



# Multilayer Triplexer

For 698-960MHz / 1452-2170MHz / 2496-5850MHz

# TPX252690MT-7029A1

---

**2.5x2.0mm [EIA 1008]\***

\* Dimensions Code JIS[EIA]

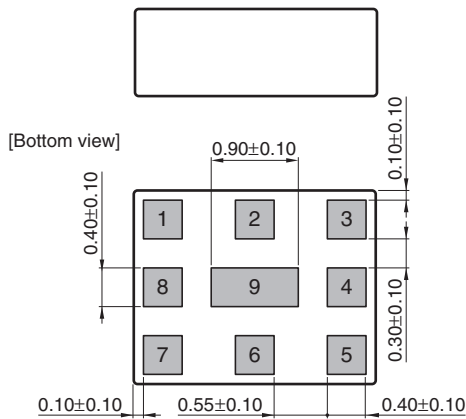
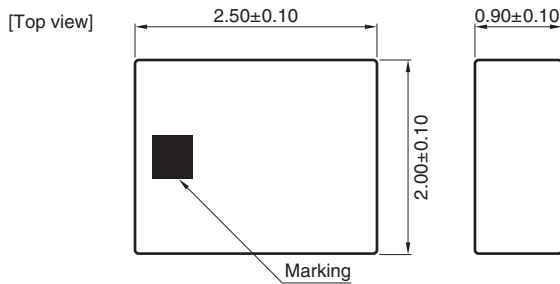
# Multilayer Triplexer

Conformity to RoHS Directive

For 698-960MHz / 1452-2170MHz / 2496-5850MHz

## TPX252690MT-7029A1

### SHAPES AND DIMENSIONS

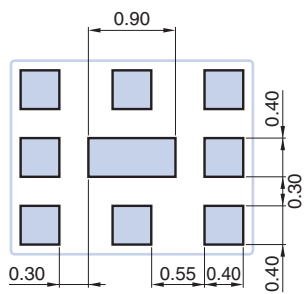


#### Terminal functions

|   |                  |
|---|------------------|
| 1 | High-Band Port   |
| 2 | GND              |
| 3 | Middle-Band Port |
| 4 | GND              |
| 5 | Low-Band Port    |
| 6 | GND              |
| 7 | Common Port      |
| 8 | GND              |
| 9 | GND              |

Dimensions in mm

### RECOMMENDED LAND PATTERN



Dimensions in mm

○ RoHS Directive Compliant Product: See the following for more details. <https://product.tdk.com/info/en/environment/rohs/index.html>

- All specifications are subject to change without notice.
- Before using these products, be sure to request the delivery specifications.

# TPX252690MT-7029A1

## ELECTRICAL CHARACTERISTICS

### LOW-BAND

| Item                                  | Frequency Range (MHz) | Min. | Typ.         | Max.                |
|---------------------------------------|-----------------------|------|--------------|---------------------|
| Insertion Loss (dB)                   | 698 to 960            | —    | 0.43         | 0.70                |
|                                       | 698 to 960            | —    | 0.53         | 0.85 (–40 to +85°C) |
| Return Loss (dB)                      | 698 to 960            | 9.54 | 15.6         | —                   |
| Attenuation (dB)                      | 1452 to 1496          | 12   | 14           | —                   |
|                                       | 1565 to 1606          | 15   | 18           | —                   |
|                                       | 1710 to 2170          | 20   | 22           | —                   |
|                                       | 2496 to 2690          | 20   | 31           | —                   |
|                                       | 3400 to 3800          | 20   | 43           | —                   |
|                                       | 4900 to 5850          | 20   | 35           | —                   |
| Isolation (dB)                        | -Mid 1452 to 1496     | 10   | 14           | —                   |
|                                       | -Mid 1710 to 2170     | 18   | 22           | —                   |
|                                       | -High 2496 to 2690    | 25   | 35           | —                   |
| Power Handling (W)                    | 698 to 960            | —    | —            | 1.5                 |
| Characteristic Impedance ( $\Omega$ ) |                       |      | 50 (Nominal) |                     |

