

SANYO

No.3056

SBL Series

Beam Lead Type GaAs Schottky Barrier Diode

C to Millimeter Band Mixer,
Detector, Modulator Applications**Features**

- Facilitates easy mounting on MIC (Microwave IC)
- Less parasitic components, conversion loss
- Usable in millimeter wave band
- In addition to 7 single types, 20 integrated types are available.

Applications

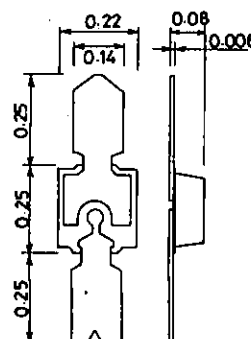
- SBL-121, 122 : C to X band use, 12GHz band DBS receiving equipment
- SBL-801 to 804 : Submillimeter wave, millimeter wave band communications equipment, measuring instruments
- SBL-221 : 22GHz band DBS receiving equipment

Absolute Maximum Ratings at Ta = 25°C

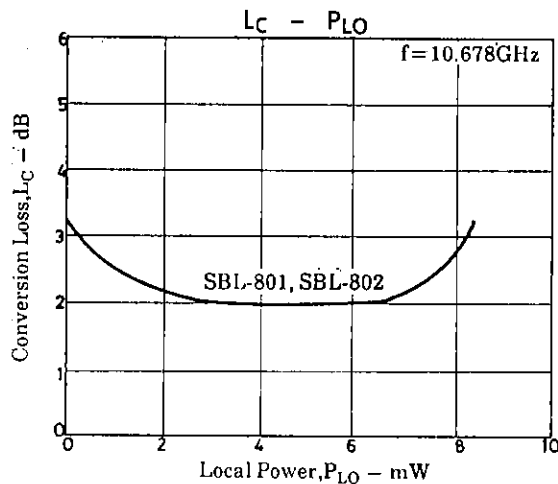
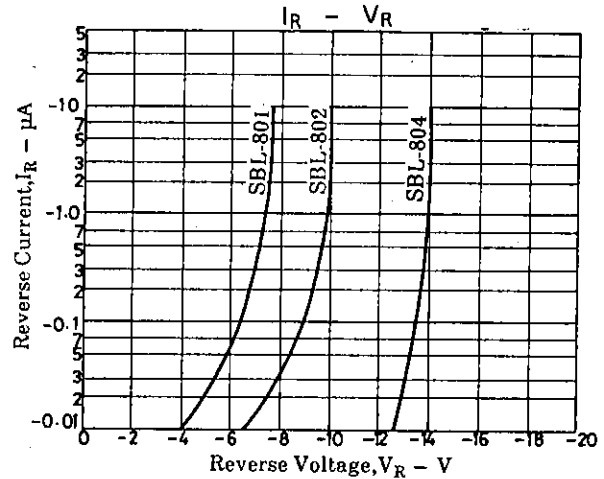
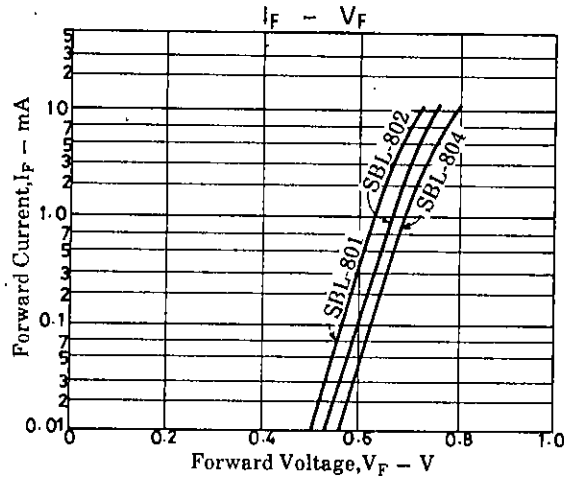
		SBL-121	122	801	802	221	803	804	unit
Reverse Voltage	V_R	→	→	→	→	→	→	-4	V
Peak Reverse Voltage	V_{RM}	→	→	→	→	→	→	-4.5	V
Average Rectified Current	I_O	→	→	→	50	→	→	30	mA
Peak Forward Current	I_{FM}	→	→	→	150	→	→	130	mA
Storage Temperature	T_{stg}	→	→	→	→	-65 to +150	→	→	°C
Junction Temperature	T_j	→	→	→	→	→	→	150	°C
Mounting Condition	T_m 10 s	→	→	→	→	→	→	200	°C

Electrical Characteristics at Ta = 25°C

			SBL-121	122	801	802	221	803	804	unit
Reverse Voltage	V_R	$I_R = -10\mu A$	→	→	→	→	→	→	-4	V
Forward Voltage	V_F	$I_F = 30mA$	0.9	1.0	0.9	1.0				V
		$I_F = 20mA$				1.1	1.1	1.2		V
Total Capacitance	C_t	$V = 0V, f = 1MHz$	0.25	0.30	0.20	0.15	0.08	0.10	0.08	pF max
Series Resistance	R_s	$I_F = 30mA$	2	3	2	4				Ω max
		$I_F = 20mA$					6	6	10	Ω max
Conversion Loss	L_C	$f = 12GHz, P_{LO} = 10mW$	2.5	3.5						dB
		$f = 20GHz, P_{LO} = 10mW$			4.5	4.5		5.0	5.0	dB
		$f = 22GHz, P_{LO} = 10mW$				4.5				dB

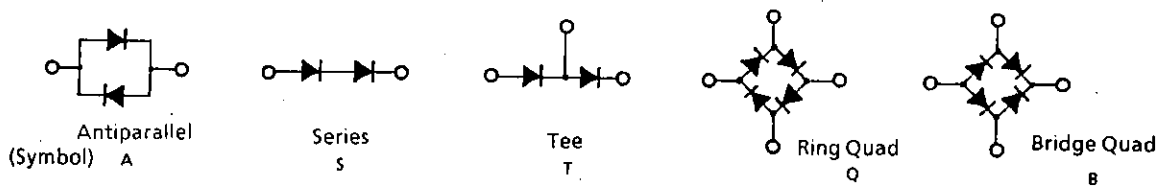
Electrical Connection**Package Dimensions 1226**
(unit: mm)

SBL Series



Note: For the SBL-801, 802, 803, 804, the integrated types shown below are available in addition to single types. 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.

■ Anyone purchasing any products described or contained herein for an above-mentioned use shall:

- ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use;
- ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.

■ Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.