

SPECIFICATION SHEET NO.	S1021– BZT52C16L0S001	
ORIGINAL MFG/PART NO.	 LGE Diodes/BZT52C16-L	
NEXTGEN PART CODE	BZT52C16L0S001	Indicate This Code For RFQ /Order
DATE	Oct. 21, 2025	
REVISION	A5	Updated With Most Recent Data
DESCRIPTION AND MAIN PARAMETRICS	SMD Zener Diodes, Case SOD-123, BZT52C L series, BZT52C16 Type, 2 Pads Nominal Zener Voltage (Vz): 16V, Power Dissipation: 500 mW Junction Temp. Range 150°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		
Effective Date: Oct. 21, 2025		

CUSTOMER APPROVE
Date:

MAIN FEATURE

- SOD-123 Plastic-Encapsulate Diodes
- 500mw Power Dissipation on Ceramic PCB.
- Planar Die Construction
- General Purpose and Medium Current
- Wide Zener Reverse Voltage Range 2.0V To 75V.
- Small Plastic Package Suitable For Surface Mounted Design.
- Cross Competitors Parts and More.
- RoHS/RoHS III compliant, RoHS Annex III lead Exemption (Exempt per RoHS EU 2015/863) and Halogen Free (HF)



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

APPLICATION

- For SMD Application



ELECTRICAL CHARACTERISTICS

- See Page 5 ~ Page 7 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 BZT52C16LOS001 For RFQ and Order.

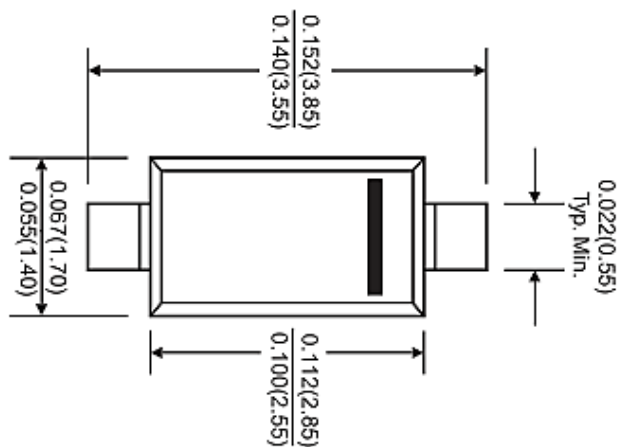
PART CODE GUIDE

RFQ
[Request For Quotation](#)

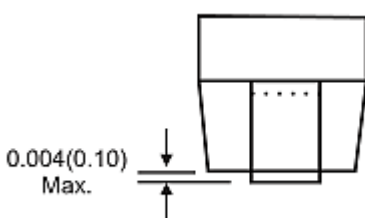
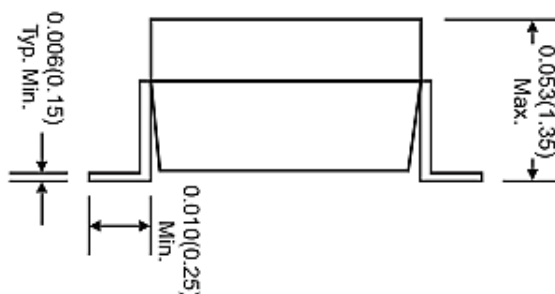
CODE	NAME	KEY SPECIFICATION OPTION
BZT52C	Product Series Code	SMD Zener Diodes, 2 Pads, Case SOD-123, BZT52C L series,
16	Parameters Code	16: Nominal Zener Voltage 16V
LOS001	Internal Control Code	Letter or Digits (A~Z, a~z or 0~9)
XX	Special/Custom Parameters Code	Letter or Digits (A~Z, a~z or 0~9) for Special Parametric; Blank: N/A

DIMENSION -- Unit: Inch (mm), Case SOD-123 Outline

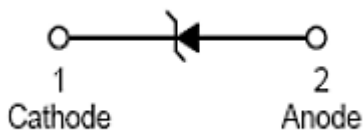
Top View



Side View



Equivalent Circuit



MECHANICAL CHARACTERISTICS

CASE	TERMINALS	POLARITY	MOUNTING POSITION	MARKING
JEDEC Sod-123 Molded Plastic Body	Solderable per MIL-STD-750, Method 2026	Polarity Symbol Marking On Body	Any	See Page 6 ~ Page 7

