SPECIFICATION SHEET

SMD SCHOTTKY DIODES CASE SOD-323 B581 L SERIES

SPECIFICATION SHEET NO.	T0814 – B5817WSL00S0SJ	
ORIGINAL MFG/PART NO.	LGE Diodes/B5817WS-L	
NEXTGEN PART CODE	B5817WSL00S0SJ	Indicate This Code For RFQ /Order
DATE	Aug. 14, 2026	
REVISION	A4	Updated With Most Recent Data
DESCRIPTION AND MAIN PARAMETRICS	SMD Schottky Barrier Diodes, B581 L Series, Case SOD-323, 2 Pads, Repetitive Peak Reverse Voltage 20V Max. Average Forward Rectified Current 1.0A Max. Junction temperature 125°C Package in Tape/Reel, 3000pcs/Reel RoHS/RoHS III compliant, RoHS Annex III lead Exemption (Exempt per RoHS EU 2015/863) and Halogen Free (HF)	
CUSTOMER		
CUSTOMER PART NUMBER		
CROSS REF. PART NUMBER		
MEMO		

VENDOR APPROVE			
Issued/Checked/Approved	Mandy Xu	Ruby Zhang	Jack Zhang
Effective Date: Aug. 14, 2026			

CUSTOMER APPROVE
Date:

MAIN FEATURE

Image shown is a representation only. Exact specifications should be obtained from the product dimension.

- High Current Capability
- Low Forward Voltage Drop
- Fast Switching Speed
- Conductance
- Surface Mount Package Ideally Suited for Automatic Insertion
- Meet MSL 1 Requirement
- Cross Competitors Parts and More.
- RoHS/RoHS III compliant, RoHS Annex III lead Exemption (Exempt per RoHS EU 2015/863) and Halogen Free (HF)

APPLICATION

- For Use In Low Voltage, High Frequency Inverters
- For Free Wheeling and Polarity Protection Applications

ELECTRICAL CHARACTERISTICS

- See Page 5 ~ Page 6 For Different Part Code .
- All Products Parameters are Subject To NextGen Components' Final Confirmation.

HOW TO ORDER

- Please Follow Up Part Code Guide And Indicate NextGen Part Code B5817WSL00S0SJ For RFQ and Order.

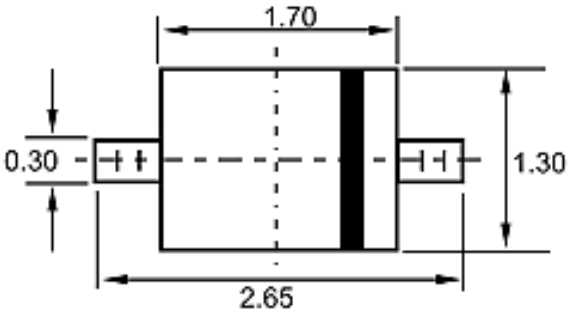
RFQ
Request For Quotation

PART CODE GUIDE

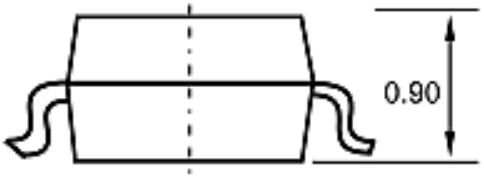
CODE	NAME	KEY SPECIFICATION OPTION
B581	Product Series Code	SMD Schottky Barrier Diodes, Case SOD-323, 2 pads, B581 L series,
7	Repetitive Peak Reverse Voltage Code	7: 20V Max. ; 8: 30V Max.; 9: 40V Max.;
WS	Case Code	W0: Case SMF/SOD-123FL; W1: Case SOD-123; WS: Case SOD-323
L00S0	Internal Control Code	Letter or Digits (A~Z, a~z or 0~9)
SJ	Marking Code	Marking “SJ” or See Marking list For different part code
XX	Special/Custom Parameters Code	Letter or Digits (A~Z, a~z or 0~9) for Special Parametric Blank: N/A

DIMENSION - Unit: mm, Case SOD-323, Inch/mm

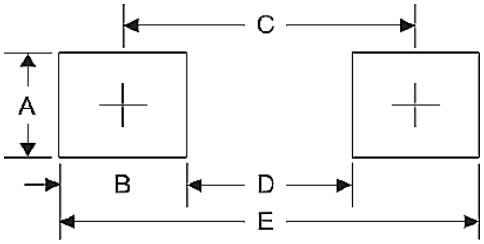
Top View



Side View

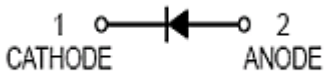


Recommend Pad Layout



Symbol	Unit (inch)	Unit (mm)
A	0.028	0.70
B	0.028	0.70
C	0.085	2.15
D	0.071	1.80
E	0.112	2.85

