

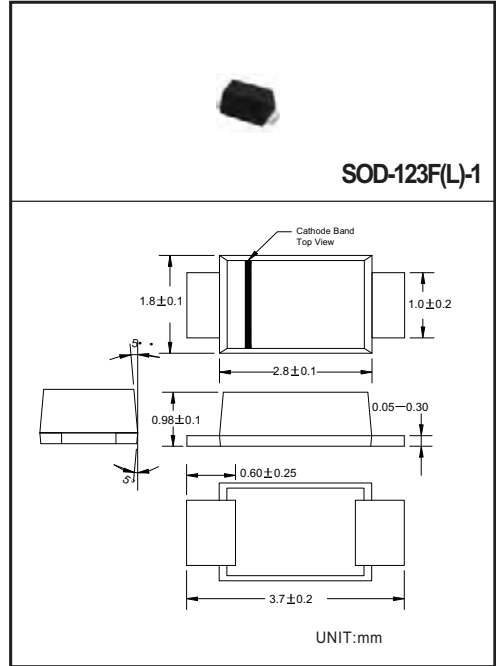
**SILICON PLANAR ZENER DIODE**

**FEATURES**

- \* Silicon planar zener diodes.
- \* Low profile surface-mount package.
- \* Zener and surge current specification
- \* Low leakage current
- \* Excellent stability
- \* High temperature soldering guaranteed: 265°C /10 seconds, at terminals
- \* Halogen-free

**MECHANICAL DATA**

- \* Case: JEDEC SOD-123F(L)-1 molded plastic
- \* Polarity: Color band denotes positive end ( cathode ) except for bidirectional
- \* Weight: 0.006 ounces, 0.02 grams
- \* Mounting position: Any



**ABSOLUTE MAXIMUM RATINGS AND CHARACTERISTICS** Ratings at 25 °C ambient temperature unless otherwise specified

RATINGS	SYMBOL	VALUE	UNITS
Non-repetitive peak pulse power dissipation with a 10/1000µs waveform (NOTE 1)	$P_{PPM}$	150	Watts
Power dissipation at $T_A=25^{\circ}C$ (NOTE 2)	$P_{tot}$	0.8	Watts
Reverse current at stand-off voltage @ $V_{WM}$	$I_R$	SEE TABLE 1	µ A
Maximum instantaneous forward voltage at 0.2A	$V_F$	1.2	Volts
Thermal resistance junction to ambient	$R_{\theta JA}$	180	K/W
Operating temperature junction range	$T_J$	- 55 to +175	°C
Storage temperature range	$T_{STG}$	- 55 to +175	°C

NOTES:(1) $T_J=25^{\circ}C$  prior to surge.

(2)Mounted on epoxy-glass PCB with 3×3 mm Cu pads( $\geq 40\mu m$  thick)

(3)Non-repetitive peak reverse current in accordance with "IEC 60-1,Section 8" (10/1000µs pulse)