· Ta: +25±5°C

### MIDDLE-BAND

| Item                                  | Frequency Range (MHz) | Min. | Typ.         | Max.                |
|---------------------------------------|-----------------------|------|--------------|---------------------|
| Insertion Loss (dB)                   | 1452 to 1496          | —    | 1.66         | 2.30                |
|                                       | 1710 to 2170          | —    | 1.16         | 1.50                |
|                                       | 1452 to 1496          | —    | 1.79         | 2.50 (–40 to +85°C) |
|                                       | 1710 to 2170          | —    | 1.34         | 1.70 (–40 to +85°C) |
| Return Loss (dB)                      | 1452 to 1496          | 6.49 | 8.6          | —                   |
|                                       | 1710 to 2170          | 9.54 | 22.6         | —                   |
| Attenuation (dB)                      | 698 to 960            | 23   | 27           | —                   |
|                                       | 2496 to 2690          | 18   | 22           | —                   |
|                                       | 3400 to 3800          | 20   | 23           | —                   |
|                                       | 4900 to 5850          | 20   | 27           | —                   |
| Isolation (dB)                        | -Low 698 to 960       | 25   | 28           | —                   |
|                                       | -High 2496 to 2690    | 18   | 21           | —                   |
| Power Handling (W)                    | 1452 to 1496          | —    | —            | 1.0                 |
|                                       | 1710 to 2170          | —    | —            | 1.0                 |
| Characteristic Impedance ( $\Omega$ ) |                       |      | 50 (Nominal) |                     |

· Ta: +25±5°C

- All specifications are subject to change without notice.
- Before using these products, be sure to request the delivery specifications.

# TPX252690MT-7029A1

## ELECTRICAL CHARACTERISTICS

### HIGH-BAND

| Item                         | Frequency Range (MHz) | Min. | Typ.         | Max.                |
|------------------------------|-----------------------|------|--------------|---------------------|
| Insertion Loss (dB)          | 2496 to 2690          | —    | 1.40         | 1.84                |
|                              | 3400 to 3800          | —    | 0.82         | 1.20                |
|                              | 4900 to 5850          | —    | 0.16         | 0.50                |
|                              | 2496 to 2690          | —    | 1.51         | 2.04 (−40 to +85°C) |
|                              | 3400 to 3800          | —    | 0.89         | 1.40 (−40 to +85°C) |
|                              | 4900 to 5850          | —    | 0.22         | 0.70 (−40 to +85°C) |
| Return Loss (dB)             | 2496 to 2690          | 9.54 | 11.3         | —                   |
|                              | 3400 to 3800          | 7.71 | 9.2          | —                   |
|                              | 4900 to 5850          | 9.54 | 15.6         | —                   |
| Attenuation (dB)             | 698 to 960            | 23   | 26           | —                   |
|                              | 1452 to 1496          | 30   | 39           | —                   |
|                              | 1710 to 2170          | 20   | 25           | —                   |
| Isolation (dB)               | -Low 698 to 960       | 20   | 25           | —                   |
|                              | -Mid 1452 to 1496     | 28   | 32           | —                   |
|                              | -Mid 1710 to 2170     | 18   | 22           | —                   |
| Power Handling (W)           | 2496 to 2690          | —    | —            | 1.0                 |
|                              | 3400 to 3800          | —    | —            | 1.0                 |
|                              | 4900 to 5850          | —    | —            | 2.0                 |
| Characteristic Impedance (Ω) |                       |      | 50 (Nominal) |                     |

· Ta: +25±5°C

## TEMPERATURE RANGE

| Operating temperature (°C) | Storage temperature (°C) |
|----------------------------|--------------------------|
| −40 to +85                 | −40 to +85               |

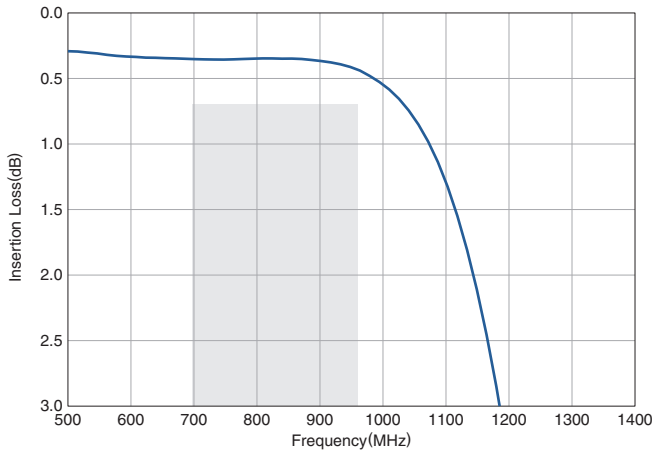
- All specifications are subject to change without notice.
- Before using these products, be sure to request the delivery specifications.

