

GSX57K Series

KHz Crystal Oscillator

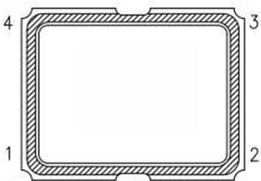
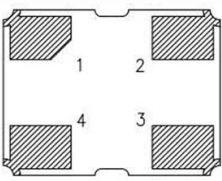
Features

- Nominal Frequency 32.768KHz

Mechanical Data

- 3225 Package
- RoHS Compliant and Halogen Free

Packages & Pin Assignments

3225			
			
Pin	Description	Pin	Description
1	OE (Tri-State)	3	Output
2	Ground	4	V _{DD}

Ordering and Marking Information

Ordering Information						
Part Number	F	V _{DD}	F _T	C _L	Marking	Reel
	KHz	V	ppm	pF		PCS
GSX57K3233F-2515	32.768	3.3	25	15	32.768 • KHz	3,000

Electrical Characteristics (T_A=25°C unless otherwise specified)

Symbol	Description	Min	Typ	Max	Unit	Note
F	Nominal Frequency		32.768		KHz	
F_T	Frequency Tolerance	-25		25	ppm	
V_{DD}	Supply Voltage	2.97	3.3	3.63	V	
I_{CC}	Consumption Current			150	μA	
I_{SB}	Standby Current			10	μA	OE=Low
C_L	Output Load (Driving Ability)		15		pF	
TH/T	Duty Ratio	45		55	%	
V_{OH}	Output Voltage High	0.9V _{DD}			V	
V_{OL}	Output Voltage Low			0.1V _{DD}	V	
V_{IH}	Enable Voltage High	0.7V _{DD}			V	
V_{IL}	Enable Voltage Low			0.3V _{DD}	V	
t_r	Rise time			20	ns	10%→90% V _{DD} Level
t_f	Fall time			20	ns	90%→10% V _{DD} Level
Tpzi	Output Enable Time			2	ms	
Tplz	Output Disable Time			0.15	ms	
	Aging	-3		+3	ppm/yr.	1st Year at 25°C
T_{OPR}	Operation Temperature	-40		85	°C	
T_{STG}	Storage Temperature	-55		125	°C	

Internal Structure

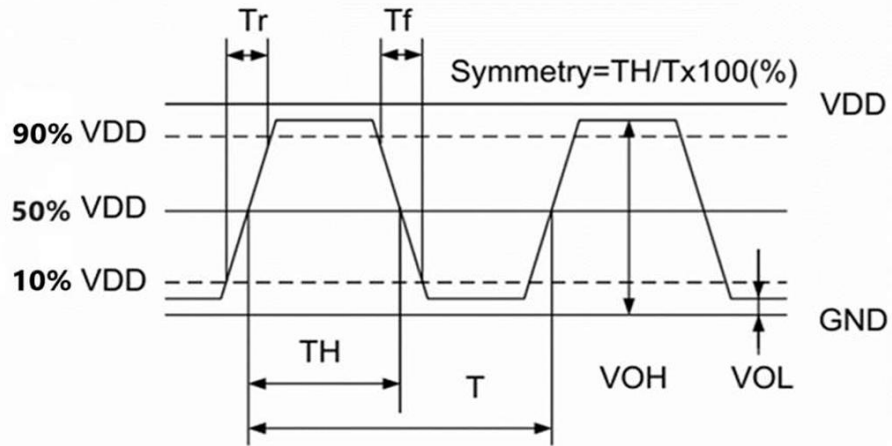
No.	Component	Material	Finish/Spec
1	Lid	Kovar	
2	Base (Package)	Ceramic (Al ₂ O ₃) + Pad (Au)	Alumina Ceramics
3	IC Chip	Si	
4	Crystal Blank	SiO ₂	
5	Conductive Adhesive	Ag	Silicon Resin
6	Electrode	Noble Metal	
7	Die Bonding	Au (Gold Ball, Flip Chip)	

