



Micro Commercial Components



Micro Commercial Components  
 20736 Marilla Street Chatsworth  
 CA 91311  
 Phone: (818) 701-4933  
 Fax: (818) 701-4939

# SMAJ4728A THRU SMAJ4764A

## Features

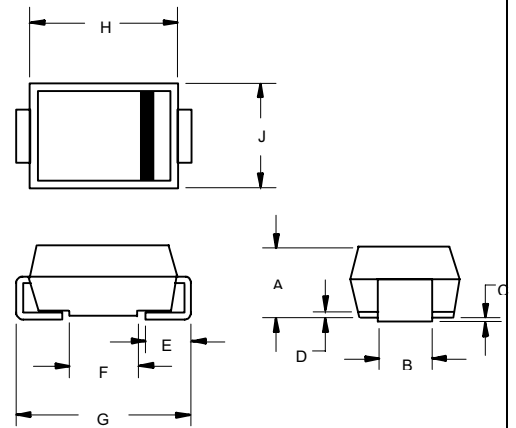
- Halogen free available upon request by adding suffix "-HF"
- Low Zener Impedance
- Low Regulation Factor
- $V_Z$  – tolerance:  $\pm 5\%$
- For Surface Mount Applications
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)

**1 Watt  
 Zener Diode  
 3.3 to 100 Volts**

### Maximum Ratings @25°C Unless Otherwise Specified

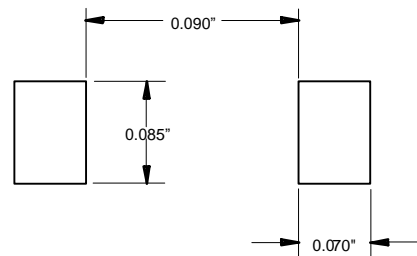
Parameters	Test Conditions	Symbol	Value	Unit
Power Dissipation	$T_{amb} \leq 50^\circ C$	$P_d$	1	W
Z-Current		$I_z$	$P_d/V_z$	mA
Operating Junction Temperature		$T_j$	-65~+150	$^\circ C$
Storage Temperature		$T_{stg}$	-65~+150	$^\circ C$
Thermal Resistance	FR-4 Board, MCC's Suggested Solder Pad	$R_{\theta ja}$	100	K/W
		$R_{\theta jL}$	75	
Max. Forward Voltage Drop	$I_F = 100mA$	$V_f$	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 $V_z$	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 $I_{zk}$	DEVICE MARKING
	VOLTS	mA	OHMS	$\mu$ A	VOLTS	OHMS	mA	
SMAJ4728A	3.3	76	10	100	1	400	1	728A
SMAJ4729A	3.6	69	10	100	1	400	1	729A
SMAJ4730A	3.9	64	9	50	1	400	1	730A
SMAJ4731A	4.3	58	9	10	1	400	1	731A
SMAJ4732A	4.7	53	8	10	1	500	1	732A
SMAJ4733A	5.1	49	7	10	1	550	1	733A
SMAJ4734A	5.6	45	5	10	2	600	1	734A
SMAJ4735A	6.2	41	2	10	3	700	1	735A
SMAJ4736A	6.8	37	3.5	10	4	700	1	736A
SMAJ4737A	7.5	34	4	10	5	700	0.5	737A
SMAJ4738A	8.2	31	4.5	10	6	700	0.5	738A
SMAJ4739A	9.1	28	5	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	50	5	27.4	1000	0.25	753A
SMAJ4754A	39	6.5	60	5	29.7	1000	0.25	754A
SMAJ4755A	43	6	70	5	32.7	1500	0.25	755A
SMAJ4756A	47	5.5	80	5	35.8	1500	0.25	756A
SMAJ4757A	51	5	95	5	38.8	1500	0.25	757A
SMAJ4758A	56	4.5	110	5	42.6	2000	0.25	758A
SMAJ4759A	62	4	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	2000	0.25	761A
SMAJ4762A	82	3	200	5	62.2	3000	0.25	762A
SMAJ4763A	91	2.8	250	5	69.2	3000	0.25	763A
SMAJ4764A	100	2.5	350	5	76	3000	0.25	764A