# TPX252690MT-7029A1

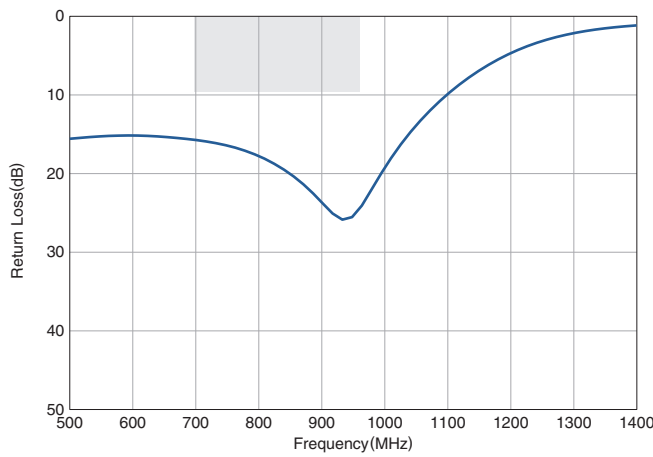
## FREQUENCY CHARACTERISTICS

### LOW-BAND

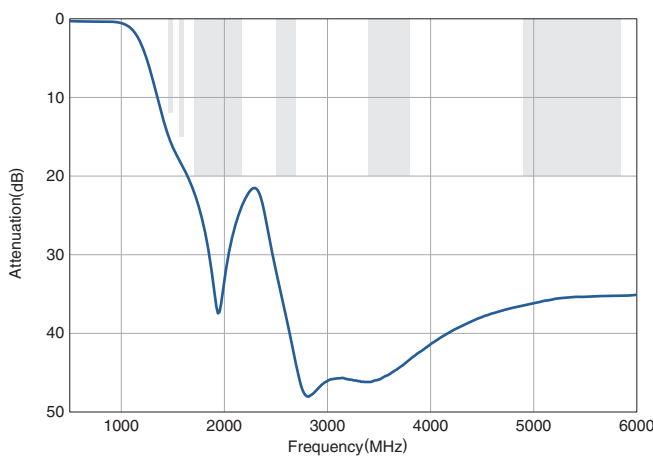
#### Insertion Loss



#### Return Loss

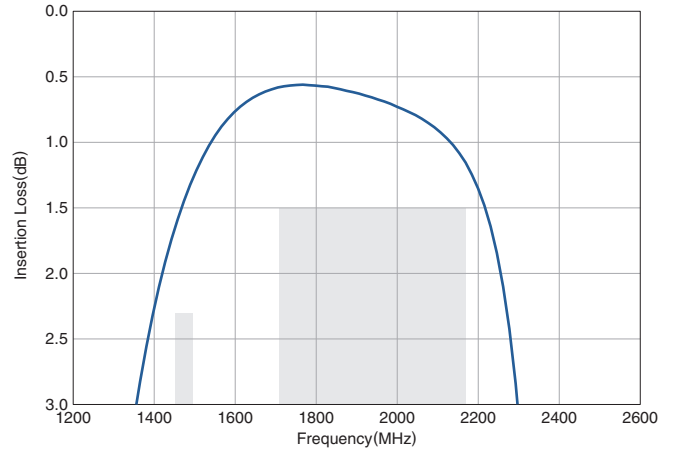


#### Attenuation

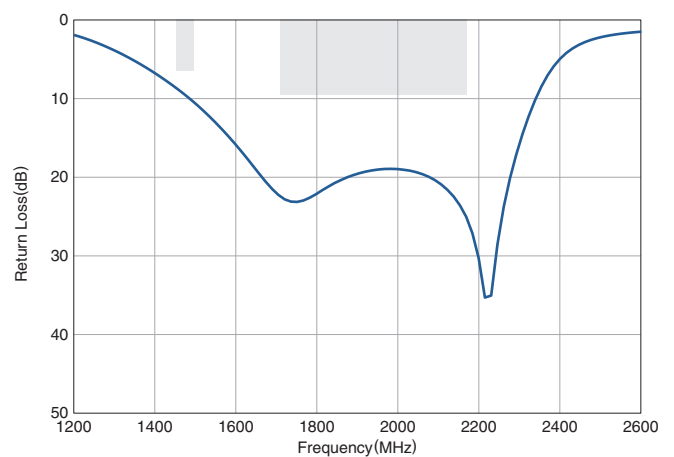


### MIDDLE-BAND

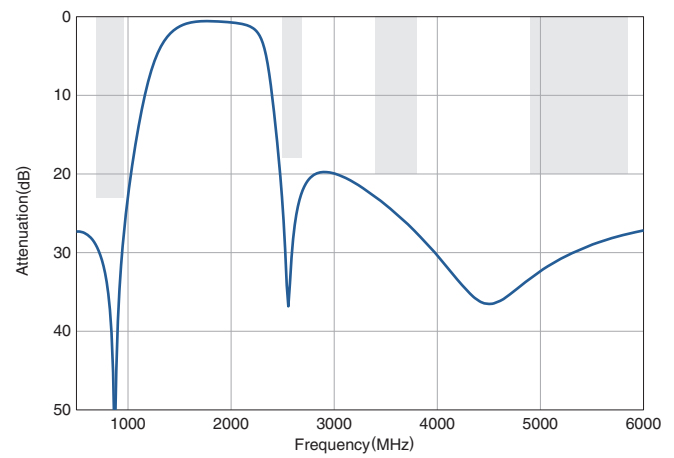
#### Insertion Loss



#### Return Loss



#### Attenuation



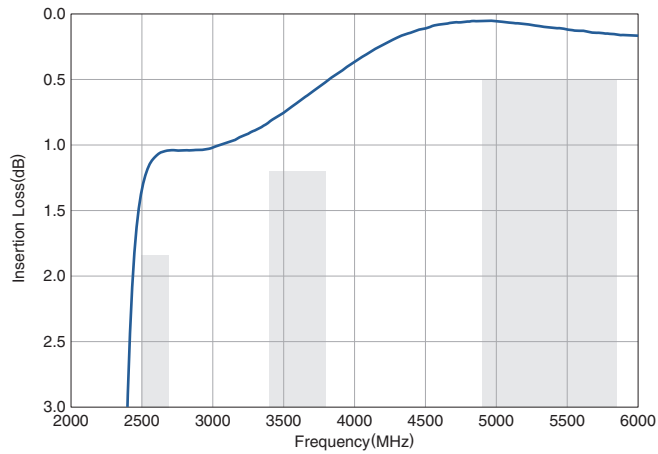
- All specifications are subject to change without notice.
- Before using these products, be sure to request the delivery specifications.

