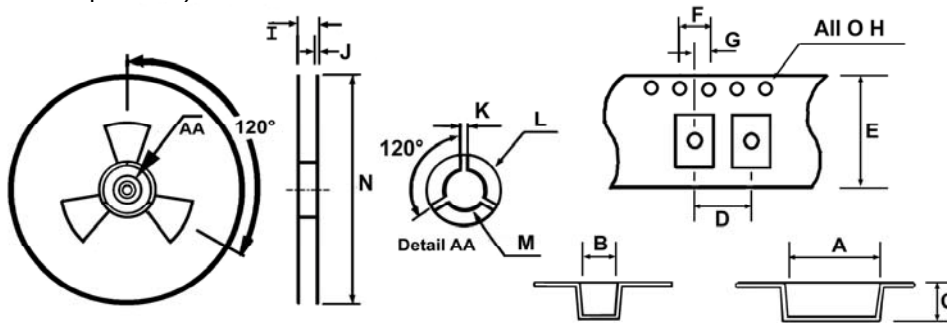
<http://www.actcrystals.com>

Issue : 3 SK

Date 29/10/07

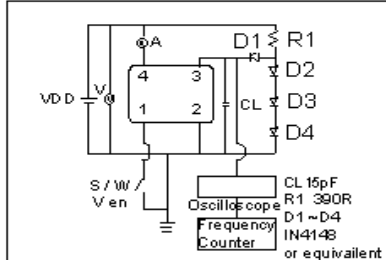
TAPE AND REEL SPECIFICATION FOR ACT9353

(1K Pieces per reel)

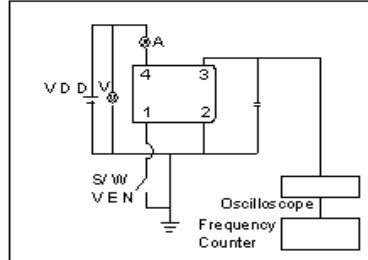


A	B	C	D	E	F	G	H	I	J	K	L	M	N
±0.1	±0.1	±0.1	±0.1	±0.3	±0.1	±0.05	+0.1 -0.0	+0.8 -0.0	±0.2	±0.5	±0.5	±0.5	±0.2
5.5	3.8	1.8	8.0	16.0	4.0	2.0	1.5	21.5	2.0	2.0	Ø23	Ø13	Ø330 Ø178

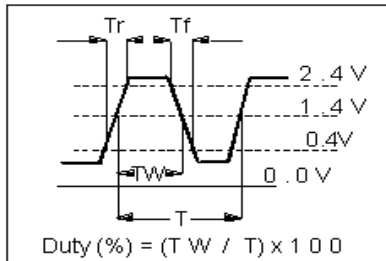
TTL Test Circuit



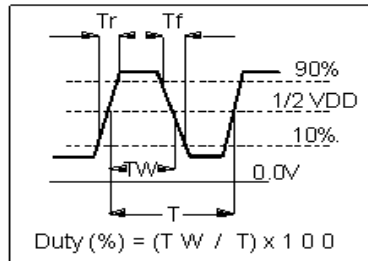
CMOS Test Circuit



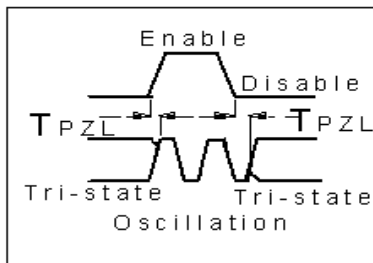
TTL Waveform



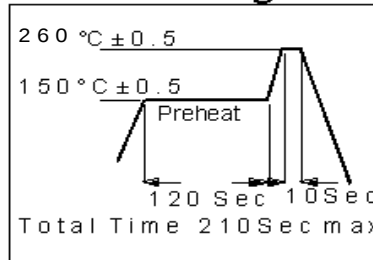
CMOS Waveform



Tristate Function



Reflow Diagram



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