0.8W, 11V - 220V Voltage Regulator Diodes

FEATURES

- Silicon zener diodes
- Low profile surface-mount package
- Zener and surge current specification
- Low leakage current
- Excellent stability
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition

Sub SMA

Pb-Free

RoHS COMPLIANT

MECHANICAL DATA

Case: Sub SMA

Molding compound, UL flammability classification rating 94V-0

Part No. with suffix "H" means AEC-Q101 qualified

Packing code with suffix "G" means green compound (halogen-free)

Moisture sensitivity level: level 1, per J-STD-020

Terminal: Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 2 whisker test

Polarity: Indicated by cathode band

Weight: 0.019 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNIT
Forward voltage @ I_F=0.2A	V_F	1.2	Volts
Power dissipation at T_L=80°C T_A=25°C (Note 1)	Ptot	2.3 0.8	Watts
Non-repetitive peak pulse power dissipation 100μs square pulse (Note 2)	P_{ZSM}	300	Watts
Thermal resistance junction to ambient (Note 1)	$R_{\theta JA}$	180	°C/W
Thermal resistance junction to lead	$R_{\theta JL}$	30	°C/W
Operating and storage temperature range	T_J, T_{STG}	-55 to +175	°C

Note 1: Mounted on Cu-Pad size 5mm x 5mm

Note 2: T_J=25°C prior to surge

ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
BZD17CxxP (Note 1)	H	RU	G	Sub SMA	1,800 / 7" Plastic reel (8mm tape)
		RV		Sub SMA	3,000 / 7" Plastic reel (8mm tape)
		RT		Sub SMA	7,500 / 13" Paper reel (8mm tape)
		MT		Sub SMA	7,500 / 13" Plastic reel (8mm tape)
		RQ		Sub SMA	10,000 / 13" Paper reel (8mm tape)
		MQ		Sub SMA	10,000 / 13" Plastic reel (8mm tape)
		R3		Sub SMA	1,800 / 7" Plastic reel (12mm tape)
		RF		Sub SMA	3,000 / 7" Plastic reel (12mm tape)
		R2		Sub SMA	7,500 / 13" Paper reel (12mm tape)
		M2		Sub SMA	7,500 / 13" Plastic reel (12mm tape)
		RH		Sub SMA	10,000 / 13" Paper reel (12mm tape)
		MH		Sub SMA	10,000 / 13" Plastic reel (12mm tape)

Note 1: "xx" defines voltage from 11V (BZD17C11P) to 220V (BZD17C220P)

EXAMPLE					
PREFERRED P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
BZD17C11P RUG	BZD17C11P	H	RU	G	AEC-Q101 qualified Green compound

RATINGS AND CHARACTERISTICS CURVES

(T_A=25°C unless otherwise noted)

FIG. 1 TYPICAL FORWARD CHARACTERISTICS

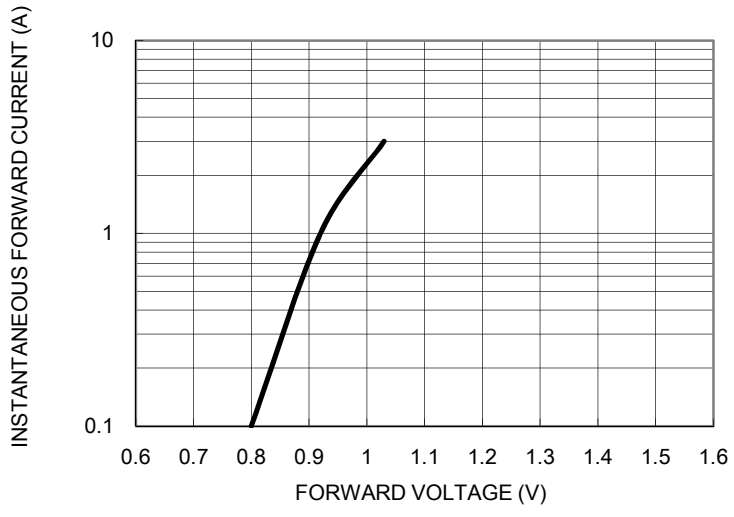


FIG. 2 TYP. DIODE CAPACITANCE vs REVERSE VOLTAGE

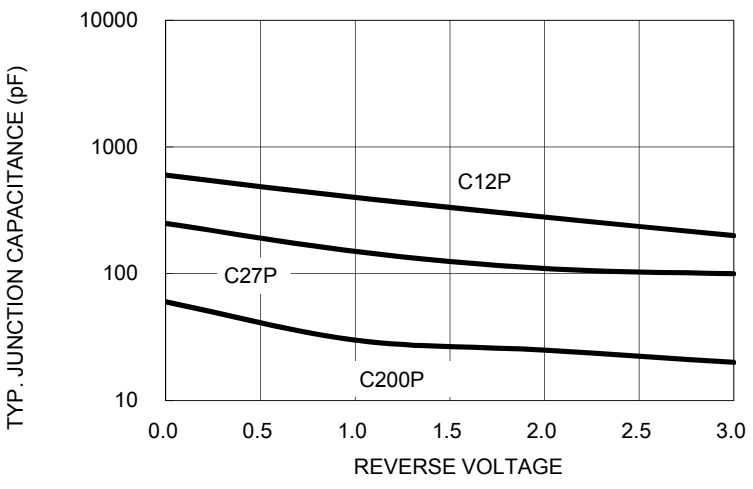
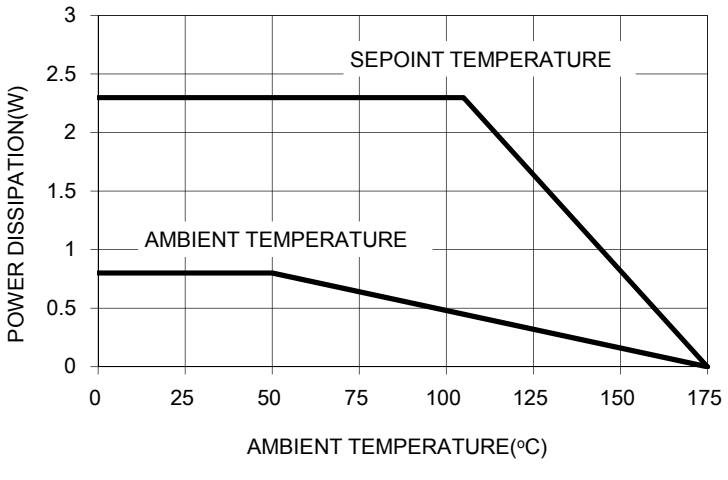


