COAXIAL CONNECTOR

Ultra-Miniature SMT GSC Type

murata

New coaxial connector GSC type. Microwave, Low profile 2mm height, SMD.

■FEATURES

1. The mating height is only 2mm maximum by new mechanical design. Suitable for low profile design.
2. Receptacle size is 3.0×3.0mm. Suitable for high density design.
3. New mating mechanical design makes stable feeling connection.
4. Soft and ultra thin 0.8mm diameter flexible coaxial cables is available. Easy cable lay out will be realized. In addition to flexible cable, ultra thin 0.62mm diameter semi rigid cable is also available. Low insertion loss and low leakage will be realized.
5. High performance with wide frequency range (DC to 6GHz). VSWR at DC to 3GHz is 1.2 maximum. VSWR at 3GHz to 6GHz is 1.3 maximum.
6. Surface mountable and reflow solderable.
7. Tape package is available.

■APPLICATIONS

Portable telephone, cordless telephone (analog and digital), GPS, and other microwave radio and measurement equipment.

■PART NUMBER

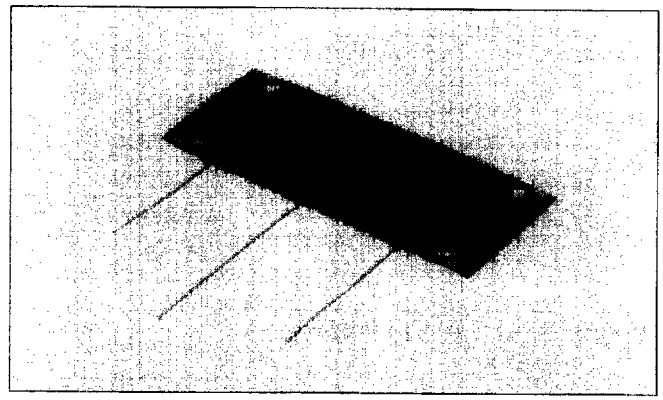
●Straight receptacle for printed circuit board.

Part Number	Packaging	Quantity
MM9329-2700	Bulk package	Free
MM9329-2700TB1	178mm Dia. Taping	1000pcs/reel
MM9329-2700TB2	330mm Dia. Taping	5000pcs/reel

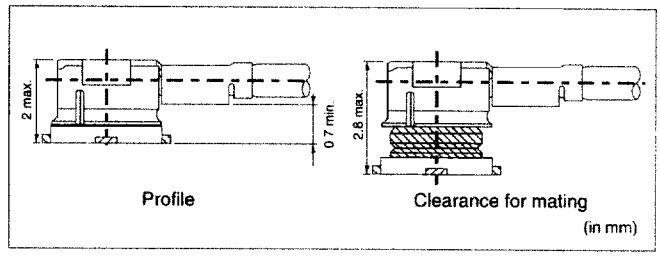
●Right angle cable assembly with flexible cable.
MXTK88□□□□□□ (Flexible Cable)
MXTK92□□□□□□ (Flexible Cable)
MXTK91□□□□□□ (Semirigid Cable)

●SMA-GSC adapters for receptacle.
MM121470 (Hand measurement)
MM121471 (Automatic measurement)

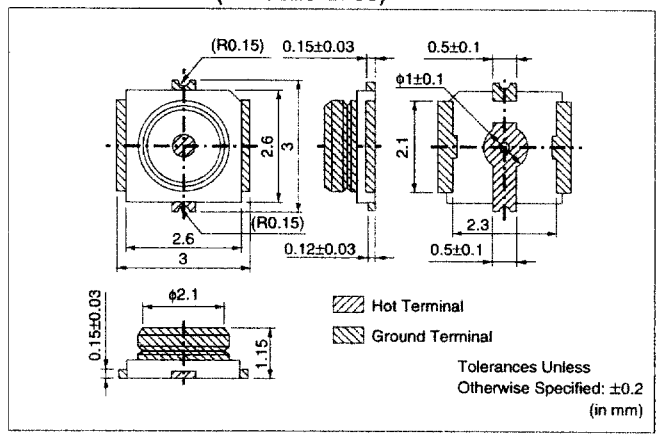
●SMA-GSC adapter for cable assembly
MM121480