ABSOLUTE MAX. RATING - $T_A=25^{\circ}\text{C}$ unless otherwise specified, For Reference Only

PARAMETER	SYMBOLS	VALUE	UNITS
Forward Voltage @ $I_F = 10\text{mA}$	V_F	0.9	V
Power Dissipation	P_D	500	mW
Thermal Resistance From Junction To Ambient Air	$R_{\theta JA}$	305	$^{\circ}\text{C/W}$
Junction Temperature Range	T_J	150	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-65 ~ +150	$^{\circ}\text{C}$

Notes

1. Device mounted on ceramic PCB; 7.6mm x 9.4mm x 0.87mm with pad areas 25mm².
2. Short duration test pulse used to minimize self-heating effect.
3. When provided, otherwise, parts are provided with date code only, and type number identifications appears on reel only.
4. $f = 1\text{KHz}$

ELECTRICAL CHARACTERISTICS - Ta=25°C unless otherwise specified

Part Code	Zener Voltage Range				Max. Zener Impedance			Max. Reverse Current		Typical Temperature Coefficient		Test Current	Marking
	Vz @ Izt			Izt	Zzt @ Izt	Zzk @ Izk	Izk	IR	@ VR	@ IZTC		IZTC	
	Nom (V)	Min (V)	Max (V)	mA	Ω		mA	μA	V	Min. mV/°C	Max. mV/°C	mA	
BZT52C2V0LS001	2.0	1.91	2.09	5	100	600	1.0	150	1.0	-3.5	0	5	WY
BZT52C2V4LS001	2.4	2.2	2.6	5	100	600	1.0	50	1.0	-3.5	0	5	WX
BZT52C2V7LS001	2.7	2.5	2.9	5	100	600	1.0	20	1.0	-3.5	0	5	W1
BZT52C3V0LS001	3.0	2.8	3.2	5	95	600	1.0	10	1.0	-3.5	0	5	W2
BZT52C3V3LS001	3.3	3.1	3.5	5	95	600	1.0	5.0	1.0	-3.5	0	5	W3
BZT52C3V6LS001	3.6	3.4	3.8	5	90	600	1.0	5.0	1.0	-3.5	0	5	W4
BZT52C3V9LS001	3.9	3.7	4.1	5	90	600	1.0	3.0	1.0	-3.5	0	5	W5
BZT52C4V3LS001	4.3	4.0	4.6	5	90	600	1.0	3.0	1.0	-3.5	0	5	W6
BZT52C4V7LS001	4.7	4.4	5.0	5	80	500	1.0	3.0	2.0	-3.5	0	5	W7
BZT52C5V1LS001	5.1	4.8	5.4	5	60	480	1.0	2.0	2.0	-2.7	1.2	5	W8
BZT52C5V6LS001	5.6	5.2	6.0	5	40	400	1.0	1.0	2.0	-2	2.5	5	W9
BZT52C6V2LS001	6.2	5.8	6.6	5	10	150	1.0	3.0	4.0	0.4	3.7	5	WA
BZT52C6V8LS001	6.8	6.4	7.2	5	15	80	1.0	2.0	4.0	1.2	4.5	5	WB
BZT52C7V5LS001	7.5	7.0	7.9	5	15	80	1.0	1.0	5.0	2.5	5.3	5	WC
BZT52C8V2LS001	8.2	7.7	8.7	5	15	80	1.0	0.7	5.0	3.2	6.2	5	WD
BZT52C9V1LS001	9.1	8.5	9.6	5	15	100	1.0	0.5	6.0	3.8	7.0	5	WE
BZT52C10LOS001	10	9.4	10.6	5	20	150	1.0	0.2	7.0	4.5	8.0	5	WF
BZT52C11LOS001	11	10.4	11.6	5	20	150	1.0	0.1	8.0	5.4	9.0	5	WG
BZT52C12LOS001	12	11.4	12.7	5	25	150	1.0	0.1	8.0	6.0	10.0	5	WH