Equivalent Circuit



MECHANICAL CHARACTERISTICS

CASE	TERMINALS	POLARITY	MOUNTING POSITION	MARKING
JEDEC SOD-323 Molded Plastic Body	Solder plated, Solderable per MIL-STD-750, Method 2026	Color Band Denotes Cathode End	Any	See Page 6

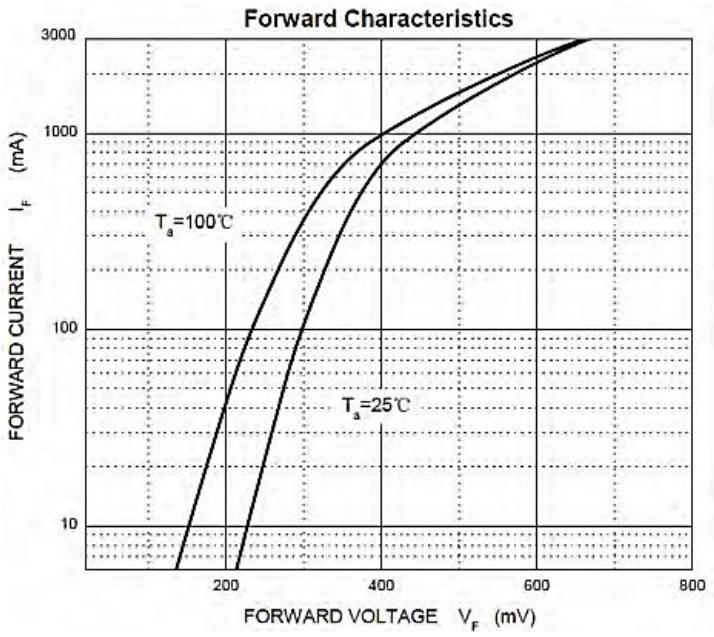
MAX. RATINGS & ELECTRICAL CHARACTERISTICS - T_A=25°C unless otherwise specified, For Reference Only

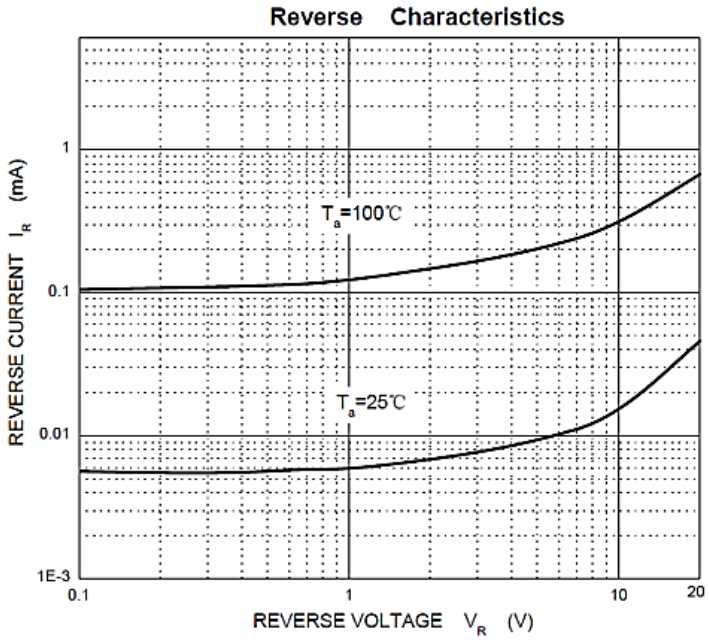
PARAMETER	SYMBOLS	VALUE	UNITS
Maximum Average Forward Rectified Current	I_{FM}	1.0	A
Maximum Reverse Current	I_R	1.0	mA
Peak Forward Surge Current 8.3ms Single Half Sine-Wave	I_{FSM}	9	A
Typical Thermal Resistance	$R_{\theta JA}$	400	°C/W
Power Dissipation	P_D	250	mW
Operating Junction Temperature	T_J	125	°C
Storage Temperature Range	T_{stg}	-50 ~ +150	°C

ELECTRICAL CHARACTERISTICS - TA=25° C unless otherwise specified, For Reference Only