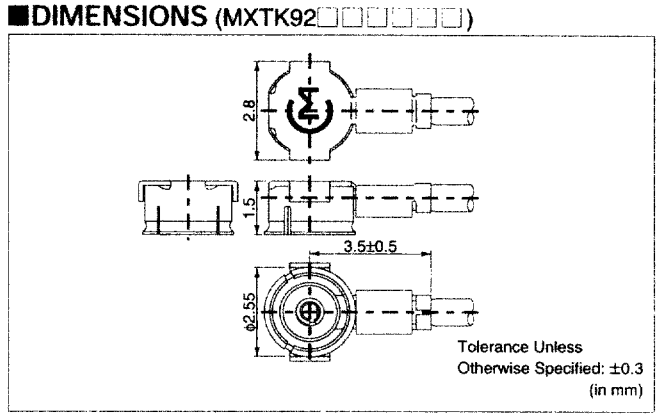
■DIMENSIONS



■DIMENSIONS (MM9329-2700)



■DIMENSIONS (MXTK92□□□□□□)



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■RATING AND CHARACTERISTICS

Item	Specification
Frequency Range	DC to 6GHz
VSWR	1.2 Max. (DC to 3GHz) 1.3 Max. (3GHz to 6GHz)
Nominal Impedance	50Ω
Temperature Range	−40°C to +90°C
Voltage Rating	250Vrms
Contact Resistance	15mΩ Max.
Withstanding Voltage	AC300Vrms
Insulation Resistance	500MΩ Min.
Durability	50 cycles

■MATERIALS AND FINISH

●MM9329-2700

Part Name	Materials	Finish
Center Contact	Copper Alloy	Gold plated
Outer Contact	Copper Alloy	Silver plated
Insulator	Engineering plastic	None

●MXTK88□□□□□□
MXTK91□□□□□□
MXTK92□□□□□□

Part Name	Materials	Finish
Center Contact	Copper Alloy	Gold plated
Outer Contact	Copper Alloy	Silver plated
Insulator	Engineering plastic	None

■PART NUMBERING FOR CABLE ASSEMBLY

(Please specify the part number when ordering.)

(Ex.) MX | TK | 92 | XX | 100 | 0

❶ ❷ ❸ ❹ ❺ ❻

❶ Cable assembly
❷❸ Connector code

Code	Connector
TK	GSC type plug connector
XX	None

❹ Cable code (See cable list on page 23 to 24 for detail.)

Code	Cable	Outer Diameter	Outer conductor construction	Insulation material	Minimum Bending radius
88	0.4D (*)	0.83mm	Single shield	PFA	3.3mm
92	0.4D (*)	0.8mm	Single shield	PFA	3.3mm
91	0.52D (*)	0.62mm	Semirigid cable	PTFE	3.2mm

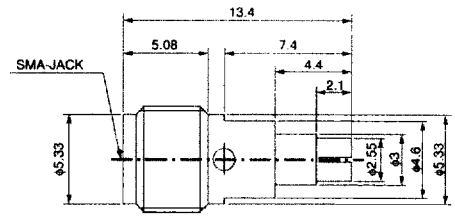
(*) Based on Japanese Industrial Standard (JIS).

❺❻ Full length of cable assembly
Length (mm) = ❺×10❻
Ex. : 500mm =500×10⁰→5000
1000mm =100×10¹→1001

■SMA-GSC ADAPTERS

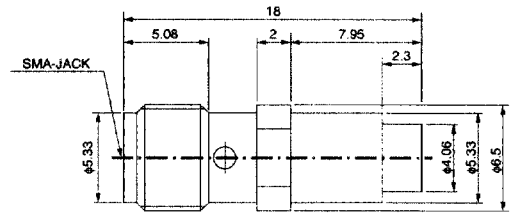
●SMA-GSC adapters for receptacle

MM121470 (Hand measurement)



(in mm)

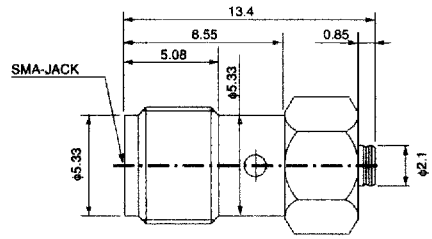
MM1121471 (Automatic measurement)



(in mm)

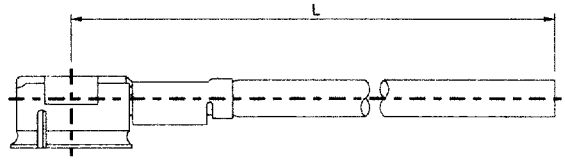
●SMA-GSC adapter for cable assembly

MM121480



(in mm)

■CABLE LENGTH TOLERANCE



Cable Length L (mm) (*)		Dimensional tolerance (mm)
Over	Till	
40	100	±3
100	500	±4
500	1000	±10
1000	–	+2% of L −0% of L

* L must be 20mm Min.