2020-11/08  
REV:F

## RATING AND CHARACTERISTICS CURVES ( BZD27CxxP)

Figure 1. Forward Current vs. Forward Voltage

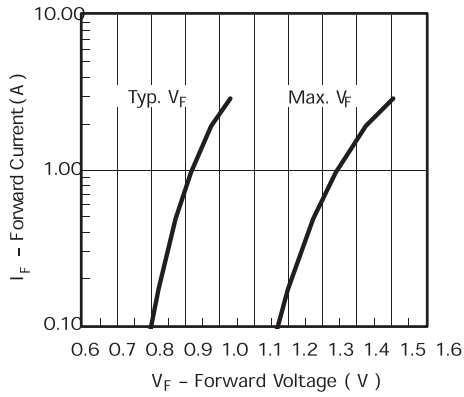


Figure 2. Maximum Pulse Power Dissipation vs. Zener Voltage

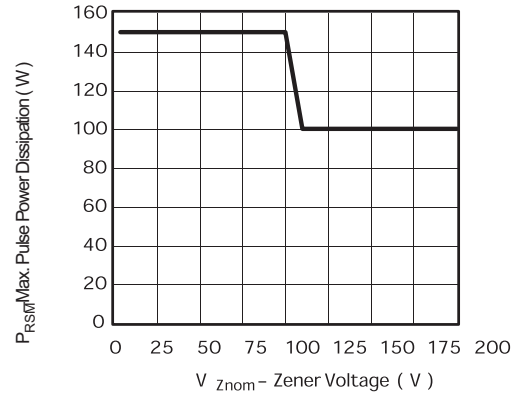


Figure 3. Typ. Diode Capacitance vs. Reverse Voltage

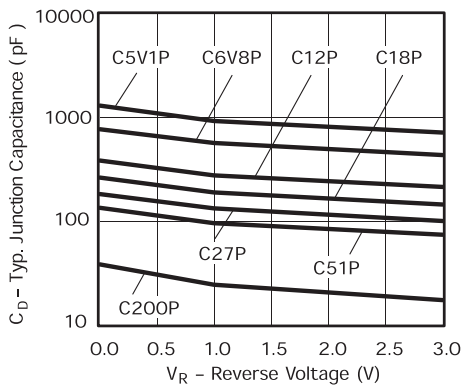


Figure 4. Non-Repetitive Peak Reverse Current Pulse Definition

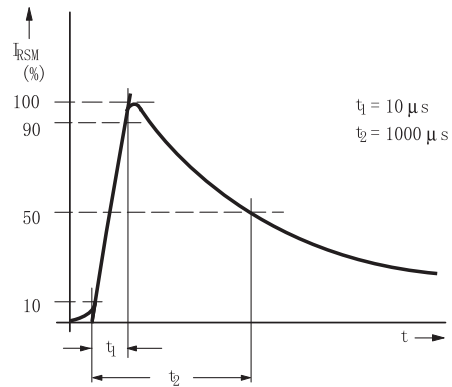
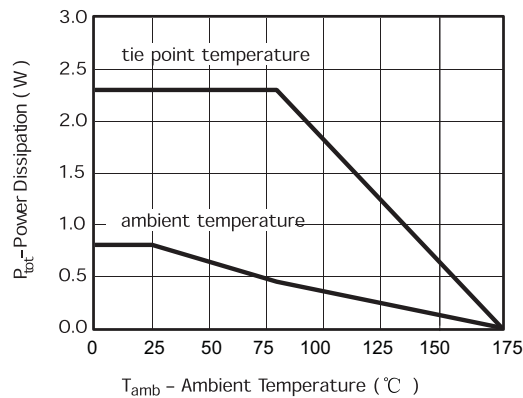


Figure 5. Power Dissipation vs. Ambient Temperature



ELECTRICAL CHARACTERISTICS (at TA=25°C unless otherwise noted)

