

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 (TSTG)	-40°C ~ +85°C
Supply Voltage (VDD)	2.5V ± 10%
Input Current (IDD)	
1.000000 ~ 40.000000 MHz	5mA
40.000001 ~ 60.000000 MHz	10mA
60.000001 ~ 80.000000 MHz	15mA
Output Symmetry (50% VDD)	45% ~ 55%
Rise Time (10% ~ 90% VDD)	6nS
Fall Time (90% ~ 10% VDD)	6nS
Output Voltage (VOL)	10% VDD
(VOH)	90% VDD Min
Output Current (IOL)	4mA Min
(IOH)	-4mA Min
Output Load (HCMOS)	15pF
Standby Current	10µA
Start-up Time (Ts)	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.

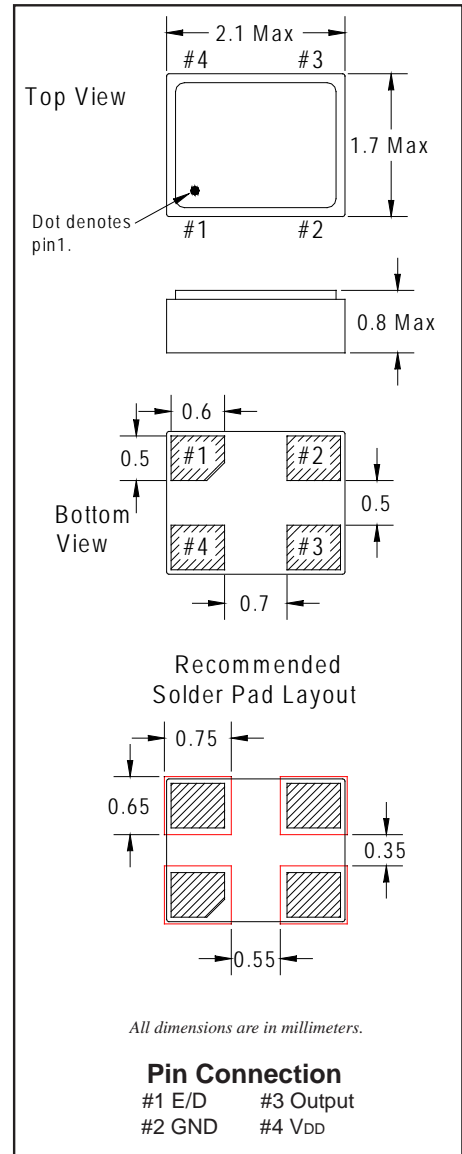
² Inclusive of 25°C tolerance and operating temperature range.

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 VDD (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 $V_{IH} \geq 70\% V_{DD}$	ACTIVE
'0' Level $V_{IL} \leq 30\% V_{DD}$	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