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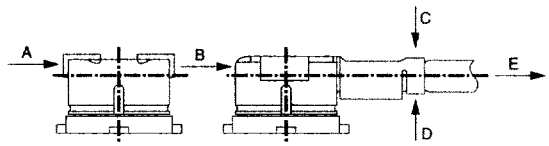
■NOTICE

Disaccord with following notes could give mechanical damage and/or poor electrical performance.

1. Mechanical Stress :
   Stress to the connector should be limited as shown Fig.1.
2. PCB mount pattern dimension :
   Dimensions shown in Fig. 2 should be used for the PCB design.
3. Disengagement and engagement.
   Use tool P/N M22001 (Fig.3). The connector to be disengaged and engaged should be pulled out or insert to the vertical direction using the tool. Do not try to pull out by the cable, because there is the possibility a wire breaks.
4. Cable and connector handling :
   Do not give a twisted torque to the cable and connector.
5. Reflow soldering condition :
   Reflow soldering should be carried out according to condition as shown in Fig.4.
   And the eutectic solder should be used.
6. When MM9329-2700 was soldered on P.C.B.,
   •Use the metal mask pattern as illustrated in Fig.2 (Thickness is 0.15mm) in order to print the proper quantity.
   •Use Rosin based flux, but not with strong acid flux (Chlorine content should be less than 0.20wt%).
   •Flux should be cleaned thoroughly.
7. Washing :
   In case of cleaning the receptacle, please dry out the receptacle immediately after cleaning.
   Do not wash cable assembly.
8. Storage of temperature and humidity.
   Temperature: −10 to +40°C
   Humidity : 30-80%RH

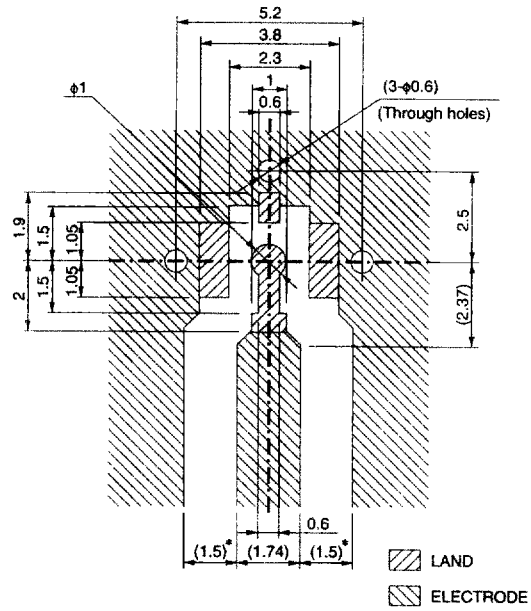
■STRESS TO THE CONNECTOR (Fig.1)

1. Stress to the housing
   Stress A and B : 4.9N (0.5kgf) max.
2. Stress to the outer sleeve.
   Stress C : 2.94N (0.3kgf) max.
   Stress D : 1.96N (0.2kgf) max.
3. Cable pull strength.
   Stress E : 4.9N (0.5kgf) max. (for 88, 92, 91 cable)



■PATTERN DIMENSION, METAL MUSK PATTERN (Fig. 2)

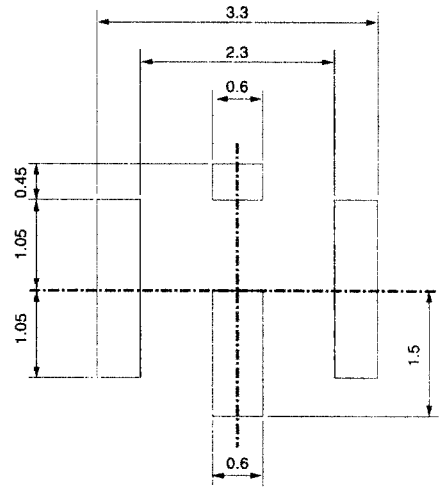
(i) Pattern Dimension



(in mm)

(Note) ● Please design I/O pattern so that the impedance matches 50 ohm including the land pattern.
● The material of P.C.B. is the epoxy resin of glass fabric base. (εr = 4.8) Thickness is 1.0 mm.
● The solder resist should be printed except for the land pattern on the P.C.B.