## TPX252690MT-7029A1

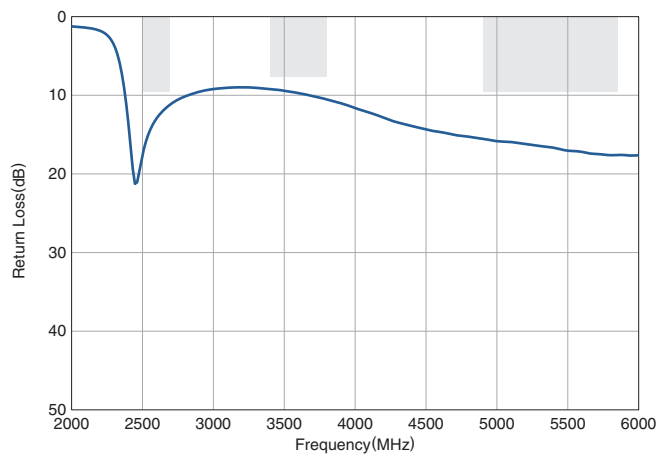
## ■ FREQUENCY CHARACTERISTICS

## □ HIGH-BAND

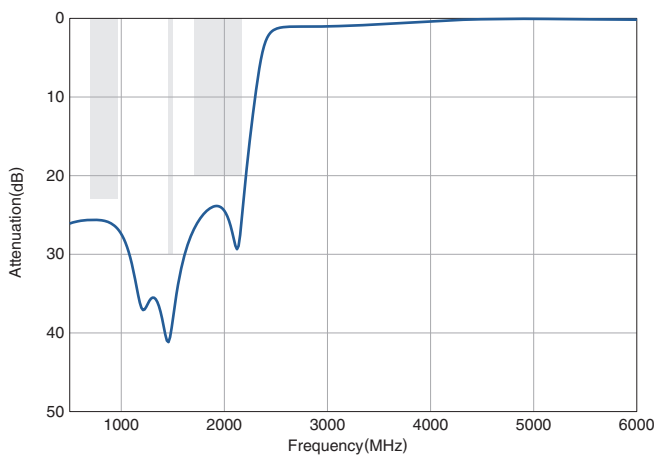
## Insertion Loss



## Return Loss



## Attenuation



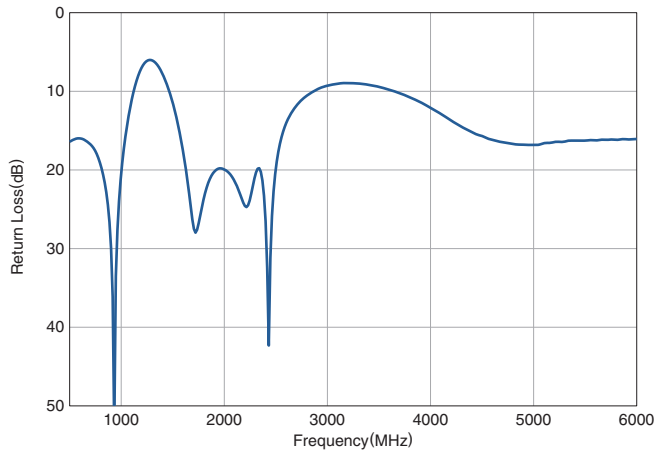
- All specifications are subject to change without notice.
