



Micro Commercial Components

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# SMAJ4728A THRU SMAJ4761A

## Features

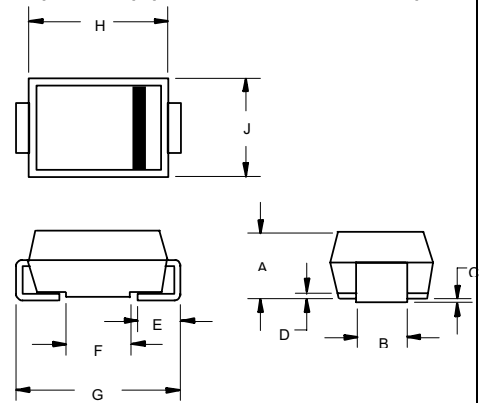
- Low Zener Impedance
- Low Regulation Factor
- $V_z$  – tolerance:  $\pm 5\%$
- For Surface Mount Applications
- Case Material : Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL rating1
- Lead Free Finish/Rohs Compliant (Note 1) ("P" Suffix designates Compliant. See ordering information)

**1 Watt  
 Zener Diode  
 3.3 to 75 Volts**

Maximum Ratings@25°C Unless Otherwise Specified

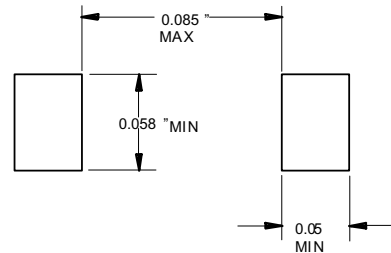
Parameters	Test Conditions	Symbol	Value	Unit
Power Dissipation	$T_{amb} \leq 50^\circ C$	$P_d$	1	W
Z-Current		$I_z$	$P_d/V_z$	mA
Operating Junction Temperature		$T_j$	-65~+200	$^\circ C$
Storage Temperature		$T_{stg}$	-65~+175	$^\circ C$
Thermal Resistance Junction to Ambient		$R_{\theta ja}$	100	K/W
Max. Forward Voltage Drop	$I_F=100mA$	$V_f$	1.2	V

## DO-214AC (SMA)( LEAD FRAME)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.079	.096	2.00	2.44	
B	.050	.064	1.27	1.63	
C	.002	.008	.05	.20	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
F	.065	.091	1.65	2.32	
G	.189	.220	4.80	5.59	
H	.157	.181	4.00	4.60	
J	.090	.115	2.25	2.92	

### SUGGESTED SOLDER PAD LAYOUT



Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7.

**ELECTRICAL CHARACTERISTICS @25°C**

MCC PART NUMBER	ZENER VOLTAGE $V_Z(1)$ VOLTS	TEST CURRENT $I_{ZT}$ mA	MAXIMUM DYNAMIC IMPEDANCE $Z_{ZT} @ I_{ZT}$ OHMS	MAXIMUM REVERSE CURRENT $I_R @ V_R$ $\mu A$	TEST VOLTAGE $V_R$ VOLTS	MAXIMUM KNEE IMPEDANCE $Z_{ZK} @ I_{ZK}$ OHMS	TEST CURRENT $I_{ZK}$ mA	DEVICE MARKING
SMAJ4728A	3.3	76	10	100	1	400	1.0	728A
SMAJ4729A	3.6	69	10	100	1	400	1.0	729A
SMAJ4730A	3.9	64	9	50	1	400	1.0	730A
SMAJ4731A	4.3	58	9	10	1	400	1.0	731A
SMAJ4732A	4.7	53	8	10	1	500	1.0	732A
SMAJ4733A	5.1	49	7	10	1	550	1.0	733A
SMAJ4734A	5.6	45	5	10	2	600	1.0	734A
SMAJ4735A	6.2	41	2	10	3	700	1.0	735A
SMAJ4736A	6.8	37	3.5	10	4	700	1.0	736A
SMAJ4737A	7.5	34	4.0	10	5	700	0.5	737A
SMAJ4738A	8.2	31	4.5	10	6	700	0.5	738A
SMAJ4739A	9.1	28	5.0	10	7	700	0.5	739A
SMAJ4740A	10	25	7	10	7.6	700	0.25	740A
SMAJ4741A	11	23	8	5	8.4	700	0.25	741A
SMAJ4742A	12	21	9	5	9.1	700	0.25	742A
SMAJ4743A	13	19	10	5	9.9	700	0.25	743A
SMAJ4744A	15	17	14	5	11.4	700	0.25	744A
SMAJ4745A	16	15.5	16	5	12.2	700	0.25	745A
SMAJ4746A	18	14	20	5	13.7	750	0.25	746A
SMAJ4747A	20	12.5	22	5	15.2	750	0.25	747A
SMAJ4748A	22	11.5	23	5	16.7	750	0.25	748A
SMAJ4749A	24	10.5	25	5	18.2	750	0.25	749A
SMAJ4750A	27	9.5	35	5	20.6	750	0.25	750A
SMAJ4751A	30	8.5	40	5	22.8	1000	0.25	751A
SMAJ4752A	33	7.5	45	5	25.1	1000	0.25	752A
SMAJ4753A	36	7.0	50	5	27.4	1000	0.25	753A
SMAJ4754A	39	6.5	60	5	29.7	1000	0.25	754A
SMAJ4755A	43	6.0	70	5	32.7	1500	0.25	755A
SMAJ4756A	47	5.5	80	5	35.8	1500	0.25	756A
SMAJ4757A	51	5.0	95	5	38.8	1500	0.25	757A
SMAJ4758A	56	4.5	110	5	42.6	2000	0.25	758A
SMAJ4759A	62	4.0	125	5	47.1	2000	0.25	759A
SMAJ4760A	68	3.7	150	5	51.7	2000	0.25	760A
SMAJ4761A	75	3.3	175	5	56.0	2000	0.25	761A