ELECTRICAL CHARACTERISTICS - Ta=25°C unless otherwise specified

Part Code	Zener Voltage Range				Max. Zener Impedance			Max. Reverse Current		Typical Temperature Coefficient		Test Current	Marking
	Vz @ Izt			Izt	Zzt @ Izt	Zzk @ Izk	Izk	Ir	@ VR	@ IZTC		IZTC	
	Nom (V)	Min (V)	Max (V)	mA	Ω		mA	μA	V	Min. mV/°C	Max. mV/°C	mA	
BZT52C13LOS001	13	12.4	14.1	5	30	170	1.0	0.1	8.0	7.0	11.0	5	WI
BZT52C15LOS001	15	13.8	15.6	5	30	200	1.0	0.1	10.5	9.2	13.0	5	WJ
BZT52C16LOS001	16	15.3	17.1	5	40	200	1.0	0.1	11.2	10.4	14.0	5	WK
BZT52C18LOS001	18	16.8	19.1	5	45	225	1.0	0.1	12.6	12.4	16.0	5	WL
BZT52C20LOS001	20	18.8	21.2	5	55	225	1.0	0.1	14.0	14.4	18.0	5	WM
BZT52C22LOS001	22	20.8	23.3	5	55	250	1.0	0.1	15.4	16.4	20.0	5	WN
BZT52C24LOS001	24	22.8	25.6	5	70	250	1.0	0.1	16.8	18.4	22.0	5	WO
BZT52C27LOS001	27	25.1	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3	2	WP
BZT52C30LOS001	30	28.0	32.0	2	80	300	0.5	0.1	21.0	24.4	29.4	2	WQ
BZT52C33LOS001	33	31.0	35.0	2	80	325	0.5	0.1	23.1	27.4	33.4	2	WR
BZT52C36LOS001	36	34.0	38.0	2	90	350	0.5	0.1	25.2	30.4	37.4	2	WS
BZT52C39LOS001	39	37.0	41.0	2	130	350	0.5	0.1	27.3	33.4	41.2	2	WT
BZT52C43LOS001	43	40.0	46.0	5	100	700	1.0	0.1	32	10.0	12.0	5	WU
BZT52C47LOS001	47	44.0	50.0	5	100	750	1.0	0.1	35	10.0	12.0	5	WV
BZT52C51LOS001	51	48.0	54.0	5	100	750	1.0	0.1	38	10.0	12.0	5	WW
BZT52C56LOS001	56	52.0	60.0	2	135	700	1.0	0.1	39	10.0	12.0	5	XW
BZT52C62LOS001	62	58.0	66.0	2	200	1000	1.0	0.2	47	10.0	12.0	5	6E
BZT52C68LOS001	68	64.0	72.0	2	250	1000	1.0	0.2	52	10.0	12.0	5	6F
BZT52C75LOS001	75	70.0	79.0	2	300	1000	1.0	0.2	57	10.0	12.0	5	6H

