



SMAJ4728A - SMAJ4764A

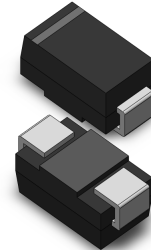
SURFACE MOUNT SILICON ZENER DIODES

VOLTAGE RANGE: 3.3 - 100V

POWER: 1.0Watts

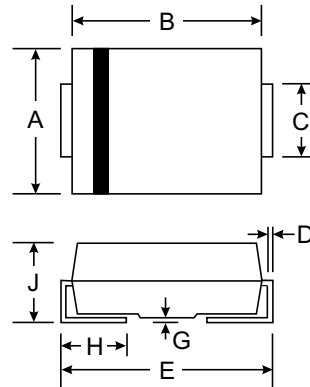
Features

- Halogen free available upon request by adding suffix "-HF"
- Low Zener Impedance
- Low Regulation Factor
- V_z – tolerance: $\pm 5\%$
- For Surface Mount Applications
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/Rohs Compliant



Mechanical Data

- Case: SMA/DO-214AC, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.064 grams (approx.)



SMA(DO-214AC)		
Dim	Min	Max
A	2.29	2.92
B	4.00	4.60
C	1.27	1.63
D	0.15	0.31
E	4.80	5.59
G	0.10	0.20
H	0.76	1.52
J	2.01	2.62
All Dimensions in mm		



Maximum Ratings $T_A = 25$

Parameters	Test Conditions	Symbol	Value	Unit
Power Dissipation	$T_{amb} \leq 50^\circ\text{C}$	P_d	1	W
Z-Current		I_z	P_d/V_z	mA
Operating Junction Temperature		T_j	-65~+150	$^\circ\text{C}$
Storage Temperature		T_{stg}	-65~+150	$^\circ\text{C}$
Thermal Resistance	FR-4 Board, MCC's Suggested Solder Pad	$R_{\theta ja}$	100	K/W
		$R_{\theta jL}$	75	
Max. Forward Voltage Drop	$I_F = 100\text{mA}$	V_f	1.2	V



MCC PART NUMBER	ZENER VOLTAGE V_z	TEST CURRENT I_{ZT}	MAXIMUM DYNAMIC IMPEDANCE $Z_{ZT} @ I_{ZT}$	MAXIMUM REVERSE CURRENT I_r	REVERSE VOLTAGE V_R	KNEE IMPEDANCE Z_{ZK}	KNEE CURRENT I_{ZK}
	VOLTS	mA	OHMS	μA	VOLTS	OHMS	mA
SMAJ4728A	3.3	76	10	100	1	400	1
SMAJ4729A	3.6	69	10	100	1	400	1
SMAJ4730A	3.9	64	9	50	1	400	1
SMAJ4731A	4.3	58	9	10	1	400	1
SMAJ4732A	4.7	53	8	10	1	500	1
SMAJ4733A	5.1	49	7	10	1	550	1
SMAJ4734A	5.6	45	5	10	2	600	1
SMAJ4735A	6.2	41	2	10	3	700	1
SMAJ4736A	6.8	37	3.5	10	4	700	1
SMAJ4737A	7.5	34	4	10	5	700	0.5
SMAJ4738A	8.2	31	4.5	10	6	700	0.5
SMAJ4739A	9.1	28	5	10	7	700	0.5
SMAJ4740A	10	25	7	10	7.6	700	0.25
SMAJ4741A	11	23	8	5	8.4	700	0.25
SMAJ4742A	12	21	9	5	9.1	700	0.25
SMAJ4743A	13	19	10	5	9.9	700	0.25
SMAJ4744A	15	17	14	5	11.4	700	0.25
SMAJ4745A	16	15.5	16	5	12.2	700	0.25
SMAJ4746A	18	14	20	5	13.7	750	0.25
SMAJ4747A	20	12.5	22	5	15.2	750	0.25
SMAJ4748A	22	11.5	23	5	16.7	750	0.25
SMAJ4749A	24	10.5	25	5	18.2	750	0.25
SMAJ4750A	27	9.5	35	5	20.6	750	0.25
SMAJ4751A	30	8.5	40	5	22.8	1000	0.25
SMAJ4752A	33	7.5	45	5	25.1	1000	0.25
SMAJ4753A	36	7	50	5	27.4	1000	0.25
SMAJ4754A	39	6.5	60	5	29.7	1000	0.25
SMAJ4755A	43	6	70	5	32.7	1500	0.25
SMAJ4756A	47	5.5	80	5	35.8	1500	0.25
SMAJ4757A	51	5	95	5	38.8	1500	0.25
SMAJ4758A	56	4.5	110	5	42.6	2000	0.25
SMAJ4759A	62	4	125	5	47.1	2000	0.25
SMAJ4760A	68	3.7	150	5	51.7	2000	0.25
SMAJ4761A	75	3.3	175	5	56	2000	0.25
SMAJ4762A	82	3	200	5	62.2	3000	0.25
SMAJ4763A	91	2.8	250	5	69.2	3000	0.25
SMAJ4764A	100	2.5	350	5	76	3000	0.25