**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 @ $I_F$

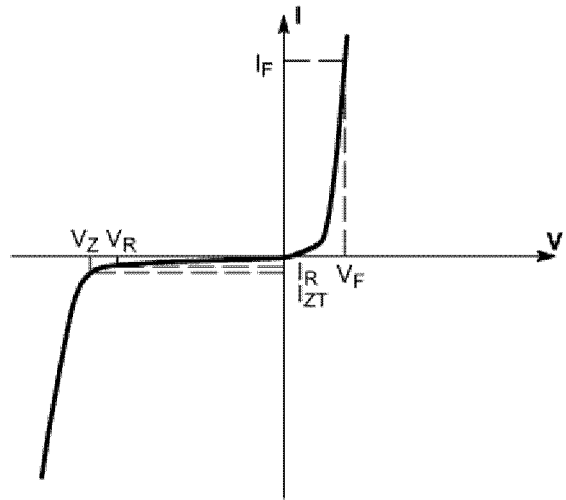


Figure 1. Zener voltage regulator

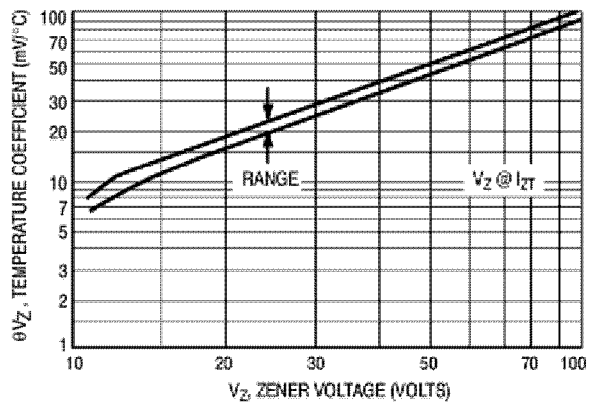
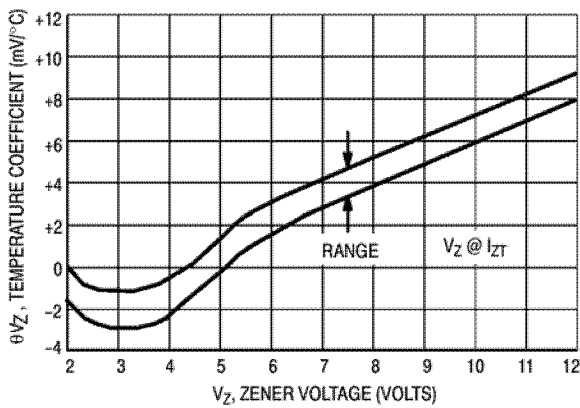


Figure 2. Temperature coefficients

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

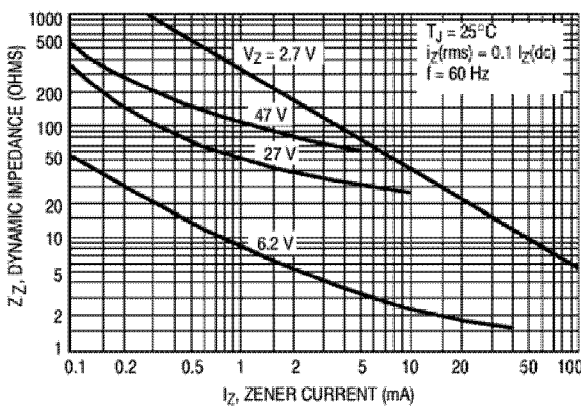


Figure 3. Effect of zener current on zener impedance

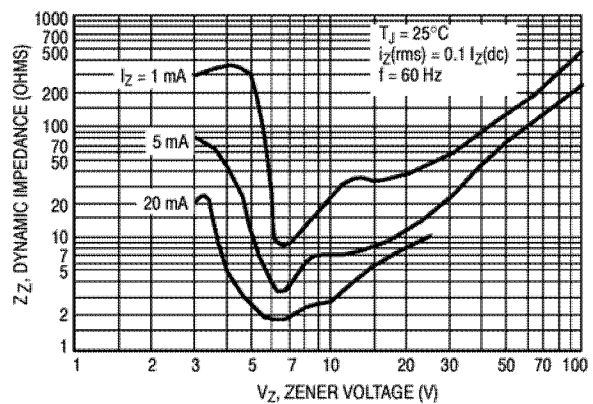


Figure 4. Effect of zener voltage on zener impedance



Micro Commercial Components

### Ordering Information :

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

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

#### \*\*\*IMPORTANT NOTICE\*\*\*

**Micro Commercial Components Corp.** reserves the right to make changes without further notice to any product herein to make corrections, modifications, enhancements, improvements, or other changes. **Micro Commercial Components Corp.** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp.** and all the companies whose products are represented on our website, harmless against all damages.

#### \*\*\*LIFE SUPPORT\*\*\*

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

#### \*\*\*CUSTOMER AWARENESS\*\*\*

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.