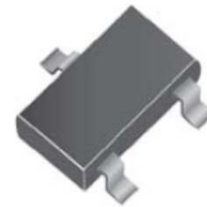


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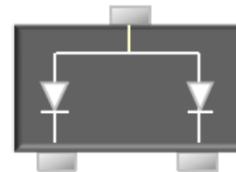
Dual SMD Zener Diode

FEATURES

- Wide zener voltage range selection : 2.7V to 51V
- V_Z Tolerance $\leq \pm 5\%$
- Matte Tin(Sn) lead finish
- Moisture sensitivity: level 1, per J-STD-020
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



SOT-23



MECHANICAL DATA

Case: SOT-23

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - green compound (halogen-free)

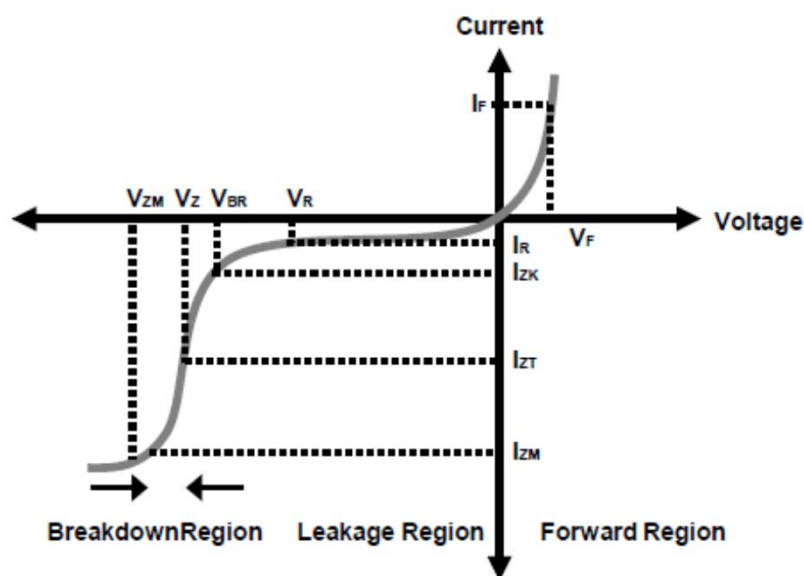
Terminal: Matte tin plated leads, solderable per JESD22-B102

Weight: 8.85 ± 0.5 mg

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Power Dissipation	P_D	300	mW
Thermal Resistance (Junction to Ambient) (Note 1)	$R_{\theta JA}$	420	$^\circ\text{C/W}$
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

Note 1: These ratings are limiting values above which the serviceability of the diode may be impaired.

ZENER I vs. V CHARACTERISTICS



- V_{BR} : Voltage at I_{ZK}
- I_{ZK} : Test current for voltage V_{BR}
- Z_{ZK} : Dynamic impedance at I_{ZK}
- I_{ZT} : Test current for voltage V_Z
- V_Z : Voltage at current I_{ZT}
- Z_{ZT} : Dynamic impedance at I_{ZT}
- I_{ZM} : Maximum steady state current
- V_{ZM} : Voltage at I_{ZM}

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RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