Characteristics ($T_j=25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter
V_Z	Reverse zener voltage @ I_{ZT}
I_{ZT}	Reverse current
Z_{ZT}	Maximum zener impedance @ I_{ZT}
I_{ZK}	Reverse current
Z_{ZK}	Maximum zener impedance @ I_{ZK}
I_R	Reverse leakage current @ V_R
V_R	Breakdown voltage
I_F	Forward current
V_F	Forward voltage @ I_F

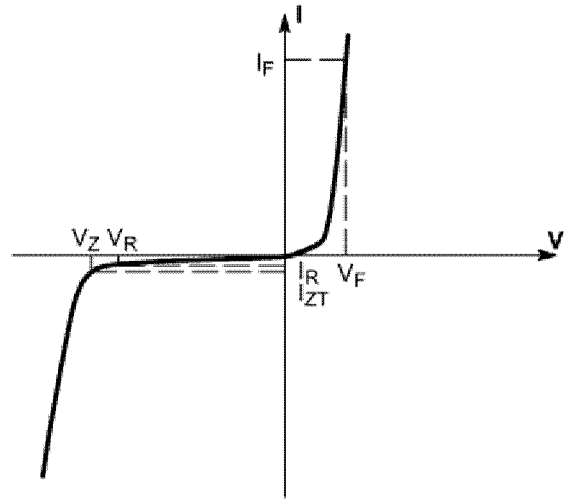


Figure 1. Zener voltage regulator

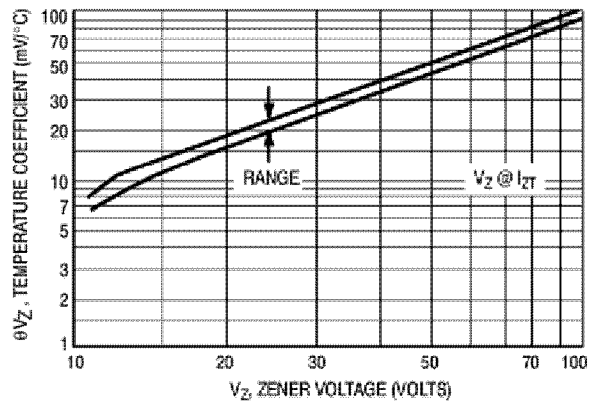
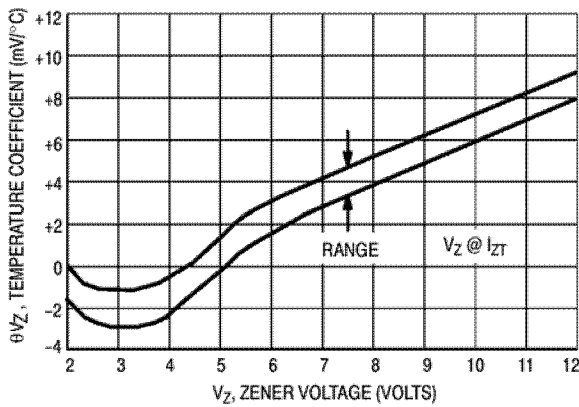


Figure 2. Temperature coefficients

(-55°C to $+150^\circ\text{C}$ temperature range; 90% of the units are in the ranges indicated)

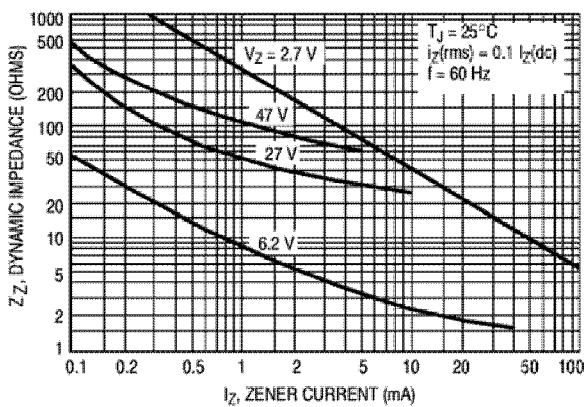


Figure 3. Effect of zener current on zener impedance

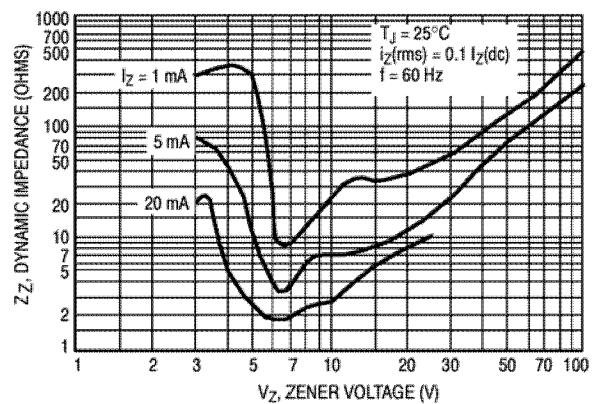


Figure 4. Effect of zener voltage on zener impedance