(ii) Metal Musk Pattern



(in mm)

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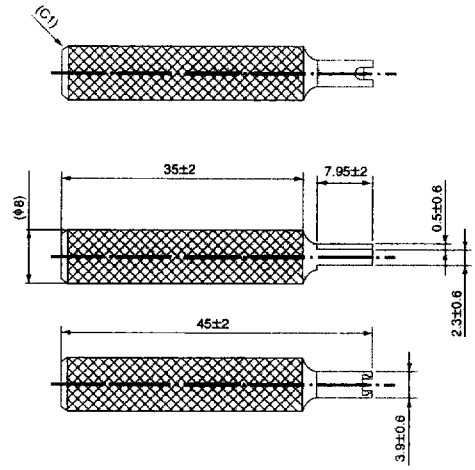
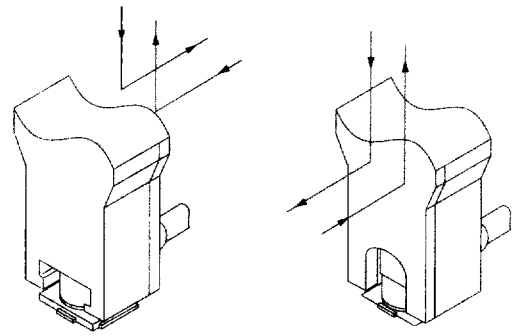
■TOOL (Fig. 3)

M22001



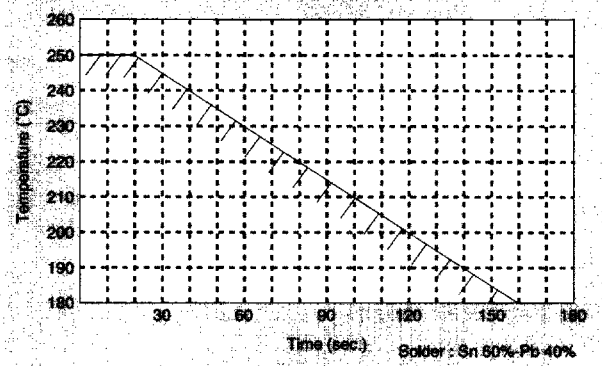
(in mm)

How to use tool

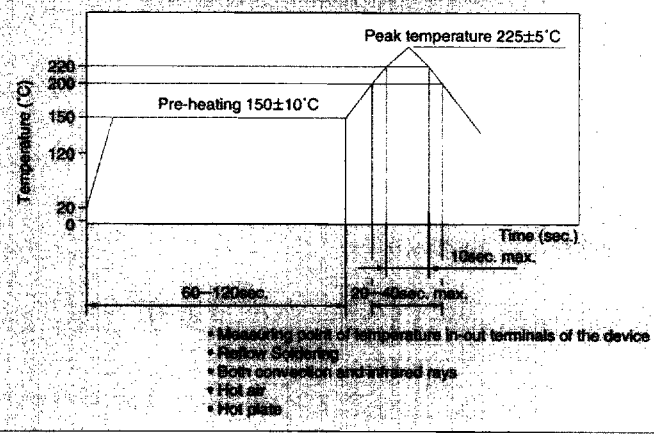


■STANDARD REFLOW SOLDERING CONDITIONS (Fig. 4)

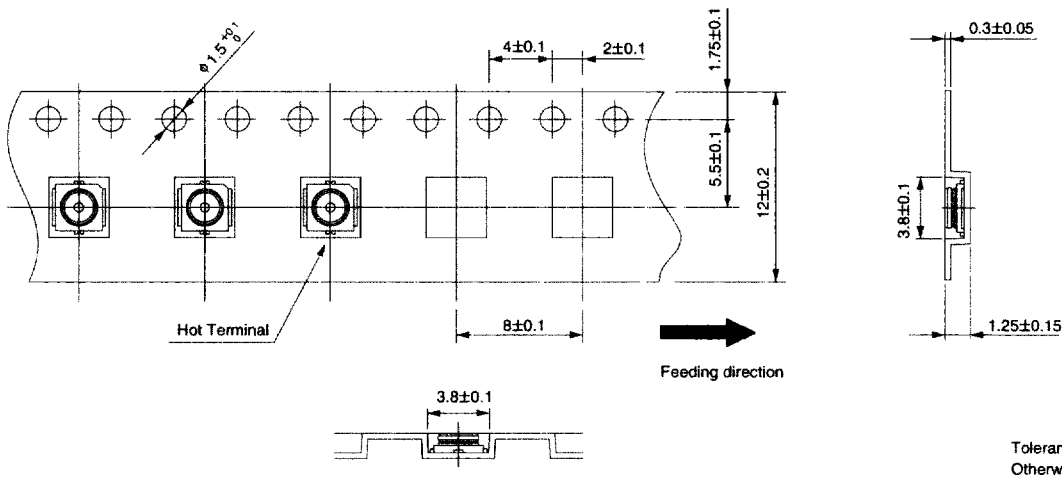
Allowable Temperature and Time of Reflow Soldering



Reflow Soldering Standard Conditions



■DIMENSIONS OF PLASTIC TAPE (Fig. 5)



Tolerances Unless Otherwise Specified ±0.1 (in mm)