

BZX584C2V0L THRU BZX584C47L

Zener Diodes



Features

- Moisture sensitivity level 1
- Zener voltage 2V~47V

Application

- Linear voltage regulator
- DC regulator
- Small-signal surge protection

Mechanical data

- **Package:** SOD-523
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ Maximum Ratings ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

Parameter	Symbol	Unit	Value
Forward voltage @ $I_F=100\text{mA}$	V_F	V	1
Power dissipation	P_D	mW	100
Maximum regulator current	I_{ZM}	mA	P_D / V_Z
Junction temperature	T_J	$^{\circ}\text{C}$	-55 to +150
Storage temperature	T_{STG}	$^{\circ}\text{C}$	-55 to +150

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■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

Type number	Device marking	V _Z @ I _{ZT} (V)			Z _{VT} (Ω)		Z _{ZK} (Ω)		I _R (μA) @V _R		C _j @V _R =0V (pF)
		Min.	Typ.	Max.	I _{ZT} (mA)	Max.	I _{ZK} (mA)	Max.	Max	V _R (V)	MAX
BZX584C2V0L	L1	1.9	2.0	2.1	5	100	1	600	90	1.0	/
BZX584C2V2L	L2	2.09	2.2	2.31	5	100	1	600	90	1.0	/
BZX584C2V4L	L3	2.28	2.4	2.52	5	85	1	600	50	1.0	/
BZX584C2V7L	LT1	2.57	2.7	2.84	5	85	1	600	10	1.0	/
BZX584C3V0L	LT2	2.85	3.0	3.15	5	85	1	600	4	1.0	/
BZX584C3V3L	LT3	3.14	3.3	3.47	5	85	1	600	2	1.0	/
BZX584C3V6L	LT4	3.42	3.6	3.78	5	85	1	600	2	1.0	/
BZX584C3V9L	LT5	3.71	3.9	4.10	5	85	1	600	2	1.0	/
BZX584C4V3L	LT6	4.09	4.3	4.52	5	80	1	600	1	1.0	/
BZX584C4V7L	LT7	4.47	4.7	4.94	5	70	1	500	0.5	1.0	/
BZX584C5V1L	LT8	4.85	5.1	5.36	5	50	1	480	0.1	1.0	/
BZX584C5V6L	LT9	5.32	5.6	5.88	5	30	1	400	0.1	1.0	25
BZX584C6V2L	L09	5.89	6.2	6.51	5	10	1	150	0.1	2.0	25
BZX584C6V8L	L10	6.46	6.8	7.14	5	8	1	80	0.1	3.0	25
BZX584C7V5L	L11	7.13	7.5	7.88	5	7	1	50	0.1	5.0	25
BZX584C8V2L	L13	7.79	8.2	8.61	5	7	1	50	0.1	6.1	25
BZX584C9V1L	L14	8.65	9.1	9.56	5	10	1	50	0.1	6.8	25
BZX584C10L	L15	9.50	10.0	10.50	5	15	1	70	0.1	7.5	25
BZX584C11L	L16	10.45	11.0	11.55	5	20	1	70	0.1	8.2	25
BZX584C12L	L17	11.40	12.0	12.60	5	20	1	90	0.1	9.0	25
BZX584C13L	L18	12.40	13.0	13.65	5	26	1	110	0.1	9.7	25
BZX584C15L	L19	14.25	15.0	15.60	5	30	1	110	0.1	11.0	25
BZX584C16L	L20	15.30	16.0	16.80	5	40	1	170	0.1	12.0	25
BZX584C18L	L21	17.10	18.0	18.90	5	45	1	170	0.1	14.0	25

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Type number	Device marking	$V_Z @ I_{ZT} (V)$			$Z_{ZT}(\Omega)$		$Z_{ZK}(\Omega)$		$I_R(\mu A) @ V_R$		$C_j @ V_R=0V (pF)$
		Min.	Typ.	Max.	$I_{ZT}(mA)$	Max.	$I_{ZK}(mA)$	Max.	Max	$V_R(V)$	MAX
BZX584C20L	L22	19.00	20.0	21.00	5	55	1	220	0.1	15.0	25
BZX584C22L	L23	20.90	22.0	23.10	5	55	1	220	0.1	17.0	25
BZX584C24L	L24	22.80	24.0	25.20	5	70	1	220	0.1	18.0	25
BZX584C27L	L25	25.65	27.0	28.35	5	80	1	220	0.1	20.0	25
BZX584C30L	L26	28.50	30.0	31.50	5	80	1	220	0.1	22.0	25
BZX584C33L	L27	31.35	33.0	34.65	5	80	1	220	0.1	24.0	25
BZX584C36L	L28	34.20	36.0	37.80	5	80	1	220	0.1	27.0	25
BZX584C39L	L29	37.05	39.0	40.95	2.5	90	0.5	500	0.1	29.0	25
BZX584C43L	L30	40.85	43.0	45.15	2.5	90	0.5	600	0.1	32.0	25
BZX584C47L	L31	44.65	47.0	49.35	2.5	110	0.5	700	0.1	35.0	25

■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	$R_{\theta J-A}^{(1)}$	$^{\circ}C/W$	1250
Thermal resistance, junction-to-case	$R_{\theta J-C}^{(1)}$	$^{\circ}C/W$	1000

Note:

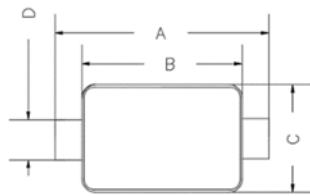
(1) Thermal resistance from junction to ambient and from junction to case mounted on P.C.B. with 8mm*9mm copper pad areas

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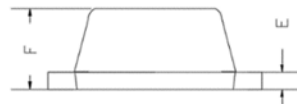
■ Ordering Information

Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
BZX584C2V0L THRU BZX584C47L	F2	Approximate 0.002	8000	80000	320000	7" reel
BZX584C2V0L THRU BZX584C47L	F3	Approximate 0.002	3000	30000	120000	7" reel

■ Outline Dimensions



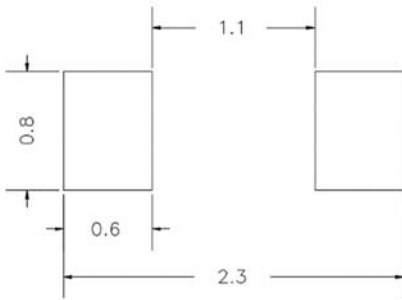
TOP VIEW



SIDE VIEW

DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.059	0.067	1.500	1.700
B	0.043	0.051	1.100	1.300
C	0.028	0.035	0.700	0.900
D	0.010	0.014	0.250	0.350
E	0.002	0.008	0.050	0.200
F	0.020	0.028	0.500	0.700

■ Suggested Pad Layout



UNIT: mm

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