FIG.3 POWER DISSIPATION vs AMBIENT TEMPERATURE

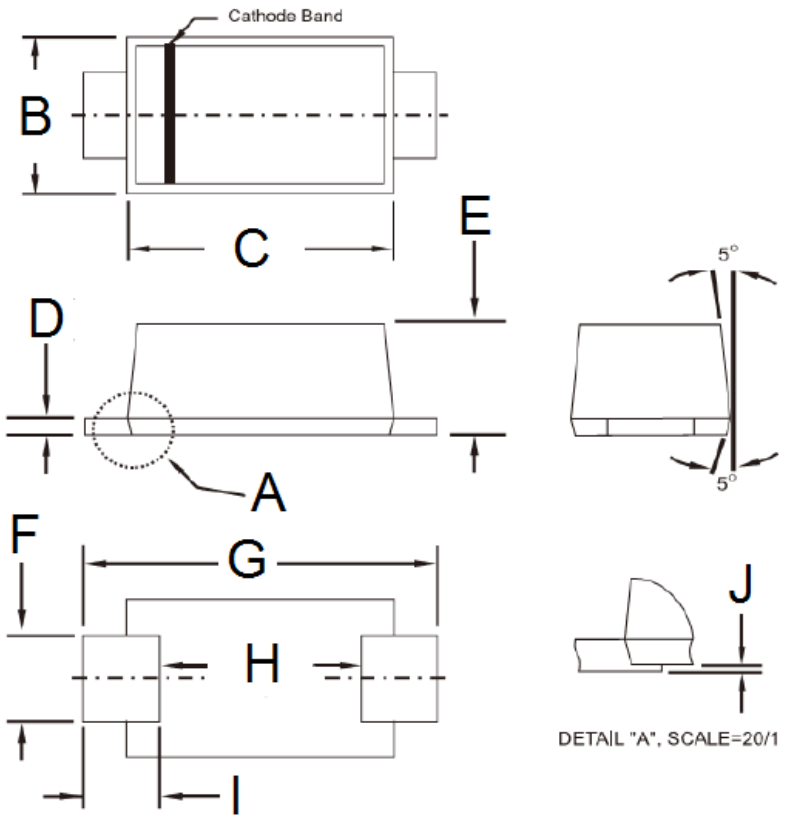


Device	Device Marking Code	Working Voltage (Note 1)		Differential Resistance		Temperature Coefficient		Test Current	Reverse Current@ Reverse Voltage	
		V_Z @ I_{ZT}		r_{dif} @ I_Z		α_Z @ I_Z		I_{ZT}	I_R	V_R
		V		Ω		%/°C		mA	μA	V
		Min.	Max	Typ	Max.	Min.	Max		Max.	
BZD17C11P	J2	10.4	11.6	4	7	0.05	0.10	50	4.0	8.2
BZD17C12P	J3	11.4	12.7	4	7	0.05	0.10	50	3.0	9.1
BZD17C13P	J4	12.4	14.1	5	10	0.05	0.10	50	2.0	10
BZD17C15P	J5	13.8	15.6	5	10	0.05	0.10	25	1.0	11
BZD17C16P	J6	15.3	17.1	6	15	0.06	0.11	25	1.0	12
BZD17C18P	J7	16.8	19.1	6	15	0.06	0.11	25	1.0	13
BZD17C24P	K0	22.8	25.6	7	15	0.06	0.11	25	1.0	18
BZD17C27P	K1	25.1	28.9	7	15	0.06	0.11	25	1.0	20
BZD17C33P	K3	31	35	8	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

Notes: 1. Pulse test: tp ≦5ms.

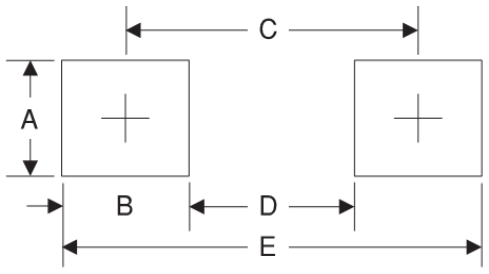
PACKAGE OUTLINE DIMENSIONS

Sub SMA



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
B	1.70	1.90	0.067	0.075
C	2.70	2.90	0.106	0.114
D	0.16	0.30	0.006	0.012
E	1.23	1.43	0.048	0.056
F	0.80	1.20	0.031	0.047
G	3.40	3.80	0.134	0.150
H	2.45	2.60	0.096	0.102
I	0.35	0.85	0.014	0.033
J	0.00	0.10	0.000	0.004

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	1.4	0.055
B	1.2	0.047
C	3.1	0.122
D	1.9	0.075
E	4.3	0.169

MARKING DIAGRAM

P/N = Marking Code
G = Green Compound
YW = Date Code
F = Factory Code

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