5.0 x 3.2 x 1.6 mm

5.0 Vdc or 3.3 Vdc • LOW PROFILE ULTRA MINIATURE CERAMIC SURFACE MOUNT

CRYSTAL CLOCK OSCILLATORS

ASF1, ASFL and ASFL1

FEATURES:

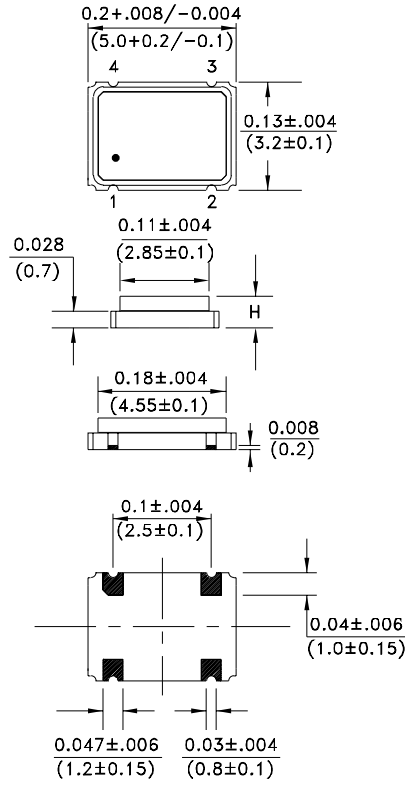
- Compact and low in height.(1.6 mm or 1.2 mm max.)
- Low current consumption.
- Tri state function.
- Suitable for high density SMT., Reflow capable.
- Tight stability option.
- Glass sealed package.

APPLICATIONS:

- CCD clock for VTR camera.
- Equipment connected to PC or PC cards.
- Thin equipment.

STANDARD SPECIFICATIONS

PARAMETERS		ASF1	ASFL	ASFL1
Frequency Range	(F_O)	1.50MHz ~ 125MHz		
Operating Temperature	(T_{OPR})	-10°C to +70°C		
Storage Temperature	(T_{STO})	-50°C to +125°C		
Frequency Stability	($\Delta F/F_O$)	±100ppm max. *(See Options)*		
Supply Voltage	(V_{dd})	5.0 Vdc ±10%	3.3Vdc ±10%	
Input Current	(Idd)	20mA max. 45mA max. 50mA max. 100mA max.	12mA max. for (F < 33MHz) 25mA max. for (F < 50MHz) 35mA max. for (F < 70MHz) 60mA max. for (F ≤ 125MHz)	
Duty Cycle or Symmetry		40 / 60% max. *(See Options)*		
Rise and Fall Times	(T_R / T_F)	6ns max.		
Output Load		5TTL or 15pF(50pF max.) 2TTL or 15pF	5TTL or 15pF(30pF max.) for F < 70MHz 2TTL or 15pF for F ≥ 70MHz	
Output Voltage	(V_{OH}) (V_{OL})	"1" 0.9 * Vdd min. "0" 0.1* Vdd max.		
Tri-State Function		"1" or Open: Oscillation "0": Output disabled (Hi Z)	≥ 2.2V < 0.8V	
Start-up Time		10ms max.		
Aging per Year		±5ppm @ 25°C		

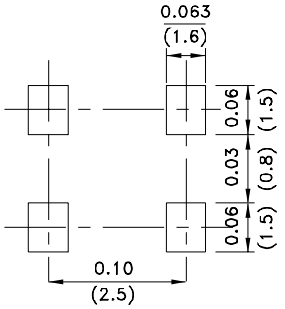


Bottom view

Recommended land pattern

Connect a By-Pass capacitor 0.01 µF between Vdd and GND.
Environmental, and mechanical specifications, see appendix C. Group 2.
Marking, see appendix G. Test circuit, waveforms, see appendix B.
Tape and Reel, see appendix H.(1,000 pcs/reel).
Reflow profile, see appendix E.
Application notes, see appendix A.

PIN N0.	FUNCTION
1	Tri State
2	GND / Case
3	Output
4	Vdd



P/N	H
ASFL	0.063+.006 (1.6+0.15)
ASF1, ASFL1	0.043+.004 (1.1+0.1)

Dimensions: Inches (mm)

ORDERING OPTIONS

ASFX X - Frequency - Temperature - Overall Frequency Stability - Duty Cycle - Packaging

- Blank or L
- Blank or 1
- XX.XXXXX MHz
- - E for -20°C to + 70°C
  - F for -30°C to + 70°C
  - N for -30°C to + 85°C
  - L for -40°C to + 85°C
- -J for ± 20ppm max.*
  -R for ± 25ppm max.*
  -K for ± 30ppm max.*
  -H for ± 35ppm max.*
  -B for ± 40ppm max.
  -C for ± 50ppm max.
- -T (Tape & Reel)
- -S for 45/55% @ 1/2 Vdd

* Vary with frequency and temperature.

NOTE: Left blank if standard • All specifications and markings subject to change without notice

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