



# BZD27C11P THRU BZD27C270P

## Voltage Regulator Diodes



Voltage Range  
11 to 270 Volts  
0.8 Watts Power Dissipation

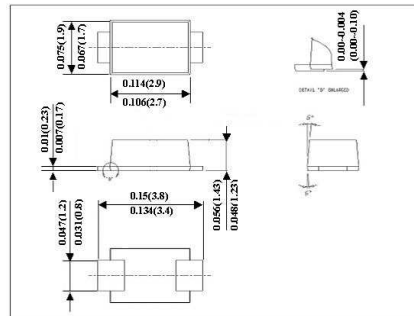
### Features

- ✧ Silicon planar zener diodes
- ✧ Low profile surface-mount package
- ✧ Zener and surge current specification
- ✧ Low leakage current
- ✧ Excellent stability
- ✧ High temperature soldering:  
260°C / 10 sec. at terminals

### Mechanical Data

- ✧ Case: Sub SMA Plastic
- ✧ Packaging method: refer to package code
- ✧ Marking code: as table
- ✧ Weight: 10 mg (approx.)

### Sub SMA



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

#### Maximum Ratings

Type Number	Symbol	Value	Units
Forward Voltage @ IF = 0.2A	$V_F$	1.2	V
Power Dissipation TL=80°C TA=25°C (Note 1)	$P_{tot}$	2.3 0.8	W
Non-Repetitive Peak Pulse Power Dissipation 100us square pulse (Note 2)	$P_{ZSM}$	300	W
Non-Repetitive Peak Pulse Power Dissipation 10/1000 us waveform (BZD27-C7V5P to BZD27-C100P) (Note 2)	$P_{RSM}$	150	W
Non-Repetitive Peak Pulse Power Dissipation 10/1000 us waveform (BZD27-110P to BZD27-C200P) (Note 2)	$P_{RSM}$	100	W
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{\theta JA}$	180	K/W
Thermal Resistance Junction to Lead	$R_{\theta JL}$	30	K/W
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to + 175	°C

Notes: 1. Mounted on Epoxy-Glass PCB with 3 x 3 mm Cu pads ( $\geq 40\mu\text{m}$  thick)

2.  $T_J=25^\circ\text{C}$  Prior to Surge.

