



# THE DATASHEET OF SMAJ4738A-TP



## Features

- For Surface Mount Applications
- VZ – Tolerance:  $\pm 5\%$
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note 2) ("P" Suffix Designates Compliant. See Ordering Information)

## Maximum Ratings

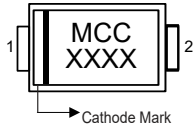
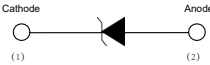
- Operating Junction Temperature Range:  $-65^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Storage Temperature Range:  $-65^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Thermal Resistance :  $100^{\circ}\text{C/W}$  Junction to Ambient
- Thermal Resistance :  $75^{\circ}\text{C/W}$  Junction to Lead

Parameter	Symbol	Rating	Conditions
Power Dissipation	$P_D$	1.0W	$T_A \leq 50^{\circ}\text{C}$
Zener Current	$I_Z$	$P_d/V_z$ mA	
Maximum Forward Voltage	$V_F$	1.2V	$I_F = 100\text{mA}$

Note:

1. Halogen free "Green" products are defined as those which contain  $<900\text{ppm}$  bromine,  $<900\text{ppm}$  chlorine ( $<1500\text{ppm}$  total Br + Cl) and  $<1000\text{ppm}$  antimony compounds.
2. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.

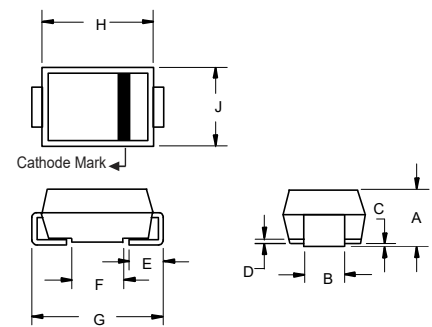
## Internal Structure

Description	Simplified outline	Graphic symbol
Uni-directional		

XXXX = Marking code

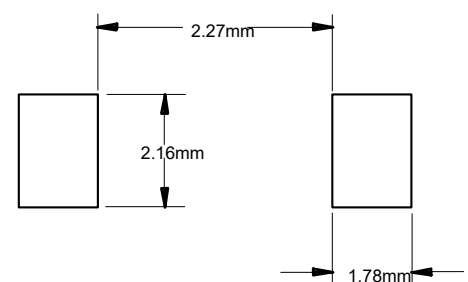
# 1.0 Watt Surface Mount Silicon Zener Diodes 5.1V to 100V

## SMA (DO-214AC) LEAD FRAME



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.075	0.096	1.90	2.44	
B	0.050	0.064	1.27	1.63	
C	0.002	0.008	0.051	0.203	
D	---	0.020	---	0.51	
E	0.030	0.060	0.76	1.52	
F	0.065	0.091	1.65	2.32	
G	0.189	0.220	4.80	5.59	
H	0.157	0.187	4.00	4.75	
J	0.090	0.115	2.25	2.92	

