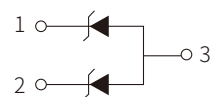


FEATURES

- | Dual zeners in common anode configuration
- | 300mW power dissipation rating
- | Ideally suited for automatic insertion
- | ΔV_z for both diodes in one case is $\leq 5\%$
- | Common cathode style available see DZ series
- | Also available in lead free version



Schematic Symbol

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS ($T_A=25^\circ\text{C}$)

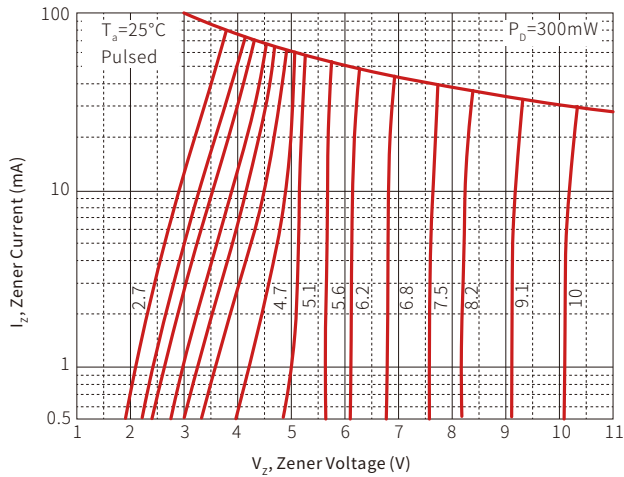
Parameter	Symbol	Value	Unit
Power Dissipation	P_D	300	mW
Forward Voltage at $I_F=10\text{mA}$	V_F	0.9	V
Operation Junction and Storage Temperature Range	$T_J, T_{STG.}$	-55 to +150	$^\circ\text{C}$
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	417	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS

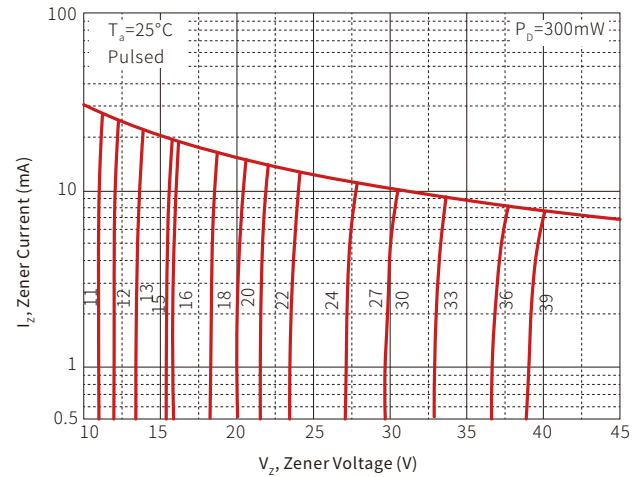
Part Number	Device Marking Code	Zener Voltage Range (note1)	Maximum Zener Impedance (note 2)		Typical Temperature Coefficient T_c (%/°C)	Min Reverse Voltage (note1)
		@ $I_{ZT}=5.0\text{mA}$	$Z_{ZT}@I_{ZT}=5.0\text{mA}$	$Z_{ZK}@I_{ZK}=1.0\text{mA}$		@ $I_R=0.1\mu\text{A}$
		V_Z (V)	(Ω)	(Ω)		V_R (V)
AZ23C2V7	KD1	2.5-2.9	83	500	-0.065	-
AZ23C3V0	KD2	2.8-3.0	95	500	-0.065	-
AZ23C3V3	KD3	3.1-3.5	95	500	-0.050	-
AZ23C3V6	KD4	3.4-3.8	95	500	-0.050	-
AZ23C3V9	KD5	3.7-4.1	95	500	-0.050	-
AZ23C4V3	KD6	4.0-4.6	95	500	-0.035	-
AZ23C4V7	KD7	4.4-5.0	78	500	-0.015	-
AZ23C5V1	KD8	4.8-5.4	60	480	+0.005	0.8
AZ23C5V6	KD9	5.2-6.0	40	400	+0.020	1.0
AZ23C6V2	KDA	5.8-6.6	10	200	+0.030	2.0
AZ23C6V8	KDB	6.4-7.2	8.0	150	+0.045	3.0
AZ23C7V5	KDC	7.0-7.9	7.0	50	+0.050	5.0
AZ23C8V2	KDD	7.7-8.7	7.0	50	+0.055	6.0
AZ23C9V1	KDE	8.5-9.6	10	50	+0.065	7.0
AZ23C10	KDF	9.4-10.6	15	70	+0.065	7.5
AZ23C11	KDG	10.4-11.6	20	70	+0.070	8.5
AZ23C12	KDH	11.4-12.7	20	90	+0.075	9.0
AZ23C13	KDI	12.4-14.1	25	110	+0.080	10.0
AZ23C15	KDJ	13.8-15.6	30	110	+0.080	11.0
AZ23C16	KDK	15.3-17.1	40	170	+0.090	12.0
AZ23C18	KDL	16.8-19.1	50	170	+0.090	14.0
AZ23C20	KDM	18.8-21.2	50	220	+0.090	15.0
AZ23C22	KDN	20.8-23.3	55	220	+0.090	17.0
AZ23C24	KDO	22.8-25.6	80	220	+0.090	18.0
AZ23C27	KDP	25.1-28.9	80	250	+0.090	20.0
AZ23C30	KDQ	28-32	80	250	+0.090	22.5
AZ23C33	KDR	31-35	80	250	+0.090	25.0
AZ23C36	KDS	34-38	90	250	+0.090	27.0
AZ23C39	KDT	37-41	90	300	+0.110	29.0