When used as voltage regulator diodes

Partnumber	Marking code	Working voltage (NOTE 1)		Differential resistance		Temperature coefficient		Test current	Reverse current at reverse voltage	
		$V_z@I_{zT}$		$r_{dif}@I_z$		$\alpha_z@I_z$			$I_{zT}$	$I_R$
		V		$\Omega$		%/°C		m A	$\mu A$	V
		min	max	typ	max	min	max		max	
BZD27C3V6P	D0	3.4	3.8	4	8	-0.14	-0.04	100	100	1
BZD27C3V9P	D1	3.7	4.1	4	8	-0.14	-0.04	100	50	1
BZD27C4V3P	D2	4	4.6	4	7	-0.12	-0.02	100	25	1
BZD27C4V7P	D3	4.4	5	3	7	-0.1	0	100	10	1
BZD27C5V1P	D4	4.8	5.4	3	6	-0.08	0.02	100	5	1
BZD27C5V6P	D5	5.2	6	2	4	-0.04	0.04	100	10	2
BZD27C6V2P	D6	5.8	6.6	2	3	-0.01	0.06	100	5	2
BZD27C6V8P	D7	6.4	7.2	1	3	0	0.07	100	10	3
BZD27C7V5P	D8	7	7.9	1	2	0	0.07	100	50	3
BZD27C8V2P	D9	7.7	8.7	1	2	0.03	0.08	100	10	3
BZD27C9V1P	E0	8.5	9.6	2	4	0.03	0.08	50	10	5
BZD27C10P	E1	9.4	10.6	2	4	0.05	0.09	50	7	7.5
BZD27C11P	E2	10.4	11.6	4	7	0.05	0.1	50	4.0	8.2
BZD27C12P	E3	11.4	12.7	4	7	0.05	0.1	50	3.0	9.1
BZD27C13P	E4	12.4	14.1	5	10	0.05	0.1	50	2	10
BZD27C15P	E5	13.8	15.6	5	10	0.05	0.1	50	1	11
BZD27C16P	E6	15.3	17.1	6	15	0.06	0.11	25	1	12
BZD27C18P	E7	16.8	19.1	6	15	0.06	0.11	25	1	13
BZD27C20P	E8	18.8	21.2	6	15	0.06	0.11	25	1	15
BZD27C22P	E9	20.8	23.3	6	15	0.06	0.11	25	1	16
BZD27C24P	F0	22.8	25.6	7	15	0.06	0.11	25	1	18
BZD27C27P	F1	25.1	28.9	7	15	0.06	0.11	25	1	20
BZD27C30P	F2	28	32	8	15	0.06	0.11	25	1	22
BZD27C33P	F3	31	35	8	15	0.06	0.11	25	1	24
BZD27C36P	F4	34	38	21	40	0.06	0.11	10	1	27
BZD27C39P	F5	37	41	21	40	0.06	0.11	10	1	30
BZD27C43P	F6	40	46	24	45	0.07	0.12	10	1	33
BZD27C47P	F7	44	50	24	45	0.07	0.12	10	1	36
BZD27C51P	F8	48	54	25	60	0.07	0.12	10	1	39
BZD27C56P	F9	52	60	25	60	0.07	0.12	10	1	43
BZD27C62P	G0	58	66	25	80	0.08	0.13	10	1	47
BZD27C68P	G1	64	72	25	80	0.08	0.13	10	1	51
BZD27C75P	G2	70	79	30	100	0.08	0.13	10	1	56
BZD27C82P	G3	77	87	30	100	0.08	0.13	10	1	62
BZD27C91P	G4	85	96	60	200	0.08	0.13	5	1	68
BZD27C100P	G5	94	106	60	200	0.09	0.13	5	1	75
BZD27C110P	G6	104	116	80	250	0.09	0.13	5	1	82
BZD27C120P	G7	114	127	80	250	0.09	0.13	5	1	91
BZD27C130P	G8	124	141	110	300	0.09	0.13	5	1	100
BZD27C150P	G9	138	156	130	300	0.09	0.13	5	1	110
BZD27C160P	H0	153	171	150	350	0.09	0.13	5	1	120
BZD27C180P	H1	168	191	180	400	0.09	0.13	5	1	130
BZD27C200P	H2	188	212	200	500	0.09	0.13	5	1	150
BZD27C220P	H3	208	233	430	900	0.09	0.13	5	1	160

