





# WORKING FOR EU RoHS / Pb FREE

## ■ EU RoHS / Pb Free Products

The standard crystal products are compliant with EU RoHS directives.  
The appropriate symbol is displayed on individual product pages as applicable.

	● Pb free.
	● Complies with EU RoHS directive. *About the products without the Pb-free mark. Contains Pb in products exempted by EU RoHS directive. (Contains Pb in sealing glass, high melting temperature type solder or other.)

## ■ DISTINCTIONS

Distinctions between the products with Pb plating terminals and the products that comply with EU RoHS directives.

- Plastic packaged type products.  
Marking (year part lot No.) indicates as follows.

	Last digit of year	1	2	3	4	5	6	7	8	9	0
Products Complied with EU RoHS directive (Terminal Plating ; Sn-Bi or Sn-Ag)	Alphabet	A	B	C	D	E	F	G	H	J	K
Products Complied with EU RoHS directive (Terminal Plating ; Sn)	Alphabet	M	N	R	S	T	U	V	W	X	Z

- Cylinder type products  
The color of glass plug will be changed as follows.

Terminal Pb Plating products	Blue or Green etc
Complies with EU RoHS directive products	Gray or White

## ■ Terminal materials of crystal products that comply with EU RoHS directive

We will deliver products that comply with EU RoHS directives for new orders.  
Sn plating of terminals is our standard for the products that offer two types of plating.

Category	Model	Terminal Material	Terminal Plating	Complies With EU RoHS Directive	Pb Free	Remarks (Contains Pb in products exempted by RoHS directive.)	Reference weight (Typ.)
kHz Range Crystal unit	C-002RX	Fe-Ni-Co	Sn-Cu	√	√		52 mg
	C-004R	Fe-Ni-Co	Sn-Cu	√	√		30 mg
	C-005R	Fe-Ni-Co	Sn-Cu	√	√		17 mg
	C-2 TYPE	Fe-Ni-Co	Sn-Cu	√	√		52 mg
	FC-12D	Mo	Au	√	√		3.1 mg
	FC-12M	Mo	Au	√	√		5 mg
	FC-135 / FC-135R	W	Au	√	√	7(c) - I	11 mg
	FC-13A	Mo	Au	√	√		14 mg
	FC1610AN	Mo	Au	√	√		3 mg
	MC-146	42 Alloy	Sn or Sn-Bi	√	√	7(a)	29 mg
	MC-306	42 Alloy	Sn or Sn-Bi	√	√	7(a)	126 mg
	MC-30A	42 Alloy	Sn or Sn-Bi	√	√	7(a)	126 mg
MC-405	42 Alloy	Sn or Sn-Bi	√	√	7(a)	229 mg	
MC-406	42 Alloy	Sn or Sn-Bi	√	√	7(a)	229 mg	
MHz Range Crystal unit	CA-301	Fe-Ni-Co	Sn-Cu	√	√		172 mg
	FA1210AN	Mo	Au	√	√		1 mg
	FA-118T	Mo	Au	√	√		3 mg
	FA-128	W	Au	√	√		7 mg
	FA-128S	W	Au	√	√		11 mg
	FA2016AA	W	Au	√	√		7 mg
	FA2016AN	W	Au	√	√		6 mg
	FA-20H	W	Au	√	√		11 mg
	FA1612AS	W	Au	√	√		5 mg
	FA2016AS	W	Au	√	√		8 mg
	FA-20HS	W	Au	√	√		18 mg
	FA-238	W	Au	√	√		16 mg
	FA-238A	W	Au	√	√		16 mg
	FA-238V	W	Au	√	√		16 mg
	MA-306	42 Alloy	Sn or Sn-Bi	√	√	7(a)	124 mg
	MA-406	42 Alloy	Sn or Sn-Bi	√	√	7(a)	330 mg
	MA-505	42 Alloy	Sn or Sn-Bi	√	√	7(a)	505 mg
MA-506	42 Alloy	Sn or Sn-Bi	√	√	7(a)	505 mg	
TSX-3225	W	Au	√	√		17 mg	
SAW Resonator	FS-335	W	Au	√	√		56 mg
	FS-555	W	Au	√	√		112 mg
	NS-21R	W	Au	√	√		13 mg
	NS-32R	W	Au	√	√		49 mg