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

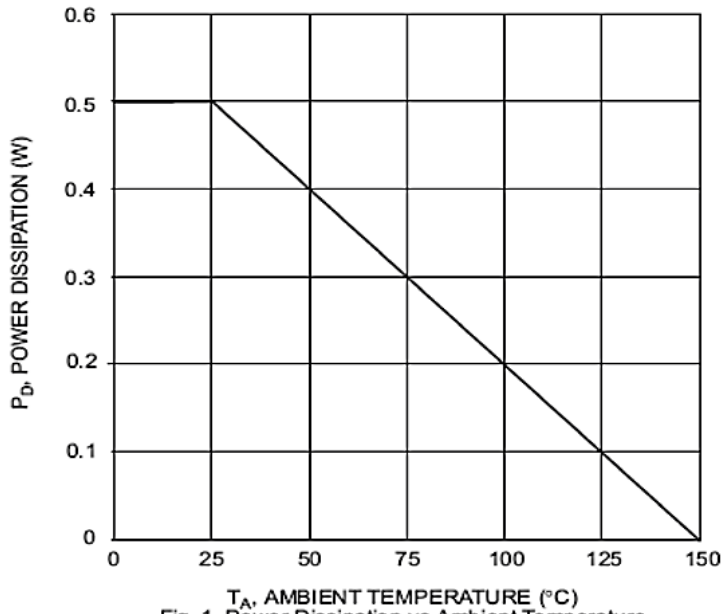


Fig. 1 Power Dissipation vs Ambient Temperature

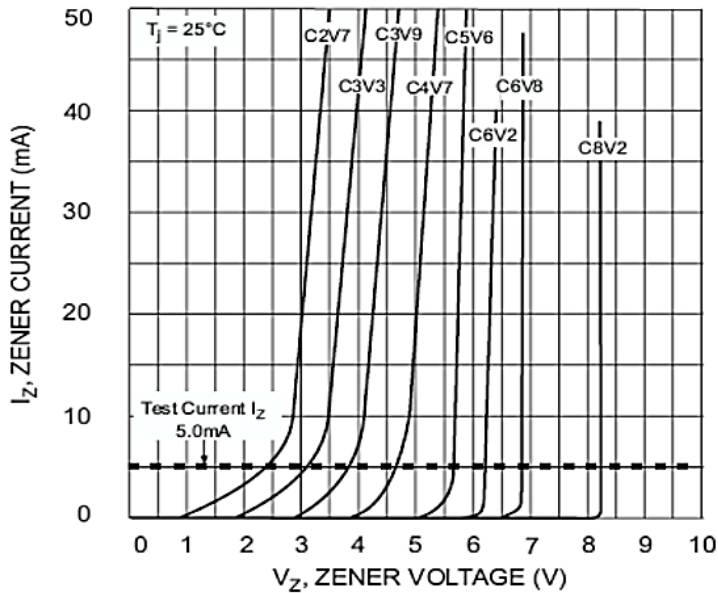


Fig. 2 Zener Breakdown Characteristics

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

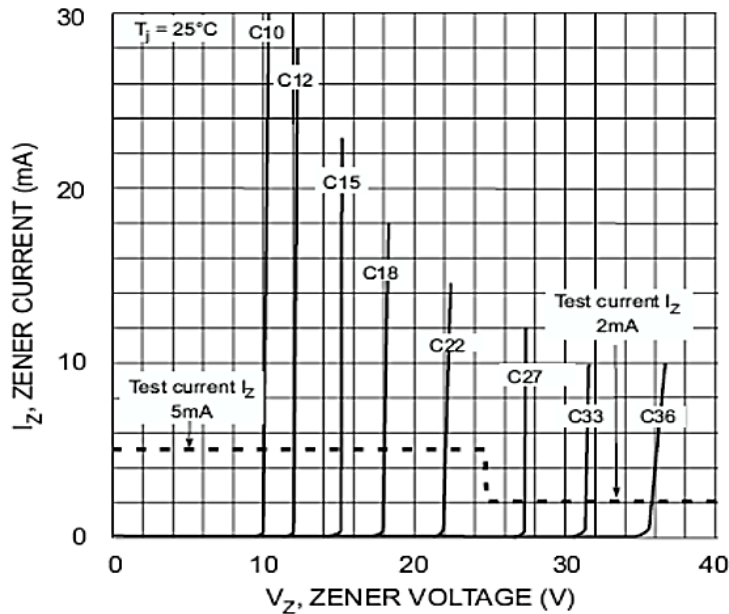


Fig. 3 Zener Breakdown Characteristics

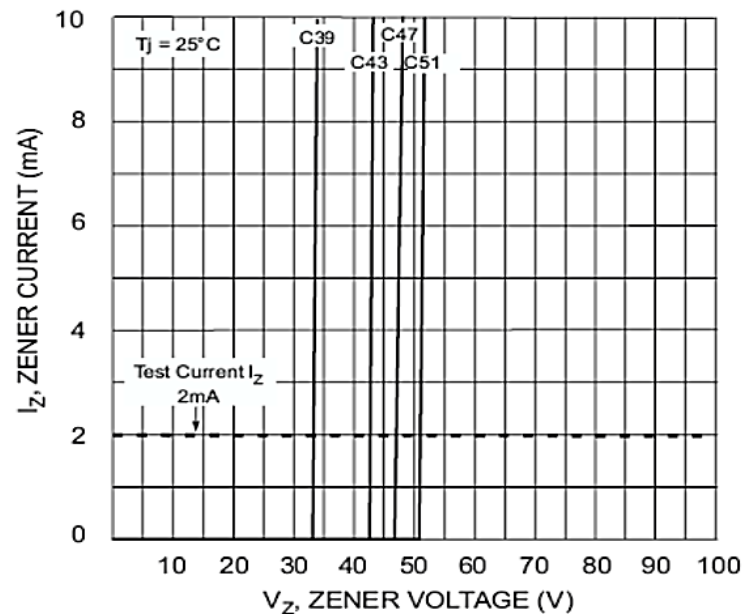


Fig. 4 Zener Breakdown Characteristics

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

