



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.

Note: * = Not recommended for new design or Discontinued products

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	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
	FC2012AN	Mo	Au	○	○		4.3 mg
	FC3215AN	Mo	Au	○	○		13 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	
MHz Range Crystal unit	FA1008AN	Mo	Au	○	○		0.9 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
	FA1612AS	W	Au	○	○		5 mg
	FA2016AS	W	Au	○	○		8 mg
	FA2016ASA	W	Au	○	○		8 mg
	FA-20H	W	Au	○	○		11 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.)
SPXO	SG2016CAN / SG2016CAA	W	Au	O	O		9.9 mg
	SG-210 STF	W	Au	O	O		12 mg
	SG-210SxBA *	W	Au	O	O		15 mg
	SG-210 SxH *	W	Au	O	O		14 mg
	SG-211 SxE *	W	Au	O	O		13 mg
	SG-3030CM *	W	Au	O	O		13 mg
	SG-3031CM	W	Au	O	O		13 mg
	SG-3031CMA	W	Au	O	O		13 mg
	SG-3030JC *	42 Alloy	Sn or Sn-Bi	O		7(a)	239 mg
	SG-3030JF *	42 Alloy	Sn or Sn-Bi	O		7(a)	90 mg
	SG-3030LC */ SG-3040LC *	42 Alloy	Sn	O		7(c) - I	25 mg
	SG2520EGN	W	Au	O	O		12 mg
	SG2520VGN	W	Au	O	O		12 mg
	SG2520EHN	W	Au	O	O		12 mg
	SG2520VHN	W	Au	O	O		12 mg
	SG3225CAN	W	Au	O	O		25 mg
	SG3225EAN / VAN	W	Au	O	O		25 mg
	SG5032CAN / CBN */ CCN	W	Au	O	O		52 mg
	SG5032EAN / VAN	W	Au	O	O		52 mg
	SG5032EEN / VEN	W	Au	O	O		165 mg
	SG-531P *	42 Alloy	Sn or Sn-Bi	O		7(a)	698 mg
	SG-615P *	42 Alloy	Sn or Sn-Bi	O		7(a)	917 mg
	SG-636 series *	42 Alloy	Sn or Sn-Bi	O		7(a)	241 mg
	SG7050CAN / CBN */ CCN	W	Au	O	O		147 mg
	SG7050EAN / VAN	W	Au	O	O		149 mg
	SG7050EBN *	W	Au	O	O		171 mg
	SG3225HBN	W	Au	O	O		26 mg
	SG7050EEN	W	Au	O	O		165 mg
	SG3225EEN	W	Au	O	O		26 mg
	SG7050VEN	W	Au	O	O		165 mg
	SG3225VEN	W	Au	O	O		26 mg
Selectable SPXO	SG-8503CA	W	Au	O	O		167mg
	SG-8504CA	W	Au	O	O		168 mg
	SG-8506CA	W	Au	O	O		167 mg
SPSO (Low-jitter SAW)	EA-2102CB	W	Au	O	O		64 mg
	EG-2001CA *	W	Au	O	O		130 mg
	EG-2002CA *	W	Au	O	O		135 mg
	EG-2021CA *	W	Au	O	O		135 mg
	EG-2101CA *	W	Au	O	O		134 mg
	EG-2102CA *	W	Au	O	O		129 mg
	EG-2102CB	W	Au	O	O		71 mg
	EG-2103CB	W	Au	O	O		71 mg
	EG-2121CA	W	Au	O	O		133 mg
	EG-2121CB	W	Au	O	O		71 mg
	EG-2123CB	W	Au	O	O		71 mg
	EG-4101CA	W	Au	O	O		140 mg
	EG-4121CA	W	Au	O	O		140 mg
	XG-1000CA *	W	Au	O	O		126 mg
	XG-1000CB *	W	Au	O	O		56 mg
	XG-2102CA	W	Au	O	O		133 mg
	XG-2103CA	W	Au	O	O		133 mg
	XG-2121CA	W	Au	O	O		133 mg
XG-2123CA *	W	Au	O	O		133 mg	
XG5032HAN	W	Au	O	O		70 mg	
Programmable	SG-8002CA *	W	Au	O	O		148 mg
	SG-8002CE *	W	Au	O	O		27 mg
	SG-8002DC *	42 Alloy	Sn or Sn-Bi	O		7(a)	699 mg