- Before using these products, be sure to request the delivery specifications.

# TPX252690MT-7029A1

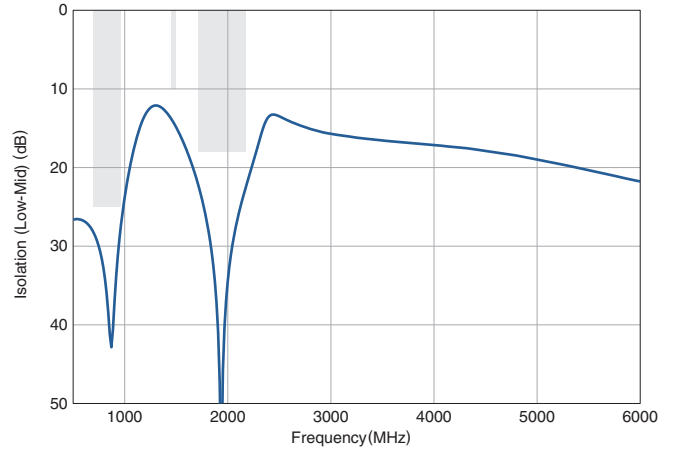
## FREQUENCY CHARACTERISTICS

### COMMON

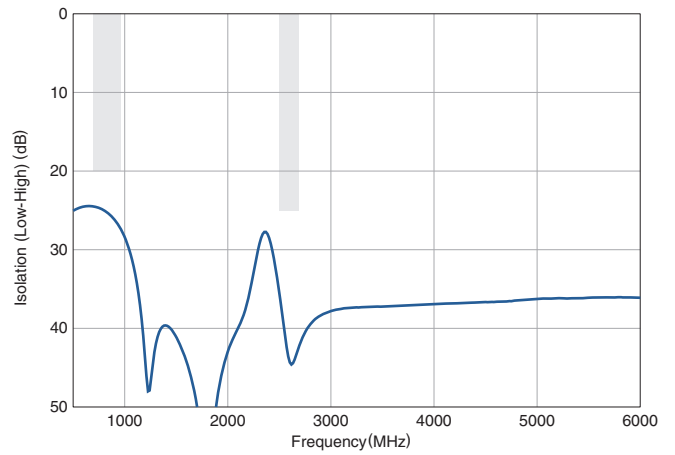
#### Return Loss



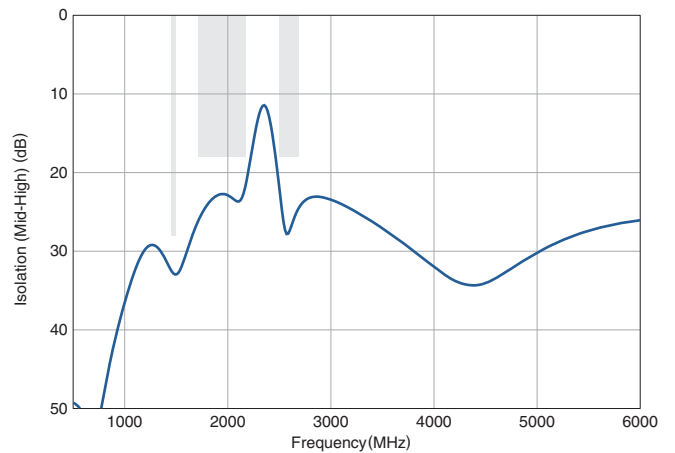
#### Isolation (Low-Mid)