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

Device	Device Marking Code	Working Voltage (Note 1)		Differential Resistance		Temperature Coefficient		Test	Reverse Current @ Reverse Voltage	
		V <sub>Z</sub> @ I <sub>ZT</sub>		r <sub>diff</sub> @ I <sub>Z</sub>		ALPH <sub>Z</sub> @ I <sub>Z</sub>		Current	I <sub>R</sub>	V <sub>R</sub>
		V		Ω		% / °C		I <sub>ZT</sub>	uA	V <sub>R</sub>
		Min.	Max.	typ	Max.	Min	Max.	Ma	Max	V
BZD27C11P	E2	10.4	11.6	4.0	7	0.05	0.10	50	4.0	8.2
BZD27C12P	E3	11.4	12.7	4.0	7	0.05	0.10	50	3.0	9.1
BZD27C13P	E4	12.4	14.1	5.0	10	0.05	0.10	50	2.0	10
BZD27C15P	E5	13.8	15.6	5.0	10	0.05	0.10	25	1.0	11
BZD27C16P	E6	15.3	17.1	6.0	15	0.06	0.11	25	1.0	12
BZD27C18P	E7	16.8	19.1	6.0	15	0.06	0.11	25	1.0	13
BZD27C20P	E8	18.8	21.2	6.0	15	0.06	0.11	25	1.0	15
BZD27C22P	E9	20.8	23.3	6.0	15	0.06	0.11	25	1.0	16
BZD27C24P	F0	22.8	25.6	7.0	15	0.06	0.11	25	1.0	18
BZD27C27P	F1	25.1	28.9	7.0	15	0.06	0.11	25	1.0	20
BZD27C30P	F2	28	32	8.0	15	0.06	0.11	25	1.0	22
BZD27C33P	F3	31	35	8.0	15	0.06	0.11	25	1.0	24
BZD27C36P	F4	34	38	21	40	0.06	0.11	10	1.0	27
BZD27C39P	F5	37	41	21	40	0.06	0.11	10	1.0	30
BZD27C43P	F6	40	46	24	45	0.07	0.12	10	1.0	33
BZD27C47P	F7	44	50	24	45	0.07	0.12	10	1.0	36
BZD27C51P	F8	48	54	25	60	0.07	0.12	10	1.0	39
BZD27C56P	F9	52	60	25	60	0.07	0.12	10	1.0	43
BZD27C62P	G0	58	66	25	80	0.08	0.13	10	1.0	47
BZD27C68P	G1	64	72	25	80	0.08	0.13	10	1.0	51
BZD27C75P	G2	70	79	30	100	0.08	0.13	10	1.0	56
BZD27C82P	G3	77	87	30	100	0.08	0.13	10	1.0	62
BZD27C91P	G4	85	96	60	200	0.08	0.13	5	1.0	68
BZD27C100P	G5	94	106	60	200	0.09	0.13	5	1.0	75
BZD27C110P	G6	104	116	80	250	0.09	0.13	5	1.0	82
BZD27C120P	G7	114	127	80	250	0.09	0.13	5	1.0	91
BZD27C130P	G8	124	141	110	300	0.09	0.13	5	1.0	100
BZD27C150P	G9	138	156	130	300	0.09	0.13	5	1.0	110
BZD27C160P	H0	153	171	150	350	0.09	0.13	5	1.0	120
BZD27C180P	H1	168	191	180	400	0.09	0.13	5	1.0	130
BZD27C200P	H2	188	212	200	500	0.09	0.13	5	1.0	150
BZD27C220P	H3	208	233	350	750	0.09	0.13	2	1.0	160
BZD27C240P	H4	228	256	400	850	0.09	0.13	2	1.0	180
BZD27C270P	H5	251	289	450	1000	0.09	0.13	2	1.0	200

Notes: 1. Pulse test: tp ≤ 5ms.



RATINGS AND CHARACTERISTIC CURVES (BZD27C11P THRU BZD27C270P)

FIG.1- FORWARD CURRENT vs FORWARD VOLTAGE

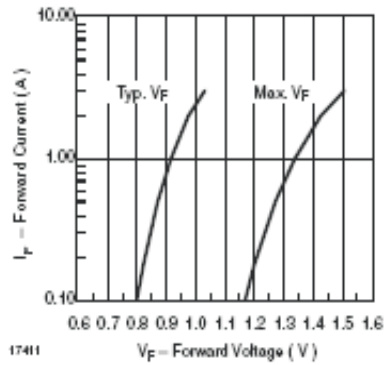


FIG.2- TYP. DIODE CAPACITANCE vs REVERSE VOLTAGE

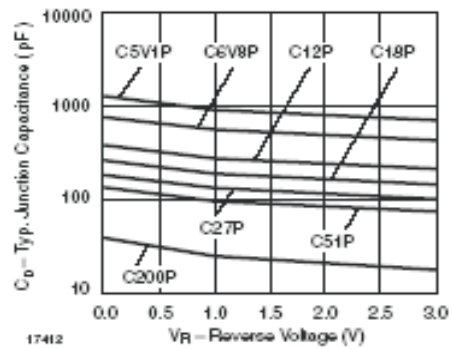


FIG.3- POWER DISSIPATION vs AMBIENT TEMPERATURE

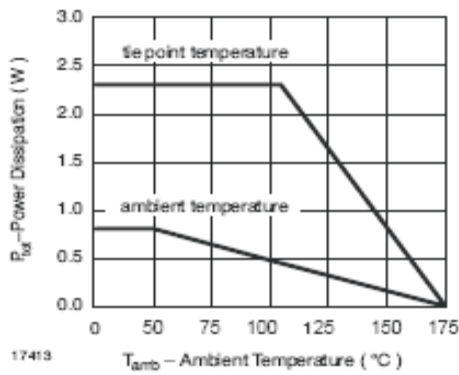


FIG.4- MAXIMUM PULSE POWER DISSIPATION vs ZENER VOLTAGE

