

Fiber Optics Lead-free replacement list October 2005

*These models in this list show the common and widely-distributed products as the lead-free type.

If you can not find out the model you are looking for, or not know the current production status of lead-free models, please contact a local SHARP sales representative.

Leaded part No.	Lead-free availability	Lead-free part No.	Outline	Solder Material	Soldering Condition
GP1FA313RZ	Yes	GP1FA313RZ0F	Square connector	Sn-Cu	See appendix
GP1FA313TZ	Yes	GP1FA313TZ0F	Square connector	Sn-Cu	See appendix
GP1FA352RZ	Yes	GP1FA352RZ0F	Square connector	Sn-Cu	See appendix
GP1FA352TZ	Yes	GP1FA352TZ0F	Square connector	Sn-Cu	See appendix
GP1FA513RZ	Yes	GP1FA513RZ0F	Square connector	Sn-Cu	See appendix
GP1FA513TZ	Yes	GP1FA513TZ0F	Square connector	Sn-Cu	See appendix
GP1FA513TZC	Yes	GP1FA513TZCF	Square connector	Sn-Cu	See appendix
GP1FA514TZ	Yes	GP1FA514TZ0F	Square connector	Sn-Cu	See appendix
GP1FA51HRZ	Yes	GP1FA51HRZ0F	Square connector	Sn-Cu	See appendix
GP1FA51HTZ	Yes	GP1FA51HTZ0F	Square connector	Sn-Cu	See appendix
GP1FA553RZ	Yes	GP1FA553RZ0F	Square connector	Sn-Cu	See appendix
GP1FA553TZ	Yes	GP1FA553TZ0F	Square connector	Sn-Cu	See appendix
GP1FA554TZ	Yes	GP1FA554TZ0F	Square connector	Sn-Cu	See appendix
-	Yes	GP1FAV50TK0F	Square connector	Sn-Cu	See appendix
GP1FC300TP	Yes	GP1FC300TP0F	Φ3.5 optical mini-jack	Sn-Ag-Cu(Optical), Sn-Cu(Jack)	See appendix
GP1FD210RK	No	-	Φ3.5 optical mini-jack	-	-
GP1FD210RP	Yes	GP1FD210RP0F	Φ3.5 optical mini-jack	Sn-Ag-Cu(Optical), Sn-Cu(Jack)	See appendix
-	Yes	GP1FD210TP0F	Φ3.5 optical mini-jack	Sn-Ag-Cu(Optical), Sn-Cu(Jack)	See appendix
GP1FD310TP	Yes	GP1FD310TP0F	Φ3.5 optical mini-jack	Sn-Ag-Cu(Optical), Sn-Cu(Jack)	See appendix
GP1FM313RZ	Yes	GP1FM313RZ0F	Square connector	Sn-Cu(Terminal), Zn(Frame)	See appendix
GP1FM313TZ	Yes	GP1FM313TZ0F	Square connector	Sn-Cu(Terminal), Zn(Frame)	See appendix
GP1FM513RZ	Yes	GP1FM513RZ0F	Square connector	Sn-Cu(Terminal), Zn(Frame)	See appendix
GP1FM513TZ	Yes	GP1FM513TZ0F	Square connector	Sn-Cu(Terminal), Zn(Frame)	See appendix
GP1FP313RK	Yes	GP1FP313RK0F	Square connector integrated with Pin Jack	Sn-Cu(Terminal), Sn(Frame)	See appendix
GP1FP513TK	Yes	GP1FP513TK0F	Square connector integrated with Pin Jack	Sn-Cu(Terminal), Sn(Frame)	See appendix

■ Fiber Optics : Lead-free part soldering conditions Square connector

● Flow Soldering

- Soldering should be completed below 260°C and within 6 s up to two times.
- Soldering area should be 1.6 mm or more away from the bottom of housing.

● Hand Soldering

- Hand soldering should be completed within 4 s with solder iron at below 380 °C.
- Please solder one time only.
- Please don't touch the terminals directly with soldering iron.
- Soldered product should be treated after it cooled down to normal temperature.

