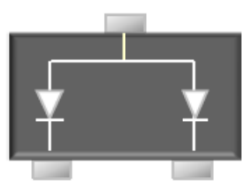
Small Signal Product

Dual SMD Zener Diode

FEATURES

- Wide zener voltage range selection : 2.7V to 51V
- V_Z Tolerance ≦ ± 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



Pb-Free

RoHS COMPLIANT

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)

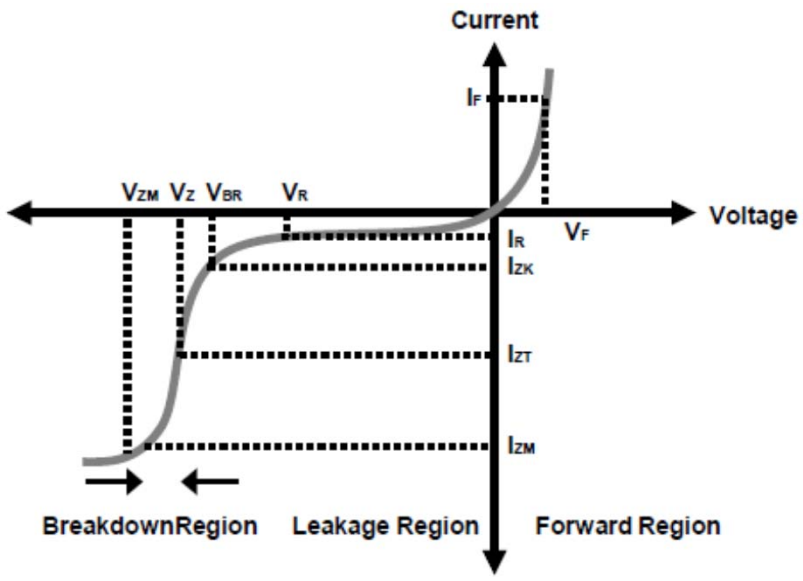
Terminal: Matte tin plated leads, solderable per JESD22-B102

Weight: 8.85 ± 0.5 mg

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°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	°C/W
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°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 nomial zener voltage of ≦± 5%.

3. For detailed information on price, availability and delivery of nomial zener voltages between the voltages shown and tighter voltage tolerances, contact your nearest Taiwan Semiconductor representative.

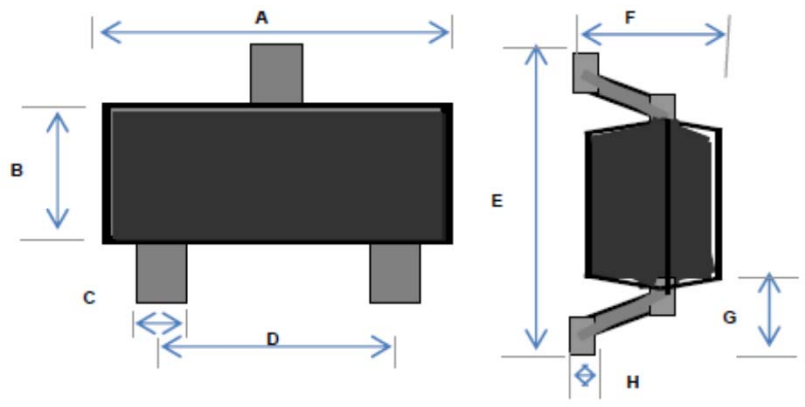
ORDERING INFORMATION					
PART NO.	MANUFACTURE CODE	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
AZ23Cxx (Note 1)	(Note 2)	RF	Suffix "G"	SOT-23	3K / 7" Reel

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

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

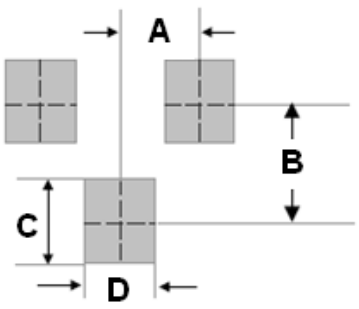
EXAMPLE					
PREFERRED P/N	PART NO.	MANUFACTURE CODE	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
AZ23C51 RFG	AZ23C51		RF	G	Green compound
AZ23C51-D0 RFG	AZ23C51	D0	RF	G	Green compound

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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