Category	Model	Terminal Material	Terminal Plating	Complies With EU RoHS directive	Pb Free	Remarks (Contains Pb in products exempted by RoHS directive.)	Reference weight (Typ.)	
Crystal Oscillator (SPXO)	SG2016CAN / SG2016CAA	W	Au	√	√		9.9 mg	
	SG-210 STF	W	Au	√	√		12 mg	
	SG-210 SxB / SG210SxBA	W	Au	√	√		15 mg	
	SG-210 SxD	W	Au	√	√		15 mg	
	SG-210 SxH	W	Au	√	√		14 mg	
	SG-211 SxE	W	Au	√	√		13 mg	
	SG-3030CM	W	Au	√	√		13 mg	
	SG-3030JC / SG-3040JC	42 Alloy	Sn or Sn-Bi	√		7(a)	239 mg	
	SG-3030JF	42 Alloy	Sn or Sn-Bi	√		7(a)	90 mg	
	SG-3030LC / SG-3040LC	42 Alloy	Sn	√		7(c) - I	25 mg	
	SG-310 series	W	Au	√	√		26 mg	
	SG3225EAN / VAN	W	Au	√	√		25 mg	
	SG5032CAN / CBN / CCN	W	Au	√	√		52 mg	
	SG5032EAN / VAN	W	Au	√	√		52 mg	
	SG-531P	42 Alloy	Sn or Sn-Bi	√		7(a)	698 mg	
	SG-615P	42 Alloy	Sn or Sn-Bi	√		7(a)	917 mg	
	SG-636 series	42 Alloy	Sn or Sn-Bi	√		7(a)	241 mg	
	SG7050CAN / CBN / CCN	W	Au	√	√		147 mg	
	SG7050EAN / VAN	W	Au	√	√		149 mg	
	SG7050EBN	W	Au	√	√		171 mg	
	SG3225HBN	W	Au	√	√		26 mg	
	SG7050EEN	W	Au	√	√		165 mg	
	SG3225EEN	W	Au	√	√		26 mg	
	SG7050VEN	W	Au	√	√		165 mg	
	SG3225VEN	W	Au	√	√		26 mg	
	Selectable SPXO	SG-8503CA	W	Au	√	√		167 mg
		SG-8504CA	W	Au	√	√		168 mg
		SG-8506CA	W	Au	√	√		167 mg
Crystal Oscillator (Low-jitter SAW)	EA-2102CB	W	Au	√	√		64 mg	
	EG-2001CA	W	Au	√	√		130 mg	
	EG-2002CA	W	Au	√	√		135 mg	
	EG-2021CA	W	Au	√	√		135 mg	
	EG-2101CA	W	Au	√	√		134 mg	
	EG-2102CA	W	Au	√	√		129 mg	
	EG-2102CB	W	Au	√	√		71 mg	
	EG-2103CB	W	Au	√	√		71 mg	
	EG-2121CA	W	Au	√	√		133 mg	
	EG-2121CB	W	Au	√	√		71 mg	
	EG-2123CB	W	Au	√	√		71 mg	
	EG-4101CA	W	Au	√	√		140 mg	
	EG-4121CA	W	Au	√	√		140 mg	
	XG-1000CA	W	Au	√	√		126 mg	
	XG-1000CB	W	Au	√	√		56 mg	
	XG-2102CA	W	Au	√	√		133 mg	
	XG-2103CA	W	Au	√	√		133 mg	
XG-2121CA	W	Au	√	√		133 mg		
XG-2123CA	W	Au	√	√		133 mg		
XG5032HAN	W	Au	√	√		70 mg		
Programmable	SG-8002CA	W	Au	√	√		148 mg	
	SG-8002CE	W	Au	√	√		27 mg	
	SG-8002DC	42 Alloy	Sn or Sn-Bi	√		7(a)	699 mg	
	SG-8002JA	42 Alloy	Sn or Sn-Bi	√		7(a)	894 mg	
	SG-8002JC	42 Alloy	Sn or Sn-Bi	√		7(a)	234 mg	
	SG-8101CG	W	Au	√	√		13 mg	
	SG-8101CE	W	Au	√	√		25 mg	
	SG-8101CB	W	Au	√	√		51 mg	
	SG-8101CA	W	Au	√	√		143 mg	
	SG-8018CG	W	Au	√	√		13 mg	
	SG-8018CE	W	Au	√	√		25 mg	
SG-8018CB	W	Au	√	√		51 mg		
SG-8018CA	W	Au	√	√		143 mg		
SG-8101CGA	W	Au	√	√		14 mg		