Notes: 1. Short duration test pulse used to minimize self-heating effect.
2. $f=1\text{kHz}$

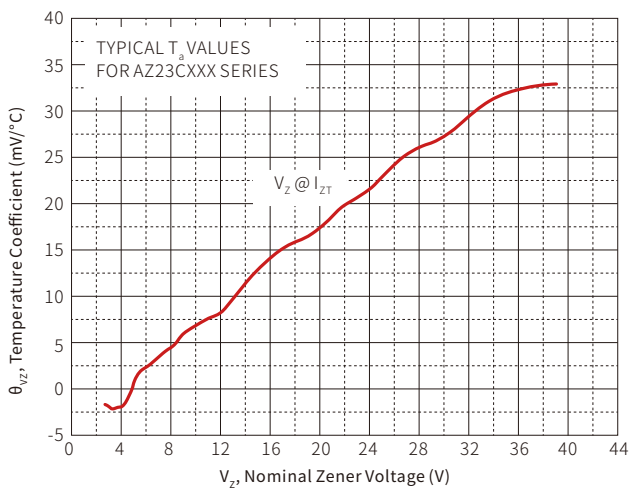
CHARACTERISTIC CURVES

 Zener Characteristics (V_z Up to 10 V)


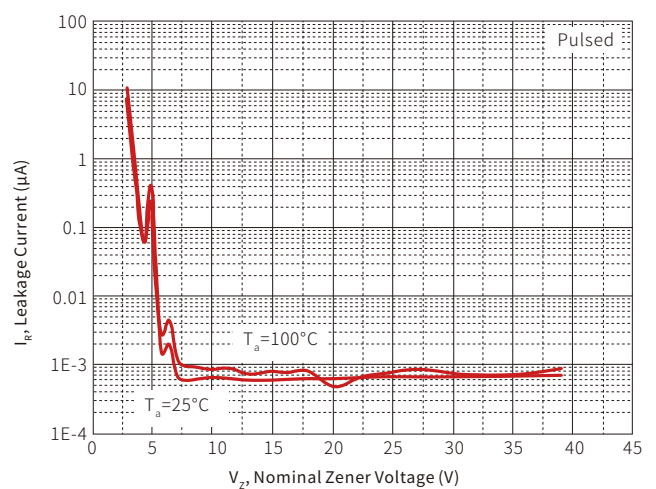
Zener Characteristics (11 V to 39 V)



