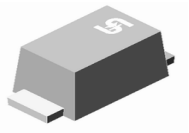
TAIWAN SEMICONDUCTOR

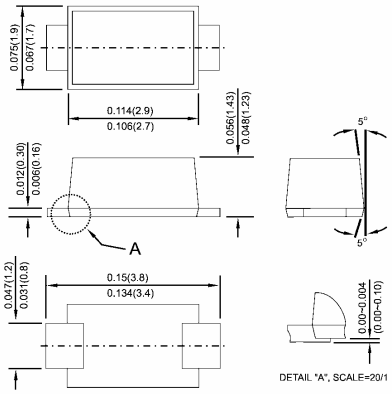
BZD17C SERIES

0.8 Watts Voltage Regulator Diodes

Sub SMA

Pb RoHS COMPLIANCE





Dimensions in inches and (millimeters)

Features

- ✧ Silicon 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
- ✧ Terminal : Pure tin plated lead free,
- ✧ Packaging method: refer to package code
- ✧ Marking code: as table
- ✧ Weight: 10 mg (approx.)

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)	Ptot	2.3 0.8	W
Non-Repetitive Peak Pulse Power Dissipation 100us square pulse (Note 2)		P_{ZSM}	300	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 (≧40um thick)

2. T_J=25°C Prior to Surge.

Version: B08

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RATINGS AND CHARACTERISTIC CURVES (BZD17C SERIES)

FIG.1- FORWARD CURRENT vs FORWARD VOLTAGE

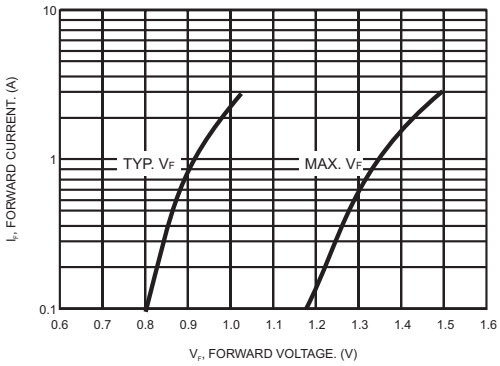


FIG.2- TYP. DIODE CAPACITANCE vs REVERSE VOLTAGE

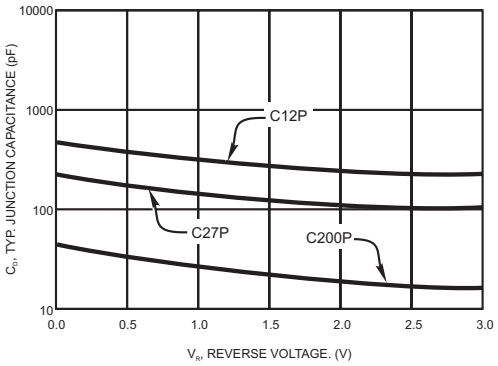
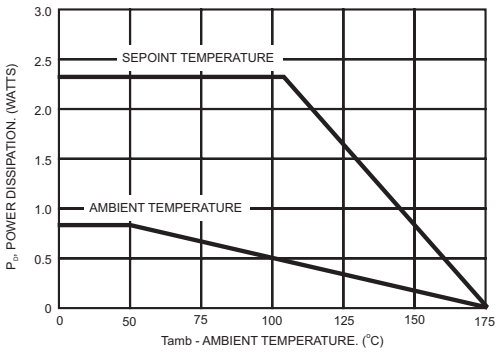


FIG.3- POWER DISSIPATION vs AMBIENT TEMPERATURE



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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 Current	Reverse Current @ Reverse Voltage	
		V_Z @ I_{ZT}		r_{dif} @ I_Z		$ALPH_{Z\ @\ I_Z}$			I_R	
		V		Ω		% / °C		I_{ZT}	uA	V_R
		Min.	Max.	typ	Max.	Min	Max.	mA	Max	V
BZD17C10P	J1	9.4	10.6	2.0	4	0.05	0.09	50	7.0	7.5
BZD17C11P	J2	10.4	11.6	4.0	7	0.05	0.10	50	4.0	8.2
BZD17C12P	J3	11.4	12.7	4.0	7	0.05	0.10	50	3.0	9.1
BZD17C13P	J4	12.4	14.1	5.0	10	0.05	0.10	50	2.0	10
BZD17C15P	J5	13.8	15.6	5.0	10	0.05	0.10	25	1.0	11
BZD17C16P	J6	15.3	17.1	6.0	15	0.06	0.11	25	1.0	12
BZD17C18P	J7	16.8	19.1	6.0	15	0.06	0.11	25	1.0	13
BZD17C24P	K0	22.8	25.6	7.0	15	0.06	0.11	25	1.0	18
BZD17C27P	K1	25.1	28.9	7.0	15	0.06	0.11	25	1.0	20
BZD17C33P	K3	31	35	8.0	15	0.06	0.11	25	1.0	24
BZD17C36P	K4	34	38	21	40	0.06	0.11	10	1.0	27
BZD17C39P	K5	37	41	21	40	0.06	0.11	10	1.0	30
BZD17C43P	K6	40	46	24	45	0.07	0.12	10	1.0	33
BZD17C47P	K7	44	50	24	45	0.07	0.12	10	1.0	36
BZD17C51P	K8	48	54	25	60	0.07	0.12	10	1.0	39
BZD17C62P	L0	58	66	25	80	0.08	0.13	10	1.0	47
BZD17C68P	L1	64	72	25	80	0.08	0.13	10	1.0	51
BZD17C75P	L2	70	79	30	100	0.08	0.13	10	1.0	56
BZD17C100P	L5	94	106	60	200	0.09	0.13	4	1.0	75
BZD17C120P	L7	114	127	150	300	0.09	0.13	4	1.0	91
BZD17C180P	M1	168	191	280	450	0.09	0.13	4	1.0	130
BZD17C200P	M2	188	212	350	750	0.09	0.13	4	1.0	150
BZD17C220P	M3	208	233	430	900	0.09	0.13	4	1.0	160
BZD17C240P	M4	228	256	500	1050	0.09	0.13	4	1.0	180

Notes: 1. Pulse test: tp ≦5ms.

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