## SUGGESTED SOLDER PAD LAYOUT



**Electrical Characteristics @ 25°C Unless Otherwise Specified**

Part Number	Nominal Zener Voltage			Test Current	Maximum Dynamic Impedance Resistance			Maximum Reverse leakage Current		Maximum DC Zener Current	Marking Code
	VZ@IZT				IZT	ZZT at IZT	ZZK at IZK	IZK	IR		
	Min(V)	Nom(V)	Max(V)	mA	Ω	Ω	mA	μA	V	mA	
SMAJ4733A	4.85	5.1	5.36	49	7	550	1	10	1.0	177	733A
SMAJ4734A	5.32	5.6	5.88	45	5	600	1	10	2.0	161	734A
SMAJ4735A	5.89	6.2	6.51	41	2	700	1	10	3.0	146	735A
SMAJ4736A	6.46	6.8	7.14	37	3.5	700	1	10	4.0	133	736A
SMAJ4737A	7.13	7.5	7.88	34	4	700	0.5	10	5.0	121	737A
SMAJ4738A	7.79	8.2	8.61	31	4.5	700	0.5	10	6.0	110	738A
SMAJ4739A	8.65	9.1	9.56	28	5	700	0.5	10	7.0	100	739A
SMAJ4740A	9.50	10.0	10.50	25	7	700	0.25	10	7.6	91	740A
SMAJ4741A	10.45	11.0	11.55	23	8	700	0.25	5	8.4	83	741A
SMAJ4742A	11.40	12.0	12.60	21	9	700	0.25	5	9.1	76	742A
SMAJ4743A	12.35	13.0	13.65	19	10	700	0.25	5	9.9	69	743A
SMAJ4744A	14.25	15.0	15.75	17	14	700	0.25	5	11.4	61	744A
SMAJ4745A	15.20	16.0	16.80	15.5	16	700	0.25	5	12.2	57	745A
SMAJ4746A	17.10	18.0	18.90	14.0	20	750	0.25	5	13.7	50	746A
SMAJ4747A	19.00	20.0	21.00	12.5	22	750	0.25	5	15.2	45	747A
SMAJ4748A	20.90	22.0	23.10	11.5	23	750	0.25	5	16.7	41	748A
SMAJ4749A	22.80	24.0	25.20	10.5	25	750	0.25	5	18.2	38	749A
SMAJ4750A	25.65	27.0	28.35	9.5	35	750	0.25	5	20.6	34	750A
SMAJ4751A	28.50	30.0	31.50	8.5	40	1000	0.25	5	22.8	30	751A
SMAJ4752A	31.35	33.0	34.65	7.5	45	1000	0.25	5	25.1	27	752A
SMAJ4753A	34.20	36.0	37.80	7	50	1000	0.25	5	27.4	25	753A
SMAJ4754A	37.05	39.0	40.95	6.5	60	1000	0.25	5	29.7	23	754A
SMAJ4755A	40.85	43.0	45.15	6	70	1500	0.25	5	32.7	22	755A
SMAJ4756A	44.65	47.0	49.35	5.5	80	1500	0.25	5	35.8	19	756A
SMAJ4757A	48.45	51.0	53.55	5	95	1500	0.25	5	38.8	18	757A
SMAJ4758A	53.20	56.0	58.80	4.5	110	2000	0.25	5	42.6	16	758A
SMAJ4759A	58.90	62.0	65.10	4	125	2000	0.25	5	47.1	14	759A
SMAJ4760A	64.60	68.0	71.40	3.7	150	2000	0.25	5	51.7	13	760A
SMAJ4761A	71.25	75.0	78.75	3.3	175	2000	0.25	5	56.0	12	761A
SMAJ4762A	77.90	82.0	86.10	3	200	3000	0.25	5	62.2	11	762A
SMAJ4763A	86.45	91.0	95.55	2.8	250	3000	0.25	5	69.2	10	763A
SMAJ4764A	95.00	100.0	105.00	2.5	350	3000	0.25	5	76.0	9	764A