	SG-8002JA *	42 Alloy	Sn or Sn-Bi	O		7(a)	894 mg
	SG-8002JC *	42 Alloy	Sn or Sn-Bi	O		7(a)	234 mg
	SG-8101CG	W	Au	O	O		13 mg
	SG-8101CE	W	Au	O	O		25 mg
	SG-8101CB	W	Au	O	O		51 mg
	SG-8101CA	W	Au	O	O		143 mg
	SG-8018CG	W	Au	O	O		13 mg
	SG-8018CE	W	Au	O	O		25 mg
	SG-8018CB	W	Au	O	O		51 mg
SG-8018CA	W	Au	O	O		143 mg	
SG-8101CGA	W	Au	O	O		14 mg	

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Spread Spectrum	SG-9101CG	W	Au	O	O		13 mg
	SG-9101CE	W	Au	O	O		25 mg
	SG-9101CB	W	Au	O	O		51 mg
	SG-9101CA	W	Au	O	O		143 mg
	SG-9101CGA	W	Au	O	O		14 mg
VCXO / VCSO	EV7050EAN	W	Au	O	O		163 mg
	VG7050CDN	W	Au	O	O		168 mg
	VG2520CAN *	W	Au	O	O		13 mg
	VG7050CAN *	W	Au	O	O		150 mg
	VG-4231CA *	W	Au	O	O		153 mg
	VG-4231CB *	W	Au	O	O		54 mg
	VG-4231CE	W	Au	O	O		26 mg
	VG-4232CA *	W	Au	O	O		153 mg
	VG-4501CA *	W	Au	O		7(c) - I	169 mg
	VG-4502CA *	W	Au	O		7(c) - I	164 mg
	VG-4512CA *	W	Au	O	O		168 mg
	VG-4513CA *	W	Au	O	O		162 mg
	VG-4513CB *	W	Au	O	O		65 mg
	VG3225EFN	W	Au	O	O		26 mg
	VG3225VFN	W	Au	O	O		26 mg
	VG5032EFN	W	Au	O	O		66 mg
	VG5032VFN	W	Au	O	O		66 mg
	VG7050EFN	W	Au	O	O		172mg
	VG7050VFN	W	Au	O	O		172mg
	VG5032EDN	W	Au	O	O		64 mg
	VG5032VDN	W	Au	O	O		64 mg
	VG7050EAN	W	Au	O	O		167 mg
	VG7050EBN	W	Au	O	O		166 mg
	VG7050ECN	W	Au	O	O		168 mg
	TCXO	TG1612SAN	Mo	Au	O	O	
TG1612SLN		Mo	Au	O	O		4 mg
TG2016SAN *		Mo	Au	O	O		9.1 mg
TG2016SMN		W	Au	O	O		8.7 mg
TG2016SKA		W	Au	O	O		8.4 mg
TG2016SLA		W	Au	O	O		8.4 mg
TG7050xKN		W	Au	O	O		165 mg
TG7050xMN		W	Au	O	O		167 mg
TG2016SBN		W	Au	O	O		8.3 mg
TG2520SMN		W	Au	O	O		16 mg
TG2520SBN		W	Au	O	O		15 mg
TG2520CEN		W	Au	O	O		16 mg
TG3225CEN		W	Au	O	O		26 mg
TG-5006CE		W	Au	O	O		28 mg
TG-5006CG		W	Au	O	O		16 mg
TG-5006CJ		Mo	Au	O	O		9.1 mg
TG5032CFN / SFN		W	Au	O	O		71 mg
TG5032CGN / SGN		W	Au	O	O		72 mg
TG5032CKN / SKN		W	Au	O	O		72 mg
TG5032SMN / CMN		W	Au	O	O		71 mg
TG5032CAN */ SAN *		W	Au	O	O		75 mg
TG5032CCN */ SCN *		W	Au	O	O		72 mg
TG5032CBN */ SBN *		W	Au	O	O		75 mg
TG5032CDN */ SDN *		W	Au	O	O		72 mg
TG-5035CE *		W	Au	O	O		29 mg
TG-5035CG *		W	Au	O	O		16 mg
TG-5035CJ *		Mo	Au	O	O		9.1 mg
TG-5500CA *		W	Au	O	O		165 mg
TG-5501CA *		W	Au	O	O		167 mg
TG-5510CA		W	Au	O	O		165 mg
TG-5511CA		W	Au	O	O		167 mg
TG-5510CB		W	Au	O	O		72 mg
TG-5511CB		W	Au	O	O		71 mg
TG-3541CE	W	Au	O	O		24 mg	
TG-3541CEA	W	Au	O	O		24 mg	
Multi Output Oscillator	MG7050EAN */VAN */HAN *	W	Au	O	O		163 mg
Module	SR3225SAA	W	Au	O	O		24 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.)	
