

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}		\rightarrow	\rightarrow	\rightarrow	\rightarrow	→	\rightarrow	-4	V	
Peak Reverse Voltage	V_{RM}		\rightarrow	\rightarrow	→	\rightarrow	\rightarrow	\rightarrow	-4.5	V	
Average Rectified Current	I_{O}		\rightarrow	\rightarrow	\rightarrow	50	\rightarrow	\rightarrow	30	mΑ	
Peak Forward Current	$\mathbf{I}_{\mathbf{FM}}$		\rightarrow	\rightarrow	\rightarrow	150	\rightarrow	\rightarrow	130	mA	
Storage Temperature	\mathbf{Tstg}		\rightarrow	\rightarrow	\rightarrow	\rightarrow	_	-65 to	+150	°C ,	
Junction Temperature	Tj		\rightarrow	\rightarrow	\rightarrow	→	\rightarrow	\rightarrow	150	$^{\circ}\mathrm{C}$	
Mounting Condition	Tm	10 s	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	200	$^{\circ}\mathrm{C}$	

Electrical Characteristics at Ta = 25°C

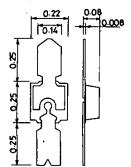
		Ş	SBL-121	122	801	802	221	803	804	unit
Reverse Voltage	V_{R}	$I_R = -10\mu A$	→	\rightarrow	\rightarrow	\rightarrow	\rightarrow	\rightarrow	4	V
Forward Voltage	$V_{\mathbf{F}}$	$I_F = 30 \text{mA}$	0.9	1.0	0.9	1.0				V
		$I_F = 20 mA$					1.1	1.1	1.2	V
Total Capacitance	Ct	V = 0V, f = 1MHz	0.25	0.30	0.20	0.15	0.08	0.10	0.08	pF max
Series Resistance	Rs	$I_F = 30 \text{mA}$	2	3	2	4				Ω max
		$I_F = 20 \text{mA}$					6	6	10	Ω max
Conversion Loss	$\mathbf{L}_{\mathbf{C}}$	$f = 12GHz, P_{LO} = 10m$	W 2.5	3.5						dB
		$f = 20GHz, P_{LO} = 10m$	ıW		4.5	4.5		5.0	5.0	dΒ
		$f = 22GHz, P_{LO} = 10m$	ıW .				4.5			dB

Electrical Connection

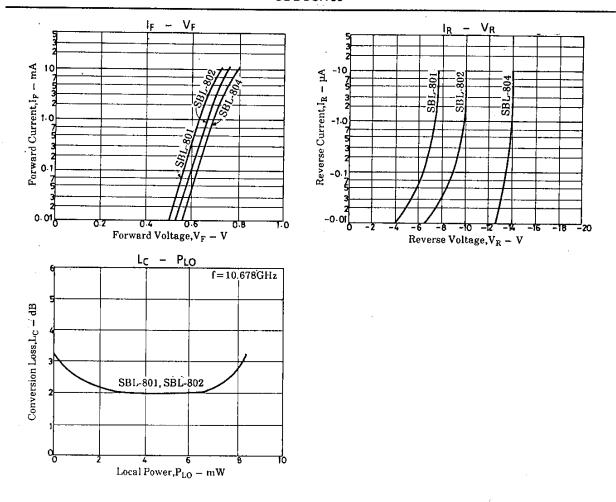


Package Dimensions 1226

(unit: mm)

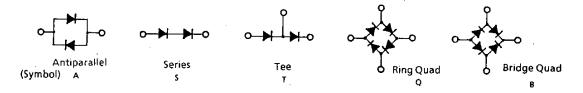


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Note: Fot the SBL-801, 802, 803, 804, the integrated types shown below are available in addition to single types. For details, contact our sales offices.

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.
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