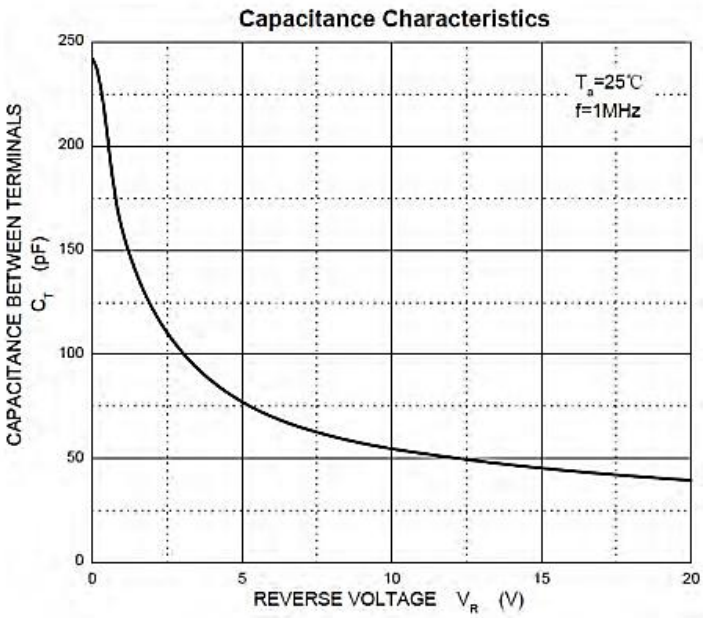
PART CODE	Max. Repetitive Peak Reverse Voltage	Max. RMS Voltage	Max. DC Blocking Voltage	Max. Reverse Break-down Voltage @ IR=1mA	Max. Forward Voltage		Type Junction Cap. @ V_R = 4.0V, f = 1MHz	Marking List
					IF= 1.0 A	IF= 3.0 A		
	V_{RRM}	V_{RMS}	V_{DC}	V_R	V_F		C_J	
	V	V	V	V	V		pF	
B5817WSL00S0SJ	20	14	20	20	0.45	0.75	120	SJ
B5818WSL00S0SK	30	21	30	30	0.55	0.875	120	SK
B5819WSL00S0SL	40	28	40	40	0.60	0.9	120	SL

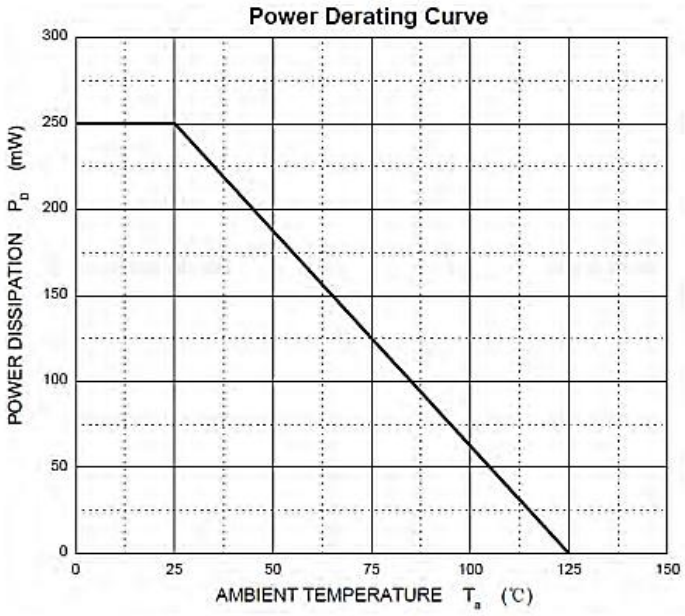
RATINGS AND CHARACTERISTICS CURVES- For Reference Only, Ta=25℃ Unless Otherwise Specified.



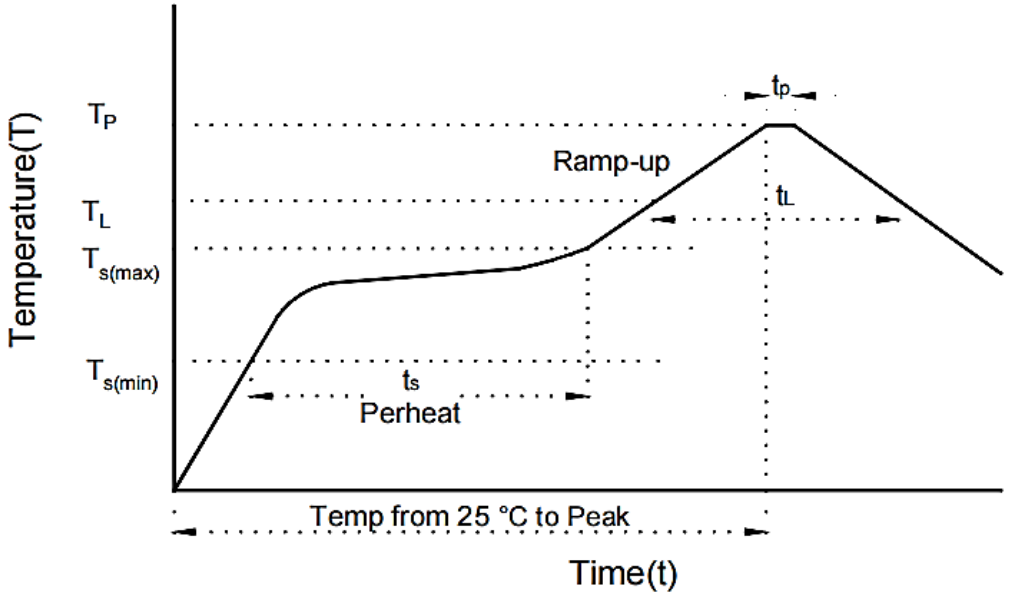


RATINGS AND CHARACTERISTICS CURVES- For Reference Only, Ta=25℃ Unless Otherwise Specified.