Part Number	Device Marking	V _Z @ I _{ZT} (Volt)			I _{ZT} (mA)	Z _{ZT} @ I _{ZT} (Ω) Max	I _{ZK} (mA)	Z _{ZK} @ I _{ZK} (Ω) Max	I _R @ V _R (μA) Max	V _R (V)
		Min	Nom	Max						
AZ23C2V7	KD1	2.5	2.7	2.9	5	83	1	500	0.1	-
AZ23C3V0	KD2	2.8	3.0	3.2	5	95	1	500	0.1	-
AZ23C3V3	KD3	3.1	3.3	3.5	5	95	1	500	0.1	-
AZ23C3V6	KD4	3.4	3.6	3.8	5	95	1	500	0.1	-
AZ23C3V9	KD5	3.7	3.9	4.1	5	95	1	500	0.1	-
AZ23C4V3	KD6	4.0	4.3	4.6	5	95	1	500	0.1	-
AZ23C4V7	KD7	4.4	4.7	5.0	5	78	1	500	0.1	-
AZ23C5V1	KD8	4.8	5.1	5.4	5	60	1	480	0.1	0.8
AZ23C5V6	KD9	5.2	5.6	6.0	5	40	1	400	0.1	1.0
AZ23C6V2	KDA	5.8	6.2	6.6	5	10	1	200	0.1	2.0
AZ23C6V8	KDB	6.4	6.8	7.2	5	8	1	150	0.1	3.0
AZ23C7V5	KDC	7.0	7.5	7.9	5	7	1	50	0.1	5.0
AZ23C8V2	KDD	7.7	8.2	8.7	5	7	1	50	0.1	6.0
AZ23C9V1	KDE	8.5	9.1	9.6	5	10	1	50	0.1	7.0
AZ23C10	KDF	9.4	10	10.6	5	15	1	70	0.1	7.5
AZ23C11	KDG	10.4	11	11.6	5	20	1	70	0.1	8.5
AZ23C12	KDH	11.4	12	12.7	5	20	1	90	0.1	9.0
AZ23C13	KDI	12.4	13	14.1	5	25	1	110	0.1	10.0
AZ23C15	KDJ	13.8	15	15.6	5	30	1	110	0.1	11.0
AZ23C16	KDK	15.3	16	17.1	5	40	1	170	0.1	12.0
AZ23C18	KDL	16.8	18	19.1	5	50	1	170	0.1	14.0
AZ23C20	KDM	18.8	20	21.2	5	50	1	220	0.1	15.0
AZ23C22	KDN	20.8	22	23.3	5	55	1	220	0.1	17.0
AZ23C24	KDO	22.8	24	25.6	5	80	1	220	0.1	18.0
AZ23C27	KDP	25.1	27	28.9	5	80	1	250	0.1	20.0
AZ23C30	KDQ	28	30	32	5	80	1	250	0.1	22.5
AZ23C33	KDR	31	33	35	5	80	1	250	0.1	25.0
AZ23C36	KDS	34	36	38	5	90	1	250	0.1	27.0
AZ23C39	KDT	37	39	41	5	90	1	300	0.1	29.0
AZ23C43	KDU	40	43	46	5	100	1	700	0.1	32.0
AZ23C47	KDV	44	47	50	5	100	1	750	0.1	35.0
AZ23C51	KDW	48	51	54	5	100	1	750	0.1	38.0

- Note:
1. The zener Voltage (V_Z) is tested under pulse condition of 5ms.
 2. The device numbers listed have a standard tolerance on the nominal zener voltage of $\leq \pm 5\%$.
 3. For detailed information on price, availability and delivery of nominal zener voltages between the voltages shown and tighter voltage tolerances, contact your nearest Taiwan Semiconductor representative.

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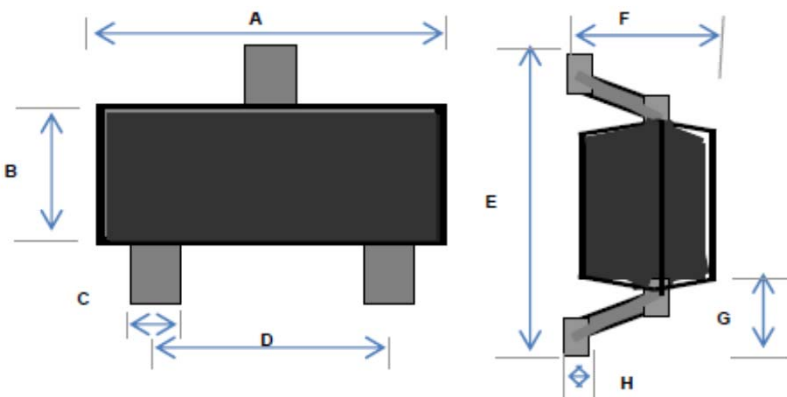
ORDERING INFORMATION					
PART NO.	MANUFACTURE CODE	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
AZ23Cxx (Note 1)	(Note 2)	RF	Suffix "G"	SOT-23	3K / 7" Reel

Note 1: "xx" defines voltage from 2.7V (AZ23C2V7) to 51V (AZ23C51)

Note 2: Manufacture special control, if empty means no special control requirement.

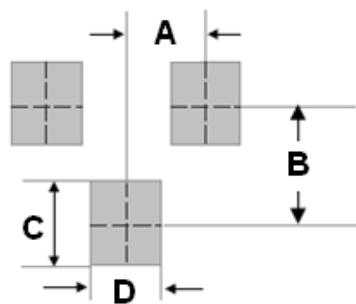
EXAMPLE					
PREFERRED P/N	PART NO.	MANUFACTURE CODE	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
AZ23C51 RFG	AZ23C51		RF	G	Green compound
AZ23C51-D0 RFG	AZ23C51	D0	RF	G	Green compound

PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.70	3.10	0.106	0.122
B	1.10	1.50	0.043	0.059
C	0.30	0.51	0.012	0.020
D	1.78	2.04	0.070	0.080
E	2.10	2.64	0.083	0.104
F	0.89	1.30	0.035	0.051
G	0.55 REF		0.022 REF	
H	0.10 REF		0.004 REF	

SUGGEST PAD LAYOUT



DIM.	Unit (mm)	Unit (inch)
A	0.95	0.037
B	2.00	0.079
C	0.90	0.035
D	0.80	0.031

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