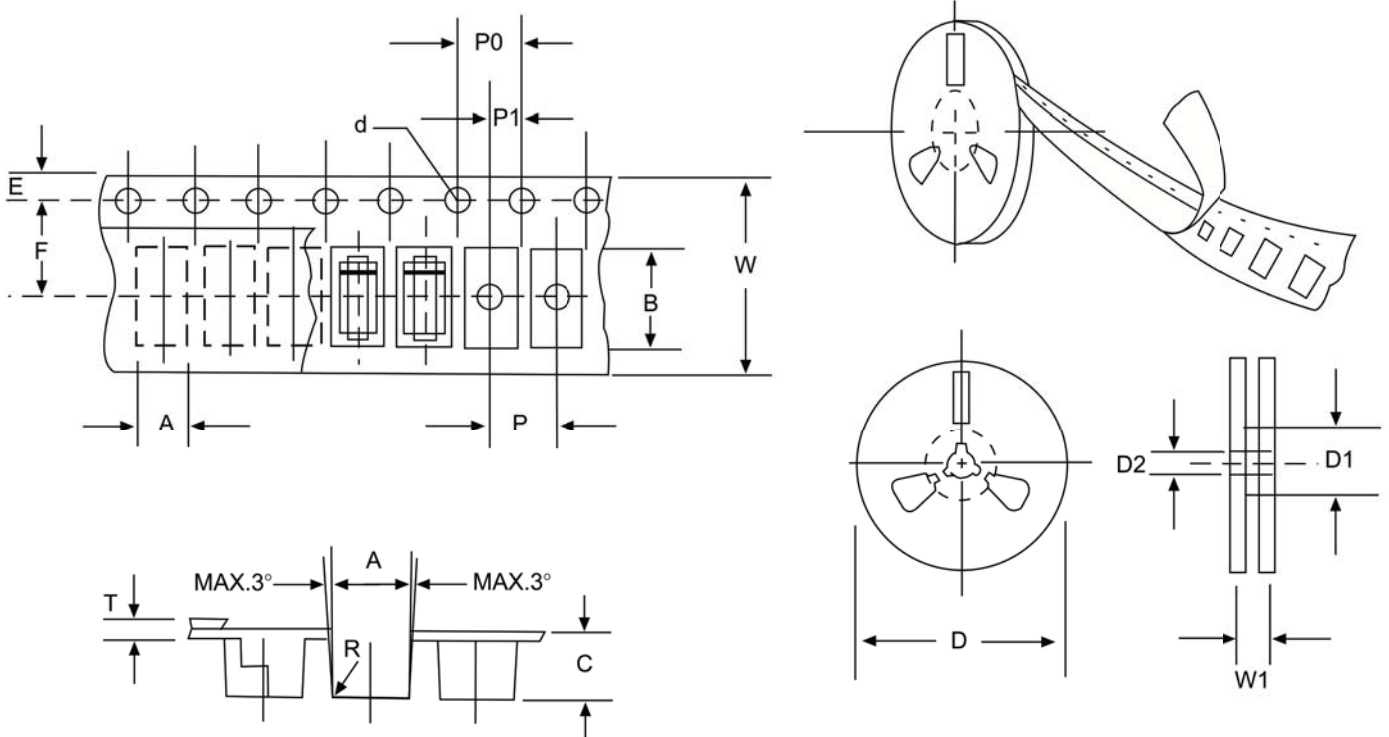
Note: 1. Pulse test:  $t_p \leq 5ms$ .

## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SOD-123F(L)-1	-W	3,000	15,000	---	---	178	390*205*31	120,000	6.964

# Reel Taping Specifications For Surface Mount Devices



**FIG:CONFIGURATION OF AXIAL TAPING**

ITEM	SYMBOL	SOD-123FLmm(inch)
Carrier width	A	2.05±0.1(0.081±0.004)
Carrier length	B	3.95±0.1(0.156±0.004)
Carrier depth	C	1.45±0.1(0.057±0.004)
Sprocket hole	d	1.55±0.05(0.061±0.002)
Reel outside diameter	D	280/178±2.0(11/7.0±0.079)
Reel inner diameter	D1	50±0.2(1.969±0.008)
Feed hole diameter	D2	13±0.5(0.512±0.020)
Sprocket hole position	E	1.75±0.1(0.069±0.004)
Punch hole position	F	3.50±0.1(0.138±0.002)
Punch hole pitch	P	4.0±0.1(0.157±0.004)
Sprocket hole pitch	P0	4.0±0.1(0.157±0.004)
Embossment center	P1	2.0±0.1(0.079±0.004)
Total tape thickness	T	0.21±0.25(0.008±0.010)
Tape width	W	8.0±0.2(0.315±0.008)
Reel width	W1	10.0±2.0(0.394±0.079)

NOTE:Devices are packde in accordance with EIA standard RS-481-A and specification given above.

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