Measurement Circuit

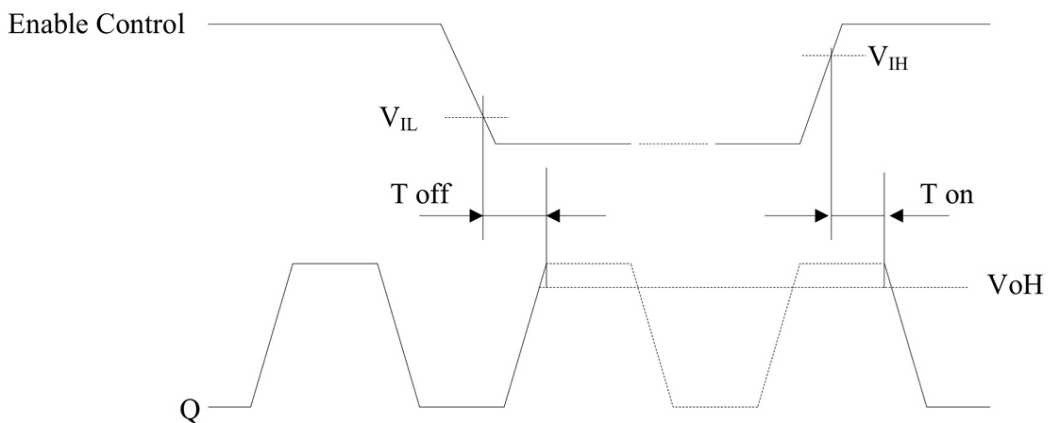
Pad 1 (OE)	Pad 3 (OUT)	Oscillator
OPEN	OSC Output	Active
HIGH	OSC Output	Active
LOW	High Impedance	Stop Oscillation

Output Waveform

Waveform measurement system should have a min. bandwidth of 5 times the frequency being tested.

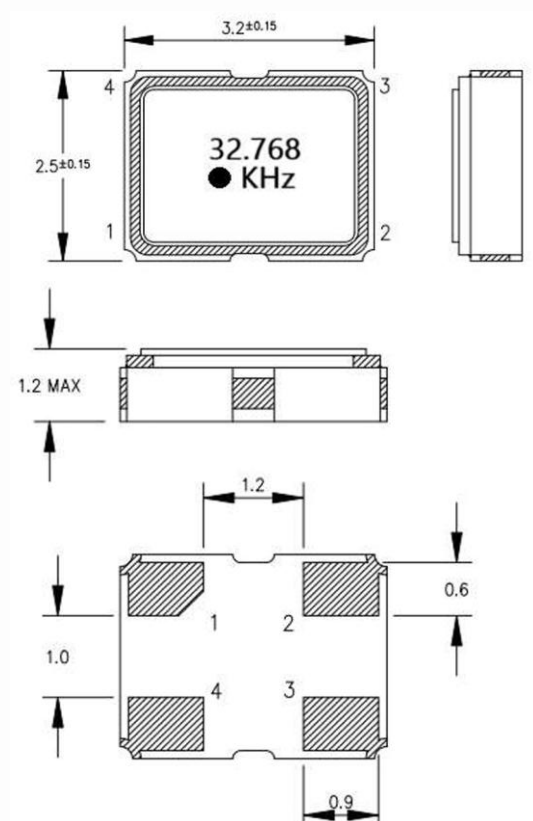


Output ENABLE / DISABLE DELAY

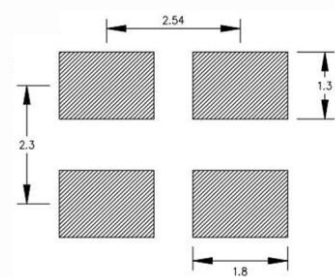


3225

Package Dimension



Recommended Land Pattern



Unit:mm

NOTE:

Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.

NOTICE

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CONTACT US

GS Headquarter	
	4F, NO.43-1, Lane 11, Sec. 6, Minquan E. Rd Neihu District, Taipei City 114761, Taiwan (R.O.C).
	886-2-2657-9980
	886-2-2657-3630
	sales_twn@gs-power.com

RD Division	
	824 Bolton Drive Milpitas. CA. 95035
	1-408-457-0587