

SANYO

No.3057

SPD Series

Package Type GaAs Schottky Barrier Diode
C to Ku Band Mixer,
Detector, Modulator Applications

Features

- Very small-sized ceramic package
- Less parasitic components, conversion loss
- Many types : 5 single types, 10 integrated types

Applications

- SPD-121 : C to X band use, DBS, measuring instruments
- SPD-121M : C to X band use, TVRO, DBS
- SPD-221 : X to Ku band use, communications equipment
- SPD-121P, 122P : C to X band use, mixer, modulator

Absolute Maximum Ratings at Ta = 25°C

| | | SPD-121 | 121M | 221 | 121P | 122P | unit |
|---------------------------|-----------|---------|------|-----|-------------|------|------|
| Reverse Voltage | V_R | → | → | → | → | -4 | V |
| Peak Reverse Voltage | V_{RM} | → | → | → | → | -4.5 | V |
| Average Rectified Current | I_O | → | → | → | → | 50 | mA |
| Peak Forward Current | I_{FM} | → | → | → | → | 150 | mA |
| Storage Temperature | T_{stg} | → | → | → | -65 to +150 | | °C |
| Junction Temperature | T_j | → | → | → | → | 150 | °C |
| Mounting Condition | T_m | → | → | → | → | 230 | °C |

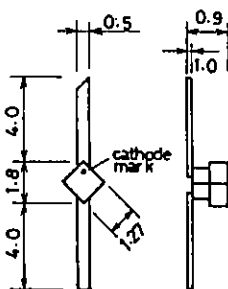
Electrical Characteristics at Ta = 25°C

| | | | SPD-121 | 121M | 221 | 121P | 122P | unit |
|-------------------|-------|--------------------------------|---------|------|------|------|------|----------|
| Reverse Voltage | V_R | $I_R = -10\mu A$ | → | → | → | → | -4 | V min |
| Forward Voltage | V_F | $I_F = 20mA$ | 0.9 | 0.9 | 1.0 | 0.9 | 0.9 | V max |
| Total Capacitance | C_t | $V = 0V, f = 1MHz$ | 0.3 | 0.35 | 0.25 | 0.4 | 0.4 | pF max |
| Series Resistance | R_s | $I_F = 20mA$ | 1.5 | 1.5 | 2.5 | 1.5 | 1.5 | Ω |
| Conversion Loss | L_C | $f = 10.678GHz, P_{LO} = 10mW$ | 3.7 | 3.8 | 3.6 | 4.0 | 4.0 | dB |

Electrical Connection

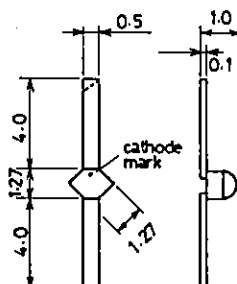


Package Dimensions 1218
(unit: mm)



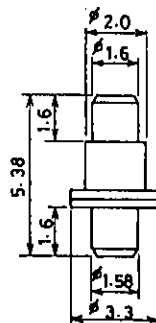
[SPD-121, 221]

Package Dimensions 1219
(unit: mm)



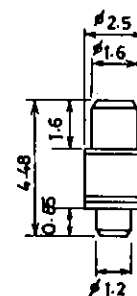
[SPD-121M]

Package Dimensions 1221
(unit: mm)



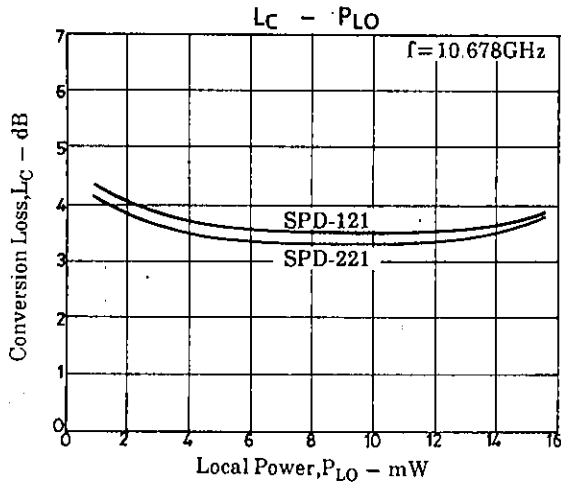
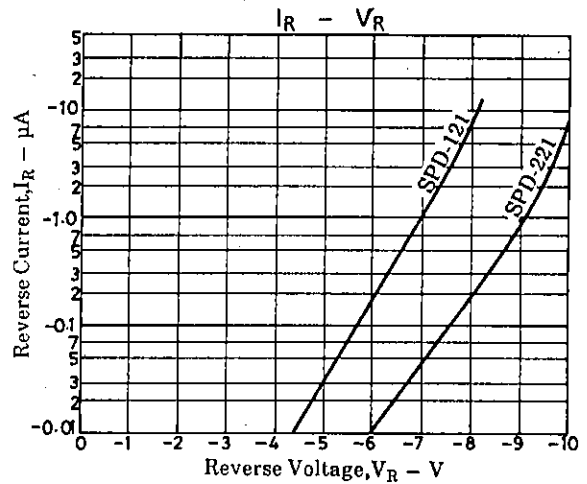
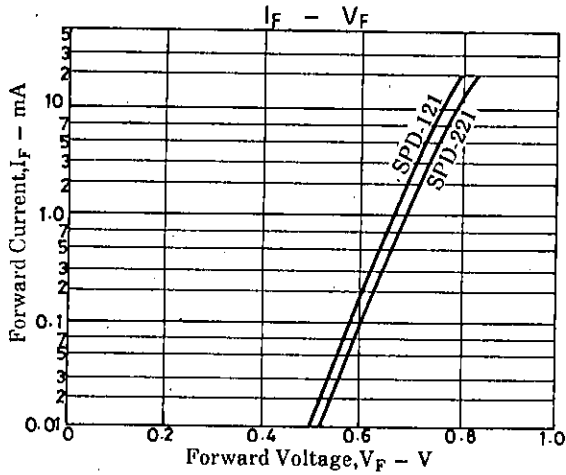
[SPD-121P]

Package Dimensions 1220
(unit: mm)



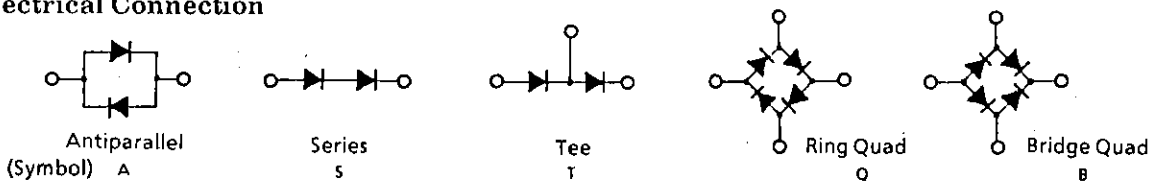
[SPD-122P]

SPD Series



Note : In addition to the single types shown above, the integrated types shown below are available.
For details, contact our sales offices.

Electrical Connection



- No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.
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