**Curve Characteristics**

Fig. 1 - Pulse Derating Curve

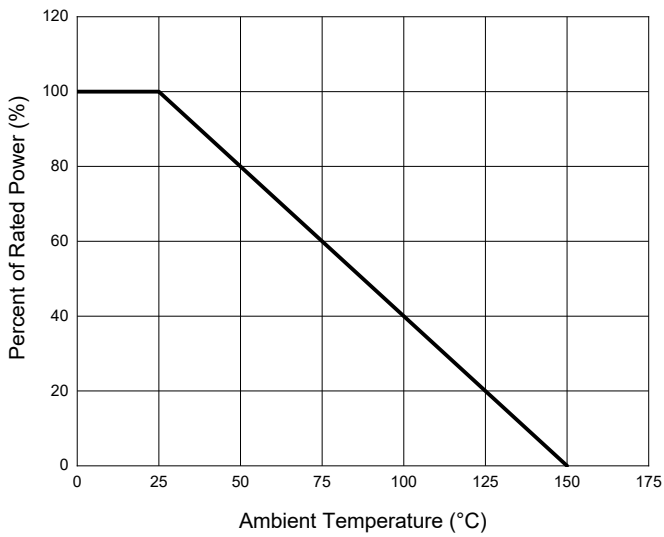


Fig. 2 - Typical Zener Breakdown Characteristics

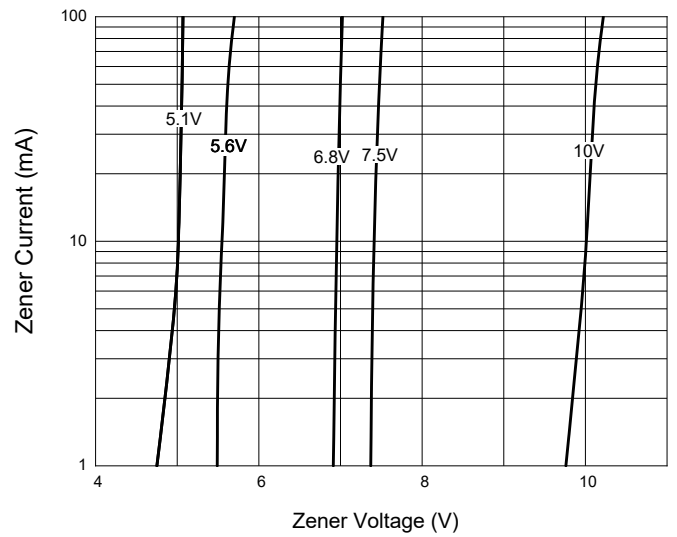


Fig. 3- Typical Zener Breakdown Characteristics

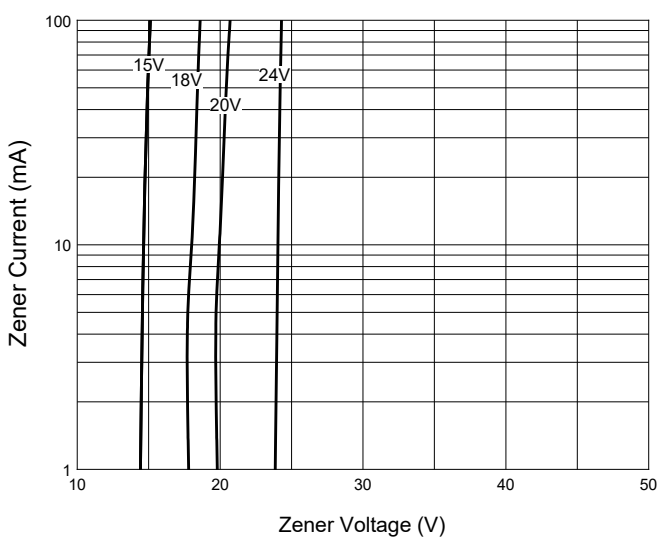


Fig. 4- Typical Zener Breakdown Characteristics

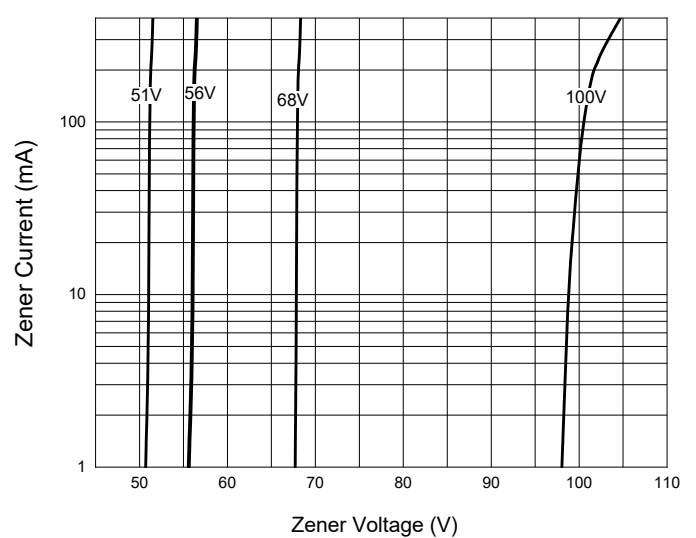


Fig. 5- Typical Forward Characteristics



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:7.5Kpcs/Reel

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