● Other notices

- Please test the soldering method in actual condition and make sure the soldering works fine, since the impact on the junction between the device and PCB varies depending on the tooling and soldering conditions.

■ Fiber Optics : Lead-free part soldering conditions Square connector integrated with Pin Jack

● Flow Soldering

- Soldering should be completed below 260°C and within 5 s up to two times.
- Soldering area is 1.6 mm or more away from the bottom of housing.

● Hand Soldering

- Hand soldering should be completed within 3.5 s with solder iron at below 350 °C.
- Please solder one time only.
- Please don't touch the terminals directly with soldering iron.
- Soldered product should be treated after it cooled down to normal temperature.

● Other notices

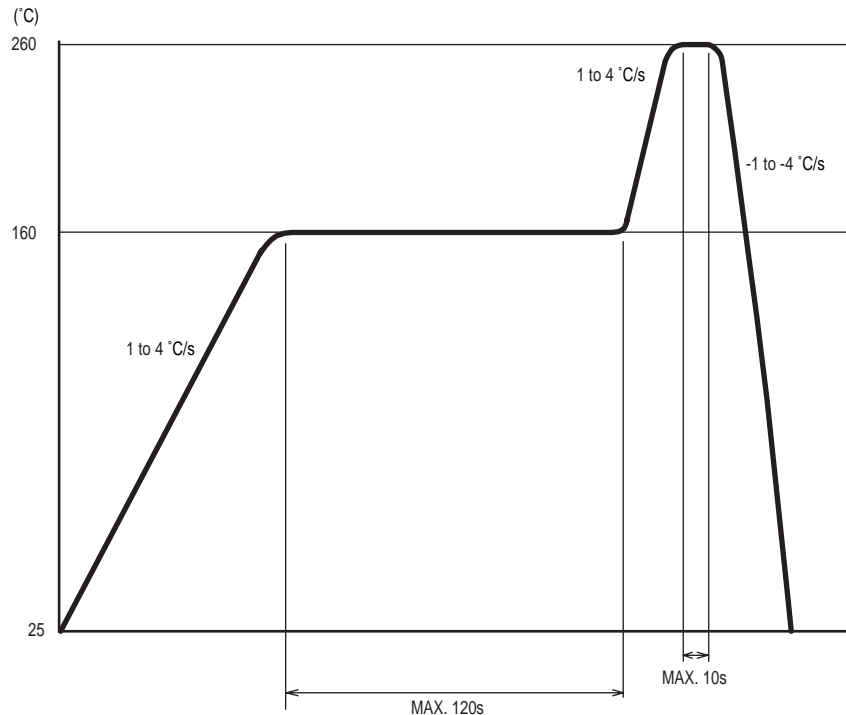
- Please test the soldering method in actual condition and make sure the soldering works fine, since the impact on the junction between the device and PCB varies depending on the tooling and soldering conditions.

■ Fiber Optics : Lead-free part soldering conditions Optical Mini Jack

● Reflow Soldering

Reflow soldering should follow the temperature profile shown below.
Soldering should not exceed the curve of temperature profile and time.
Please don't solder more than twice.

Reflow interval shall be within two days under conditions, 10 to 30°C, 70%RH or less.



An infrared lamp used to heat up for soldering may cause a localized temperature rise in the resin.

So keep the package temperature within that specified in above.

Also avoid immersing the resin part in the solder.

Even if within the temperature profile above, there is the possibility that the gold wire in package is broken in case that the deformation of PWB gives the affection to lead pins.
Please use after confirmation the conditions fully by actual solder reflow machine.

● Hand Soldering

- Hand soldering should be completed within 4 s with solder iron at below 390 °C.
- Please solder one time only.
- Please take care not to let any external stress imposed on to lead pins.
- Soldering area should be 0.8 mm or more away from the bottom of housing.
- Soldered product should be treated after it cooled down to normal temperature.