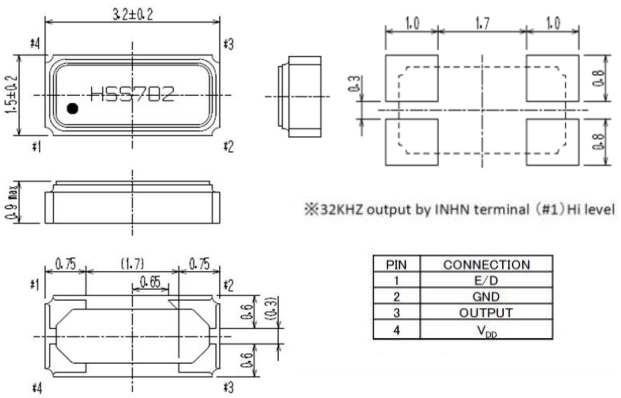
TITLE	DATE
OSCILLATOR SPECIFICATIONS	June 4, 2018

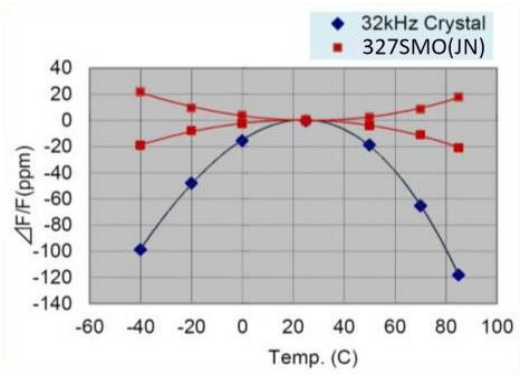
1.	Part No. :	327SMO(JN)
2.	Output frequency :	32.768 kHz
3.	Frequency tolerance:	±3 ppm max.(at +25℃, VDD= 3.3V)
4.	Frequency stability (referred to +25℃):	327SMO(JNB) … ±50 ppm over -40℃ to +85℃ 327SMO(JNC) … ±30 ppm over -40℃ to +85℃ 327SMO(JND) … ±25 ppm over -40℃ to +85℃ 327SMO(JNE) … ±20 ppm over -40℃ to +85℃ 327SMO(JNF) … ±15 ppm over -40℃ to +85℃ 327SMO(JNG) … ±10 ppm over -40℃ to +85℃ 327SMO(JNH) … ±5 ppm over -40℃ to +85℃ 327SMO(JNJ) … ±3 ppm over -40℃ to +85℃
5.	Operating Conditions	
	Operating temperature:	-40℃ to +85℃ (Standard) -40℃ to +105℃ (W= Option)
	Supply voltage:	2.0V to 5.5V (compensated)
	Stand-by control voltage(Pin#1):	20%V_{DD} max. (ViL) 80%V_{DD} min. (ViH)
6.	Absolute Maximum Ratings	
	Supply voltage:	1.3V to 5.5V
	Storage temperature:	-55℃ to +125℃
7.	Input current (at +3.3V, no load):	1.0μA, Typical (2.0 μA max.)
8.	Stanb-by current (at +3.3V):	1.5μA max. (-40℃ to +85℃) 2.1μA max. (-40℃ to +105℃)
9.	Output (-40℃ to +85℃)	
	Symmetry(CL= 15 pF):	40% to 60% at 1/2V_{DD} (-40℃ to +85℃) 35% to 65% at 1/2V_{DD} (-40℃ to +105℃)
	Rise and fall times(CL = 15 pF):	50 ns max.(20% to 80% V_{DD} level)
	"0" level:	0.4V max. (VoL)
	"1" level:	V_{DD}-0.4V min. (VoH)
	Load:	CMOS 15 pF max.
10.	Frequency voltage coefficient:	1 ppm/V max.
11.	Start-up time:	0.5 sec. max. (+25℃, 3.3V) 3.0 sec. max. (-40℃ to +105℃, 1.3V to 5.5V)
12.	Aging:	±3 ppm max. (+25℃, 3.3V, first year)

Dimensions



PIN	CONNECTION
1	E/D
2	GND
3	OUTPUT
4	V_{DD}

Temperature charactaristic



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ISSUED	CHECKED	APPROVAL
SMI '18/06/04 石山 A. Ishiyama	SMI '18/06/04 増田 Hiroshi	SMI '18/06/04 三浦

	ITEM.	No.
SMI	**32.768 kHz TEMPERATURE COMPENSATED CRYSTAL OSCILLATORS**	**SO-10591A**