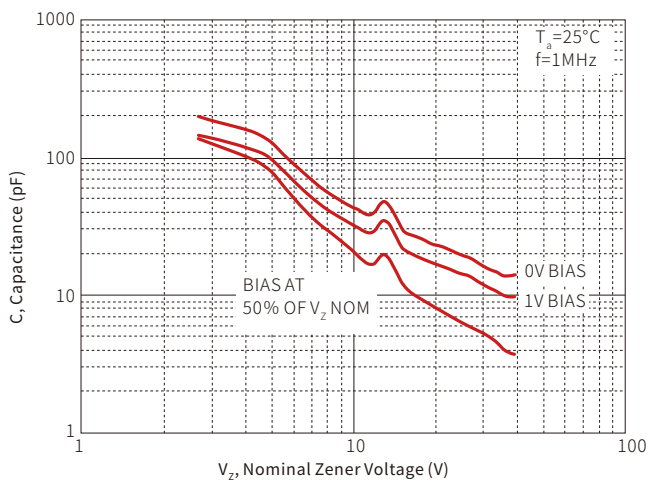
Temperature Coefficients



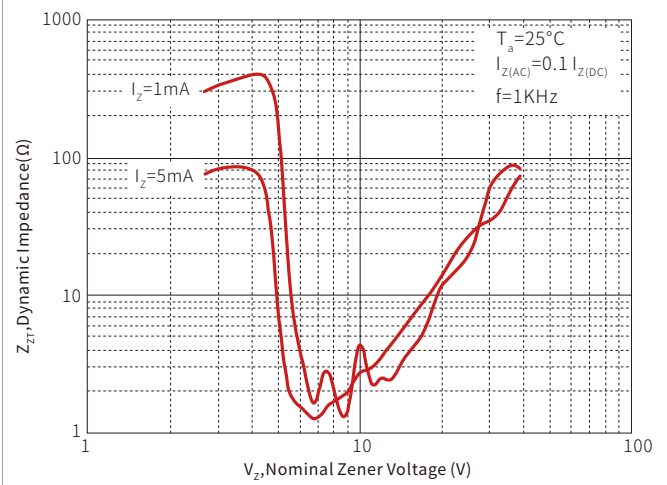
Typical Leakage Current



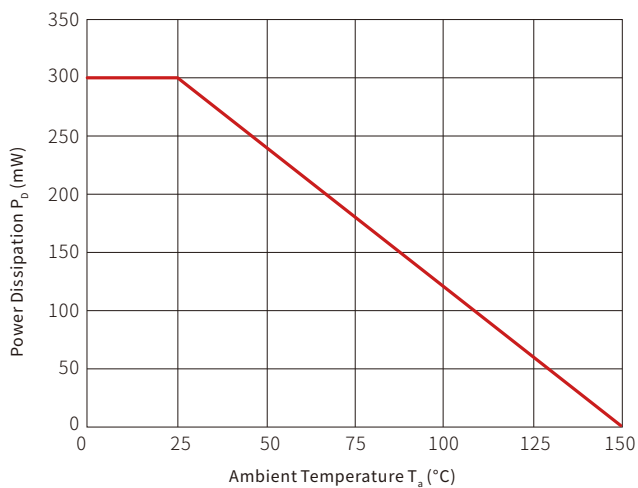
Typical Capacitance



Effect of Zener Voltage on Zener Impedance

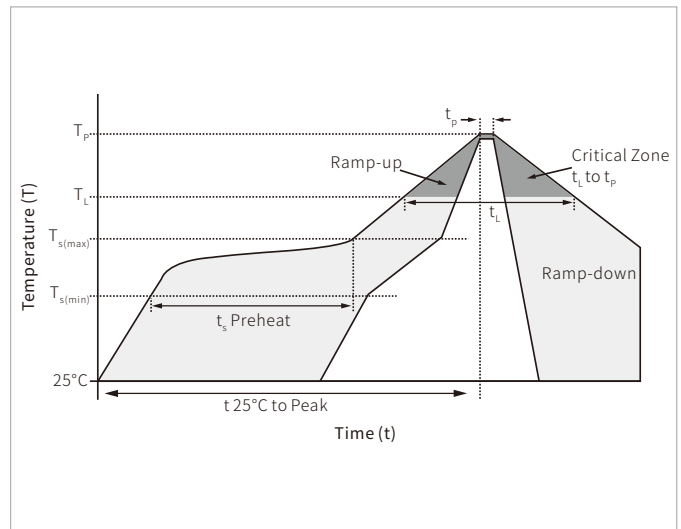


Power Derating Curve

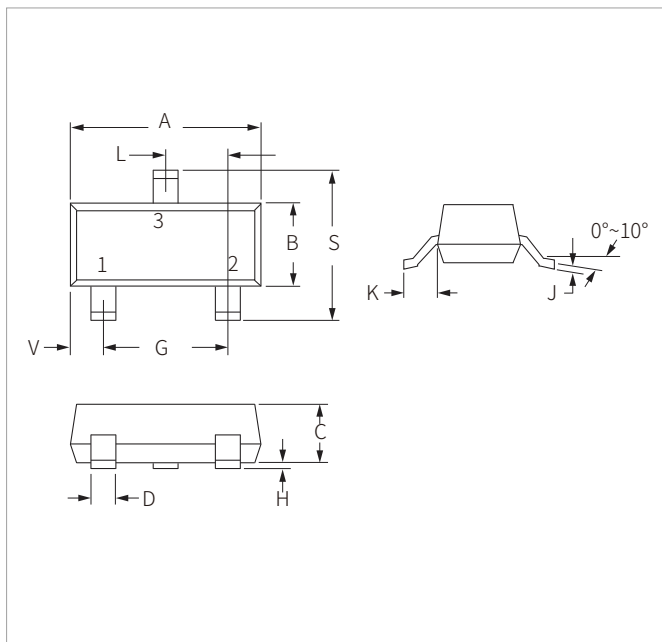


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C

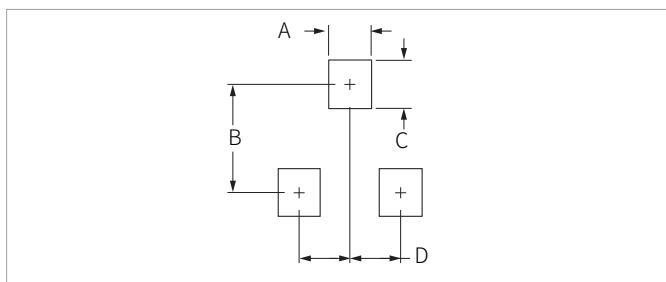


SOT-23 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.80	3.05	0.110	0.120
B	1.20	1.40	0.047	0.055
C	0.90	1.15	0.035	0.045
D	0.37	0.50	0.015	0.020
G	1.75	2.05	0.069	0.081
H	0.01	0.100	0.001	0.004
J	0.085	0.180	0.003	0.007
K	0.35	0.69	0.014	0.029
L	0.89	1.02	0.035	0.040
S	2.10	2.65	0.083	0.104
V	0.45	0.60	0.018	0.024

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.71	0.97	0.028	0.038
B	1.88	2.13	0.074	0.084
C	0.71	0.97	0.028	0.038
D	0.81	1.07	0.032	0.042

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
AZ23C2V7-AZ23C39	SOT-23	3000PCS	7"

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