

HCMOS 2.0x1.6mm 2.5V SMD Oscillator



Model: F140 SERIES

RoHS Compliant / Pb Free

Rev. 3/9/2011

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FEATURES

- 2.5V Operation
- Standby Function
- Tape and Reel (3,000 pcs. STD)

• PART NUMBER SELECTION [Learn More](#) - Internet Required

Part Number	Model Number	Frequency Stability	Operating Temperature (°C)	Frequency Range (MHz)
838-Frequency-xxxxx	F140	±100PPM ¹	-20 ~ +70	1.000 ~ 80.000
838A-Frequency-xxxxx	F140R	±100PPM ¹	-40 ~ +85	1.000 ~ 80.000
838B-Frequency-xxxxx	F145	±50PPM ¹	-20 ~ +70	1.000 ~ 80.000
838C-Frequency-xxxxx	F145R	±50PPM ¹	-40 ~ +85	1.000 ~ 80.000
838D-Frequency-xxxxx	F146	±25PPM ²	-10 ~ +60	1.000 ~ 80.000

• ELECTRICAL CHARACTERISTICS

PARAMETERS	MAX (unless otherwise noted)
Frequency Range (Fo)	1.000~ 80.000 MHz
Storage Temperature Range (T _{STG})	-40°C ~ +85°C
Supply Voltage (V _{DD})	2.5V ± 10%
Input Current (I _{DD})	
1.000000 ~ 40.000000 MHz	5mA
40.000001 ~ 60.000000 MHz	10mA
60.000001 ~ 80.000000 MHz	15mA
Output Symmetry (50% V _{DD})	45% ~ 55%
Rise Time (10% ~ 90% V _{DD})	6nS
Fall Time (90% ~ 10% V _{DD})	6nS
Output Voltage (V _{OL})	10% V _{DD}
(V _{OH})	90% V _{DD} Min
Output Current (I _{OL})	4mA Min
(I _{OH})	-4mA Min
Output Load (HCMOS)	15pF
Standby Current	10µA
Start-up Time (T _s)	3mS
Output Disable Time ³	50uS
Output Enable Time ³	3mS
Maximum Soldering Temp / Time	260°C ±5°C / 5 Seconds
Moisture Sensitivity Level (MSL)	1
Termination Finish	Au over Ni

¹ Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, reflow freq. shift and one year aging.

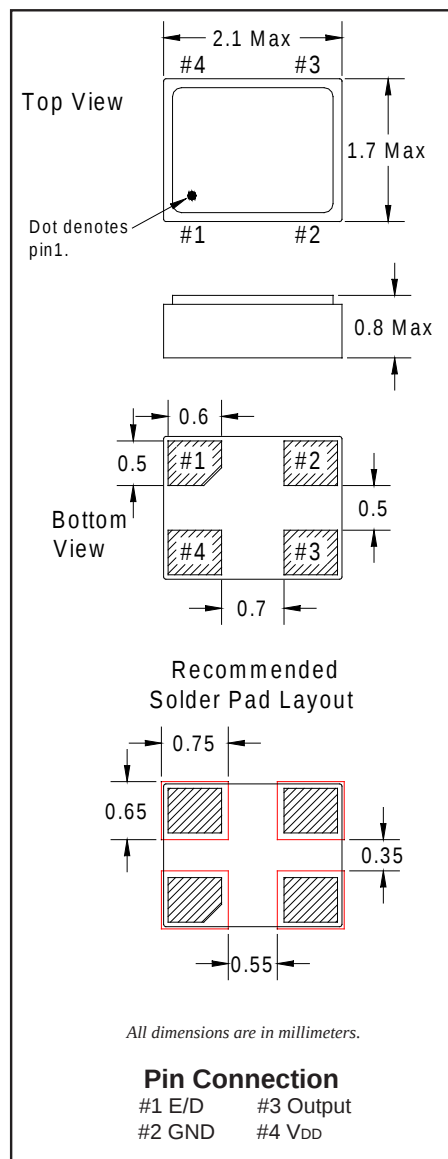
² Inclusive of 25°C tolerance and operating temperature range.

³ An internal pullup resistor from pin 1 to pin 4 allows active output if pin 1 is left open.

Notes: A 0.01µF capacitor should be placed between V_{DD} (Pin 4) and GND (Pin2) to minimize power supply noise.

Dimensional drawing is for reference to critical specifications defined by size measurements. Certain non-critical visual attributes, such as side castellations, reference pin shape, etc. may vary.

All specifications subject to change without notice.



• ENABLE / DISABLE FUNCTION

Pin 1	OUTPUT (Pin 3)
OPEN ³	ACTIVE
'1' Level V _{IH} ≥ 70% V _{DD}	ACTIVE
'0' Level V _{IL} ≤ 30% V _{DD}	High Z

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• TAPE SPECIFICATIONS (millimeters)							
MODEL	A	B	C	D	E	F	STD Reel QTY
F140 Series	Ø1.5	4.0	4.0	3.5	8.0	1.15	3,000

• REEL SPECIFICATIONS (millimeters)							
MODEL	G	H	I	J	K	L	M
F140 Series	2.0	Ø13	Ø21	Ø60	Ø180	9.0	1.7