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Spread Spectrum	SG-9101CG	W	Au	√	√		13 mg
	SG-9101CE	W	Au	√	√		25 mg
	SG-9101CB	W	Au	√	√		51 mg
	SG-9101CA	W	Au	√	√		143 mg
	SG-9101CGA	W	Au	√	√		14 mg
VCXO/ VCSO	EV7050EAN	W	Au	√	√		163 mg
	VG7050CDN	W	Au	√	√		168 mg
	VG2520CAN	W	Au	√	√		13 mg
	VG7050CAN	W	Au	√	√		150 mg
	VG-4231CA	W	Au	√	√		153 mg
	VG-4231CB	W	Au	√	√		54 mg
	VG-4231CE	W	Au	√	√		26 mg
	VG-4232CA	W	Au	√	√		153 mg
	VG-4501CA	W	Au	√		7(c) - I	169 mg
	VG-4502CA	W	Au	√		7(c) - I	164 mg
	VG-4512CA	W	Au	√	√		168 mg
	VG-4513CA	W	Au	√	√		162 mg
	VG-4513CB	W	Au	√	√		65 mg
	VG3225EFN	W	Au	√	√		26 mg
	VG3225VFN	W	Au	√	√		26 mg
	VG5032EFN	W	Au	√	√		66 mg
	VG5032VFN	W	Au	√	√		66 mg
	VG7050EFN	W	Au	√	√		172 mg
	VG7050VFN	W	Au	√	√		172 mg
	VG5032EDN	W	Au	√	√		64 mg
	VG5032VDN	W	Au	√	√		64 mg
	VG7050EAN	W	Au	√	√		167 mg
	VG7050EBN	W	Au	√	√		166 mg
VG7050ECN	W	Au	√	√		168 mg	
TCXO	TG1612SAN	Mo	Au	√	√		4 mg
	TG2016SAN	Mo	Au	√	√		9.1 mg
	TG2016SMN	W	Au	√	√		8.7 mg
	TG2016SBN	W	Au	√	√		8.3 mg
	TG2520SMN	W	Au	√	√		16 mg
	TG2520SBN	W	Au	√	√		15 mg
	TG2520CEN	W	Au	√	√		16 mg
	TG3225CEN	W	Au	√	√		26 mg
	TG-5006CE	W	Au	√	√		28 mg
	TG-5006CG	W	Au	√	√		16 mg
	TG-5006CJ	Mo	Au	√	√		9.1 mg
	TG5032CFN / SFN	W	Au	√	√		71 mg
	TG5032CGN / SGN	W	Au	√	√		72 mg
	TG5032CAN / SAN	W	Au	√	√		75 mg
	TG5032CCN / SCN	W	Au	√	√		72 mg
	TG5032CBN / SBN	W	Au	√	√		75 mg
	TG5032CDN / SDN	W	Au	√	√		72 mg
	TG-5035CE	W	Au	√	√		29 mg
	TG-5035CG	W	Au	√	√		16 mg
	TG-5035CJ	Mo	Au	√	√		9.1 mg
TG-5500CA	W	Au	√	√		165 mg	
TG-5501CA	W	Au	√	√		167 mg	
TG-3541CE	W	Au	√	√		24 mg	
TG-3541CEA	W	Au	√	√		24 mg	
Multi Output Oscillator	MG7050EAN /VAN /HAN	W	Au	√	√		163 mg
OCXO	OG1409CAN	Cu	Au	√		7(c) - I	1.278 g
	OG2525CCN	Fe-Ni	Sn-Cu	√		7(a) , 7(c) - I	12 g
Module	SR3225SAA	W	Au	√	√		25 mg



