

**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	$T_m$	10 s	→	→	→	→	230	°C

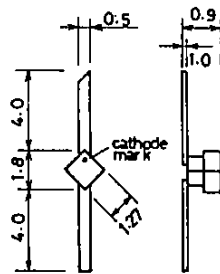
**Electrical Characteristics at Ta = 25°C**

			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	$\Omega$
Conversion Loss	$L_C$	$f = 10.678GHz, P_{LO} = 10mW$	3.7	3.8	3.6	4.0	4.0	dB

**Electrical Connection**

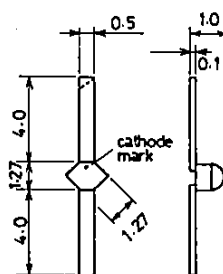


**Package Dimensions 1218**  
(unit: mm)



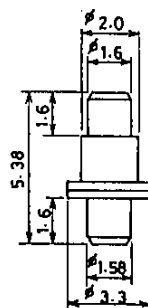
[SPD-121, 221]

**Package Dimensions 1219**  
(unit: mm)



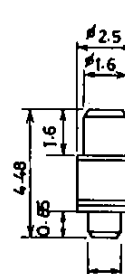
[SPD-121M]

**Package Dimensions 1221**  
(unit: mm)



[SPD-121P]

**Package Dimensions 1220**  
(unit: mm)

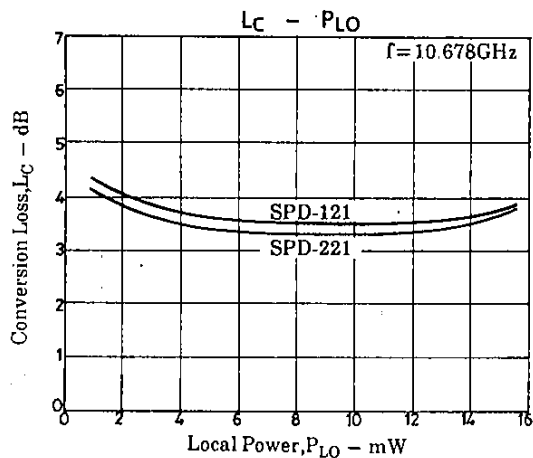
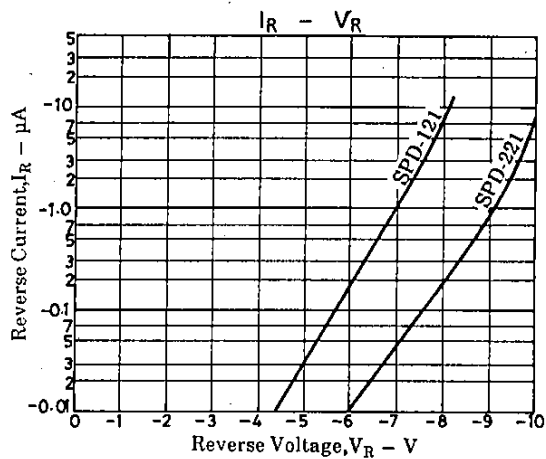
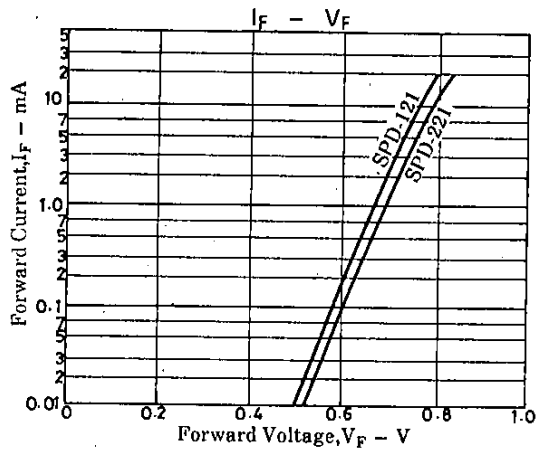


[SPD-122P]

**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

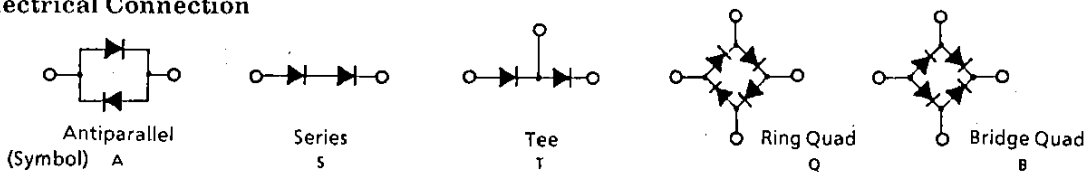
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

## 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



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