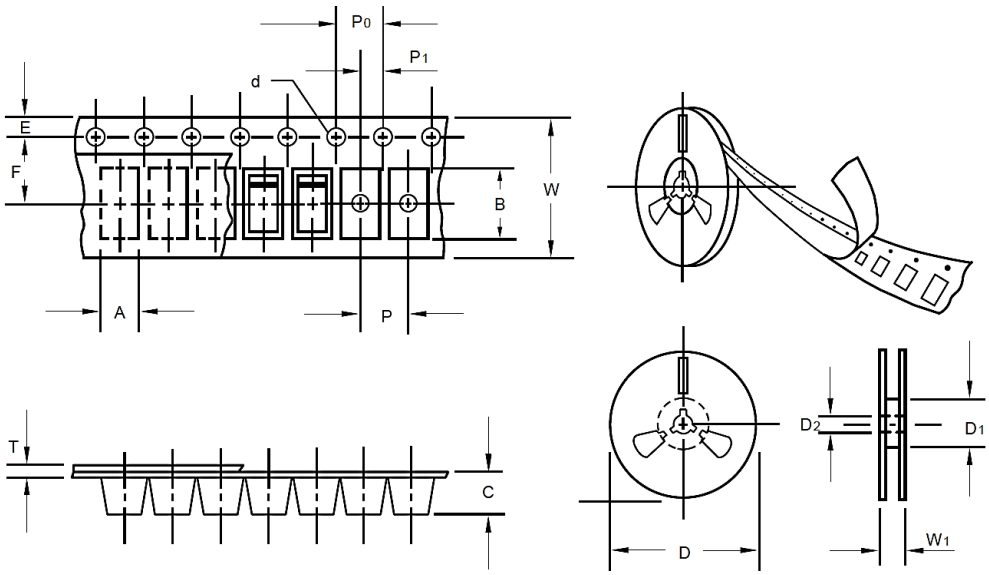


SUGGESTED REFLOW PROFILE - For Reference Only



PROFILE FEATURE		PB-FREE ASSEMBLY
Average Ramp-up Rate (T_L Max to T_p)		3°C/second Max
Preheat	Temperature Min (T_s Min.)	150°C
	Temperature Max (T_s Max.)	200°C
	Time (t_s Min. to t_s Max.)	60 ~ 180 seconds
Time maintained above	Temperature (T_L)	217°C
	Time (t_L)	60 ~ 150 seconds
Peak/Classification Temperature (T_p)		260 °C
Time within 5°C of actual Peak Temperature (t_p)		10 seconds Max.
Ramp-down Rate		6 °C /Second Max.
Time 25 °C to Peak Temperature		8 Minutes Max.
Suggest reflow times		3 Times Max.

TAPE/REEL - Unit: mm, All Devices are packed in accordance with EIA standard RS-481-A and specifications



ITEM	SYMBOL	TOLERANCE	SOD-323
Carrier width	A	0.1	2.10
Carrier Length	B	0.1	4.00
Carrier Depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7” Reel outside diameter	D	2.0	178.00
7” Reel inner diameter	D1	Min.	50.00
Feed hole diameter	D2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P0	0.1	4.00
Embossment center	P1	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	8.15
Reel width	W1	1.0	10.50
MPQ/Reel	3000pcs/Reel		

IMPORTANT NOTES AND DISCLAIMER

1. ROHS COMPLIANCE: The levels of RoHS restricted materials in this product are below the maximum concentration values (also referred to as the threshold limits) permitted for such substances, or are used in an exempted application, in accordance with EU RoHS Directive (EU) 2015/863 EC (RoHS3). RoHS Test Report for this product can be obtained can be obtained at Download Center.
2. REACH COMPLIANCE: REACH substances of high concern (SVHCs) information is available for this product. Since the European Chemical Agency (ECHA) has published notice of their intent to frequently revise the SVHC listing for the foreseeable future, REACH Test Report for this product can be obtained can be obtained at Download Center.
3. All Product parametric performance is indicated in the Electrical Characteristics for the listed herein test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.
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