Category	Model	Terminal Material	Terminal Plating	Complies With EU RoHS directive	Pb Free	Remarks (Contains Pb in products exempted by RoHS directive.)	Reference weight (Typ.)
	RA-4565SA	42 Alloy	Sn	√		7(a)	309 mg
	RA-4574SA	42 Alloy	Sn	√		7(a)	289 mg
	RA4803SA	42 Alloy	Sn	√		7(a)	314 mg
	RA-8565SA	42 Alloy	Sn	√		7(a)	309 mg
	RA-8581SA	42 Alloy	Sn	√		7(a)	289 mg
	RA8803SA	42Alloy	Sn	√		7(a)	314 mg
	RA8900CE	W	Au	√	√		24 mg
	RA8804CE	W	Au	√	√		24 mg
	RTC-4543SA	42 Alloy	Sn	√		7(a)	291 mg
	RTC-4574JE	42 Alloy	Sn-Ag	√		7(a)	118 mg
	RTC-4574NB	Cu Alloy	Sn or Sn-Ag	√		7(a)	83 mg
	RTC-4574SA	42 Alloy	Sn	√		7(a)	289 mg
	RTC-72423	42 Alloy	Sn or Sn-Bi	√		7(a)	661 mg
	RTC-7301SF	Cu Alloy	Sn or Sn-Ag	√		7(a)	233 mg
	RTC-8564JE	42 Alloy	Sn-Ag	√		7(a)	119 mg
	RTC-8564NB	Cu Alloy	Sn or Sn-Ag	√		7(a)	83 mg
	RX-4035LC	42 Alloy	Sn	√		7(c) - I	25 mg
	RX-4035SA	42 Alloy	Sn	√		7(a)	314 mg
	RX-4045NB	Cu Alloy	Sn or Sn-Ag	√		7(a)	84 mg
	RX-4045SA	42 Alloy	Sn	√		7(a)	290 mg
	RX-4571LC	42 Alloy	Sn	√		7(c) - I	25 mg
	RX-4571NB	Cu Alloy	Sn or Sn-Ag	√		7(a)	83 mg
Real Time Clock Module	RX-4571SA	42 Alloy	Sn	√		7(a)	309 mg
	RX-4574LC	42 Alloy	Sn	√		7(c) - I	25 mg
	RX-4581NB	Cu Alloy	Sn or Sn-Ag	√		7(a)	84 mg
	RX-4803LC	42 Alloy	Sn	√		7(c) - I	25 mg
	RX-4803SA	42 Alloy	Sn	√		7(a)	314 mg
	RX6110SA	42 Alloy	Sn	√		7(a)	313 mg
	RX8010SJ	42 Alloy	Sn	√		7(a)	150 mg
	RX-8025NB	Cu Alloy	Sn or Sn-Ag	√		7(a)	84 mg
	RX-8025SA	42 Alloy	Sn	√		7(a)	292 mg
	RX-8035LC	42 Alloy	Sn	√		7(c) - I	25 mg
	RX-8035SA	42 Alloy	Sn	√		7(a)	314 mg
	RX8130CE	W	Au	√	√		24 mg
	RX-8564LC	42 Alloy	Sn	√		7(c) - I	25 mg
	RX-8571LC	42 Alloy	Sn	√		7(c) - I	25 mg
	RX-8571NB	Cu Alloy	Sn	√		7(a)	84 mg
	RX-8571SA	42 Alloy	Sn	√		7(a)	311 mg
	RX-8581JE	42 Alloy	Sn-Ag	√		7(a)	111 mg
	RX-8581NB	Cu Alloy	Sn or Sn-Ag	√		7(a)	84 mg
	RX-8581SA	42 Alloy	Sn	√		7(a)	289 mg
	RX-8731LC	42 Alloy	Sn	√		7(c) - I	25 mg
	RX-8803LC	42 Alloy	Sn	√		7(c) - I	25 mg
	RX-8803SA	42Alloy	Sn	√		7(a)	314 mg
	RX8804CE	W	Au	√	√		24 mg
	RX8900CE	W	Au	√	√		24 mg
	RX8900SA	42Alloy	Sn	√		7(a)	313 mg
SAW Filter	FF-555	W	Au	√	√		112 mg
Sensor	XV-3500CB	W	Au	√	√		65 mg
	XV-3510CB	W	Au	√	√		65 mg
	XV-3900CB	W	Au	√	√		65 mg
	XV4001Bx	W	Au	√	√		68 mg
	XV4001Kx	Cu Alloy	Ni-Pd-Au	√	√		194 mg
	XV7001BB	W	Au	√	√		65 mg
	XV7011BB	W	Au	√	√		65 mg
	XV7021BB	W	Au	√	√		67 mg
	XV-8000CB	W	Au	√	√		65 mg
	XV-8000LK	Cu Alloy	Ni-Pd-Au	√	√		191 mg
	XV-9100CD	W	Au	√	√		107 mg
	XV-9100LP	Cu Alloy	Ni-Pd-Au	√	√		651 mg
	XV-9100LV	Cu Alloy	Ni-Pd-Au	√	√		317 mg
	XV-9300CD	W	Au	√	√		107 mg
	XV-9300LP	Cu Alloy	Ni-Pd-Au	√	√		651 mg
	XV-9300LV	Cu Alloy	Ni-Pd-Au	√	√		317 mg
	TSU-20G	Cu	Sn	√		7(c) - I	200 g
	TSU-70G	Cu	Sn	√		7(c) - I	200 g
	TSU-100G	Cu	Sn	√		7(c) - I	200 g
	HTS-206	Fe-Ni-Co	Sn-Pb	√		7(a)	52 mg