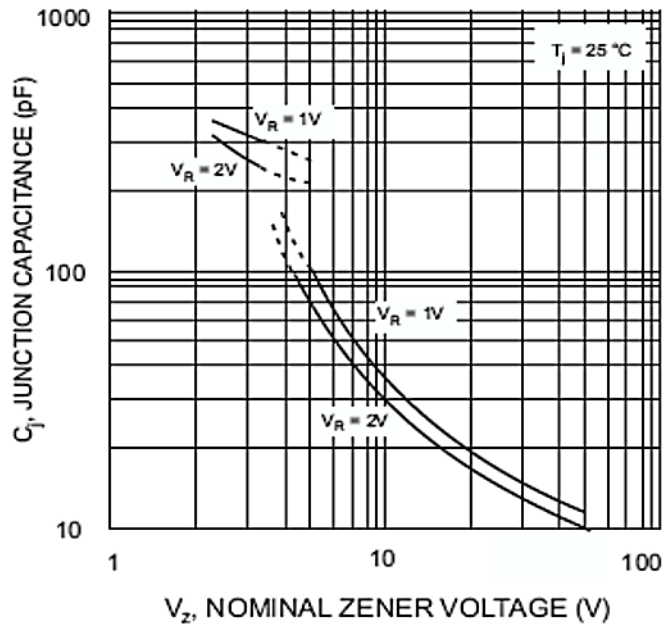
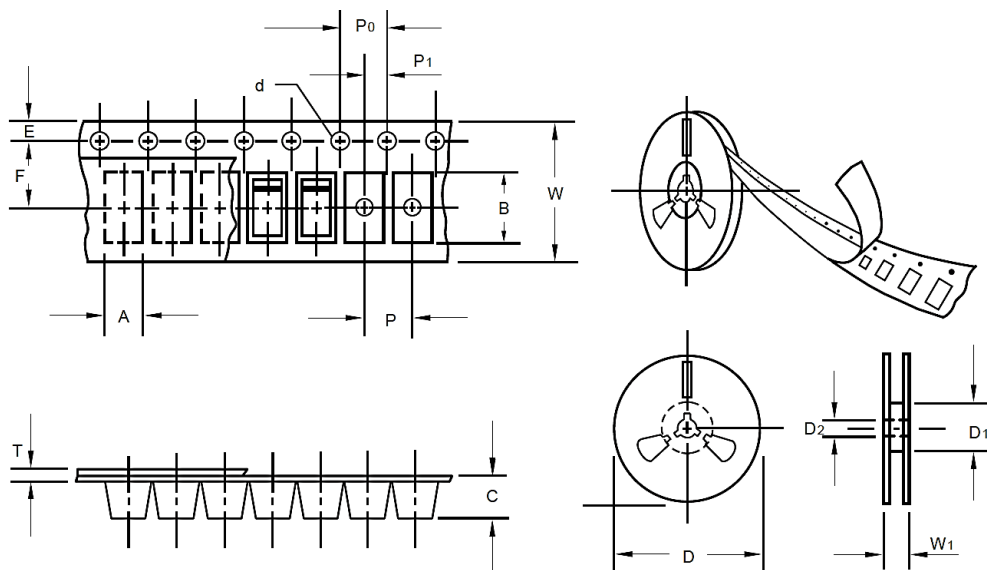


Fig. 5 Junction Capacitance vs Nominal Zener Voltage

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	CASE SOD-123
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
13" Reel outside diameter	-	-	-
13" Reel inner diameter	-	-	-
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 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 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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