#### Isolation (Low-High)



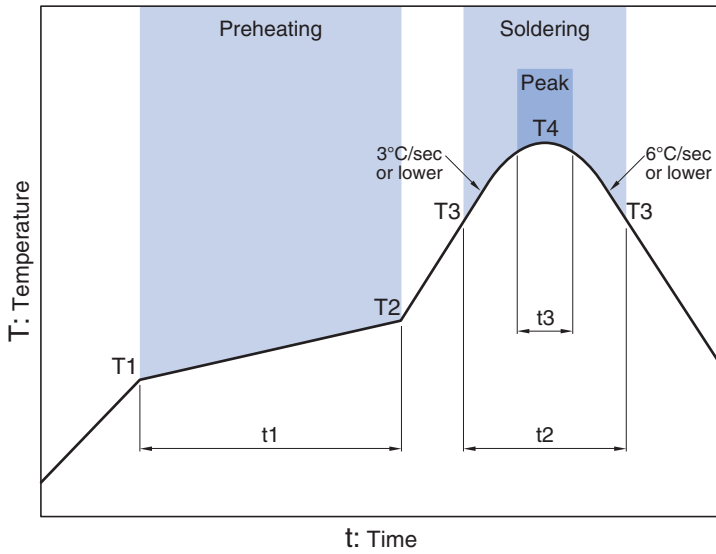
#### Isolation (Mid-High)



- All specifications are subject to change without notice.
- Before using these products, be sure to request the delivery specifications.

# TPX252690MT-7029A1

## RECOMMENDED REFLOW PROFILE



| Preheating |       |              | Soldering                |              |              |            |
|------------|-------|--------------|--------------------------|--------------|--------------|------------|
|            |       |              | Critical zone (T3 to T4) |              | Peak         |            |
| Temp.      | Temp. | Time         | Temp.                    | Time         | Temp.        | Time       |
| T1         | T2    | t1           | T3                       | t2           | T4           | t3*        |
| 150°C      | 200°C | 60 to 120sec | 217°C                    | 60 to 120sec | 240 to 260°C | 30sec max. |

\* t3 : Time within 5°C of actual peak temperature  
 The maximum number of reflow is 3.

- All specifications are subject to change without notice.
- Before using these products, be sure to request the delivery specifications.



## REMINDERS FOR USING THESE PRODUCTS

Before using these products, be sure to request the delivery specifications.

### SAFETY REMINDERS

Please pay sufficient attention to the warnings for safe designing when using these products.

#### REMINDERS

The products listed on this catalog are intended for use in general electronic equipment (AV equipment, telecommunications equipment, home appliances, amusement equipment, computer equipment, personal equipment, office equipment, measurement equipment, industrial robots) under a normal operation and use condition.

The products are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or quality require a more stringent level of safety or reliability, or whose failure, malfunction or trouble could cause serious damage to society, person or property.

Please understand that we are not responsible for any damage or liability caused by use of the products in any of the applications below or for any other use exceeding the range or conditions set forth in this catalog.

- |   |  |
|---|--|
| (1) Aerospace/Aviation equipment                                  | (8) Public information-processing equipment                                  |
| (2) Transportation equipment (cars, electric trains, ships, etc.) | (9) Military equipment   |
| (3) Medical equipment   | (10) Electric heating apparatus, burning equipment                           |
| (4) Power-generation control equipment                            | (11) Disaster prevention/crime prevention equipment                          |
| (5) Atomic energy-related equipment                               | (12) Safety equipment  |
| (6) Seabed equipment  | (13) Other applications that are not considered general-purpose applications |
| (7) Transportation control equipment                              |  |

When using this product in general-purpose applications, you are kindly requested to take into consideration securing protection circuit/equipment or providing backup circuits, etc., to ensure higher safety.

- All specifications are subject to change without notice.
- Before using these products, be sure to request the delivery specifications.