Real Time Clock Module	RA-4565SA	42 Alloy	Sn	O		7(a)	309 mg	
	RA-4574SA *	42 Alloy	Sn	O		7(a)	289 mg	
	RA4000CE	W	Au	O	O		24 mg	
	RA4803SA	42 Alloy	Sn	O		7(a)	314 mg	
	RA-8565SA	42 Alloy	Sn	O		7(a)	309 mg	
	RA-8581SA	42 Alloy	Sn	O		7(a)	289 mg	
	RA8803SA	42Alloy	Sn	O		7(a)	314 mg	
	RA8000CE	W	Au	O	O		24 mg	
	RA8900CE	W	Au	O	O		24 mg	
	RA8900CE	W	Au	O	O		24 mg	
	RA8804CE	W	Au	O	O		24 mg	
	RTC-4543SA *	42 Alloy	Sn	O			7(a)	291 mg
	RTC-4574JE *	42 Alloy	Sn-Ag	O			7(a)	118 mg
	RTC-4574NB *	Cu Alloy	Sn or Sn-Ag	O			7(a)	83 mg
	RTC-4574SA	42 Alloy	Sn	O			7(a)	289 mg
	RTC-72423	42 Alloy	Sn or Sn-Bi	O			7(a)	661 mg
	RTC-7301SF *	Cu Alloy	Sn or Sn-Ag	O			7(a)	233 mg
	RTC-8564JE *	42 Alloy	Sn-Ag	O			7(a)	119 mg
	RTC-8564NB *	Cu Alloy	Sn or Sn-Ag	O			7(a)	83 mg
	RX4001CE	W	Au	O	O			24 mg
	RX4111CE	W	Au	O	O			24 mg
	RX4901CE	W	Au	O	O			24 mg
	RX-4035LC	42 Alloy	Sn	O			7(c) - I	25mg
	RX-4035SA	42 Alloy	Sn	O			7(a)	314 mg
	RX-4045NB *	Cu Alloy	Sn or Sn-Ag	O			7(a)	84 mg
	RX-4045SA	42 Alloy	Sn	O			7(a)	290 mg
	RX-4571LC	42 Alloy	Sn	O			7(c) - I	25 mg
	RX-4571NB *	Cu Alloy	Sn or Sn-Ag	O			7(a)	83 mg
	RX-4571SA	42 Alloy	Sn	O			7(a)	309 mg
	RX-4574LC *	42 Alloy	Sn	O			7(c) - I	25 mg
	RX-4581NB *	Cu Alloy	Sn or Sn-Ag	O			7(a)	84 mg
	RX-4803LC	42 Alloy	Sn	O			7(c) - I	25 mg
	RX-4803SA	42 Alloy	Sn	O			7(a)	314 mg
	RX6110SA	42 Alloy	Sn	O			7(a)	313 mg
	RX8010SJ	42 Alloy	Sn	O			7(a)	150 mg
	RX-8025NB *	Cu Alloy	Sn or Sn-Ag	O			7(a)	84 mg
	RX-8025SA	42 Alloy	Sn	O			7(a)	292 mg
	RX-8035LC	42 Alloy	Sn	O			7(c) - I	25 mg
	RX-8035SA	42 Alloy	Sn	O			7(a)	314 mg
	RX8130CE	W	Au	O	O			24 mg
	RX-8564LC	42 Alloy	Sn	O			7(c) - I	25 mg
	RX-8571LC	42 Alloy	Sn	O			7(c) - I	25 mg
	RX-8571NB *	Cu Alloy	Sn	O			7(a)	84 mg
	RX-8571SA	42 Alloy	Sn	O			7(a)	311 mg
	RX-8581JE *	42 Alloy	Sn-Ag	O			7(a)	111 mg
	RX-8581NB *	Cu Alloy	Sn or Sn-Ag	O			7(a)	84 mg
	RX-8581SA *	42 Alloy	Sn	O			7(a)	289 mg
	RX-8731LC	42 Alloy	Sn	O			7(c) - I	25 mg
	RX-8803LC	42 Alloy	Sn	O			7(c) - I	25 mg
	RX-8803SA	42Alloy	Sn	O			7(a)	314 mg
RX8111CE	W	Au	O	O			24 mg	
RX8900CE	W	Au	O	O			24 mg	
RX8804CE	W	Au	O	O			24 mg	
RX8901CE	W	Au	O	O			24 mg	
RX8900SA	42Alloy	Sn	O			7(a)	313 mg	
SAW Filter	FF-555 *	W	Au	O	O		112 mg	
Sensor	XV-3500CB *	W	Au	O	O		65 mg	
	XV-3510CB	W	Au	O	O		65 mg	
	XV4001Bx	W	Au	O	O		68 mg	
	XV4001Kx	Cu Alloy	Ni-Pd-Au	O	O		194 mg	
	XV7001BB	W	Au	O	O		65 mg	
	XV7011BB	W	Au	O	O		65 mg	
	XV7021BB	W	Au	O	O		67 mg	
	XV7081BB	W	Au	O	O		67 mg	
	XV-8000CB *	W	Au	O	O		65 mg	
	XV-8000LK *	Cu Alloy	Ni-Pd-Au	O	O		191 mg	
	XV-9100CD	W	Au	O	O		107 mg	
	XV-9100LP	Cu Alloy	Ni-Pd-Au	O	O		651 mg	
	XV-9100LV	Cu Alloy	Ni-Pd-Au	O	O		317 mg	
	XV-9300CD	W	Au	O	O		107 mg	
	XV-9300LP	Cu Alloy	Ni-Pd-Au	O	O		651 mg	
	XV-9300LV	Cu Alloy	Ni-Pd-Au	O	O		317 mg	
HTS-206 *	Fe-Ni-Co	Sn-Pb	O			7(a)	52 mg	