1) Based on DC-measurement at thermal equilibrium while maintaining the lead temperature( $T_L$ ) at 30°C, 9.5mm(3/8") from the diode body.

**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 @ $I_F$

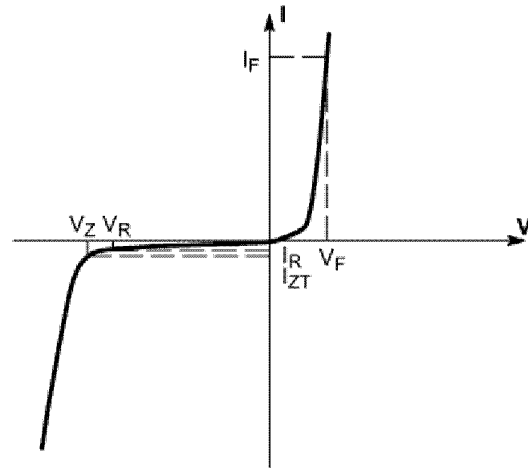


Figure 1. Zener voltage regulator

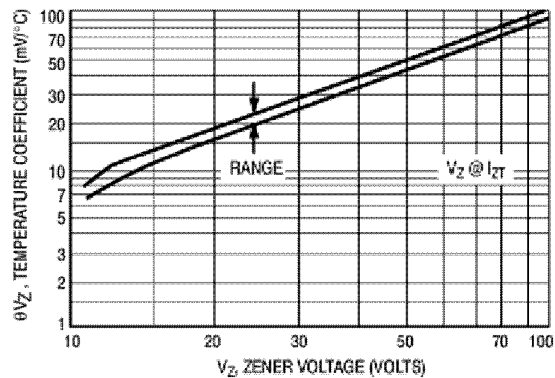
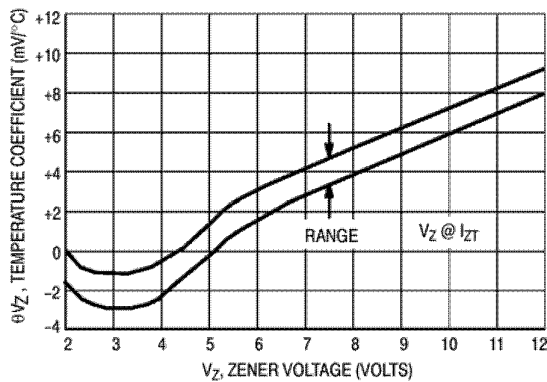


Figure 2. Temperature coefficients

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

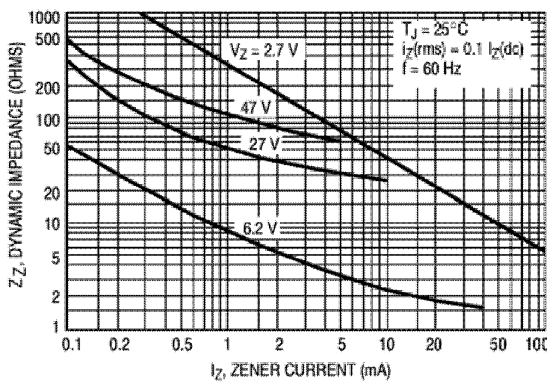


Figure 3. Effect of zener current on zener impedance

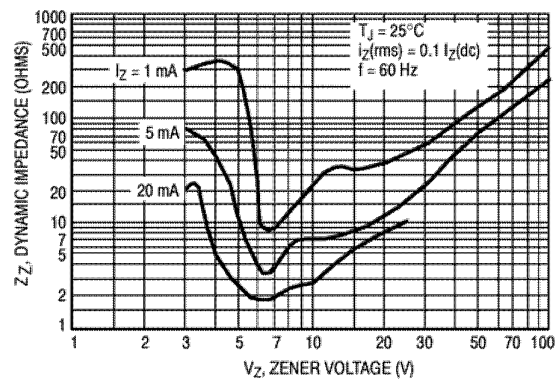


Figure 4. Effect of zener voltage on zener impedance



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## Ordering Information

Device (Part Number)-TP	Packing Tape&Reel;7.5Kpcs/Reel
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