



ZIBO MICRO COMMERCIAL  
COMPONENTS CORP.



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# SMAJ4728A THRU SMAJ4764A

## Features

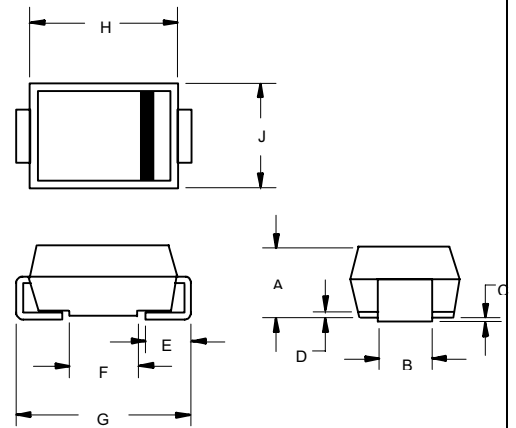
- Halogen free available upon request by adding suffix "-HF"
- Low Zener Impedance
- Low Regulation Factor
- $V_z$  – tolerance:  $\pm 5\%$
- For Surface Mount Applications
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix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

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

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

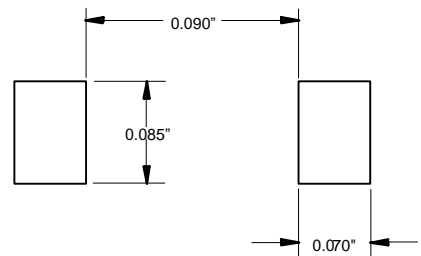
## 1 Watt Zener Diode 3.3 to 100 Volts

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



DIM	DIMENSIONS				NOTE
	INCHES		MM		
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.

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## ELECTRICAL CHARACTERISTICS @25°C

MCC PART NUMBER	ZENER VOLTAGE V <sub>Z</sub>	TEST CURRENT I <sub>ZT</sub>	MAXIMUM DYNAMIC IMPEDANCE Z <sub>ZT</sub> @I <sub>ZT</sub>	MAXIMUM REVERSE CURRENT I <sub>R</sub>	REVERSE VOLTAGE V <sub>R</sub>	KNEE IMPEDANCE Z <sub>ZK</sub>	KNEE CURRENT I <sub>ZK</sub>	DEVICE MARKING
	VOLTS	mA	OHMS	μA	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 @ $I_F$

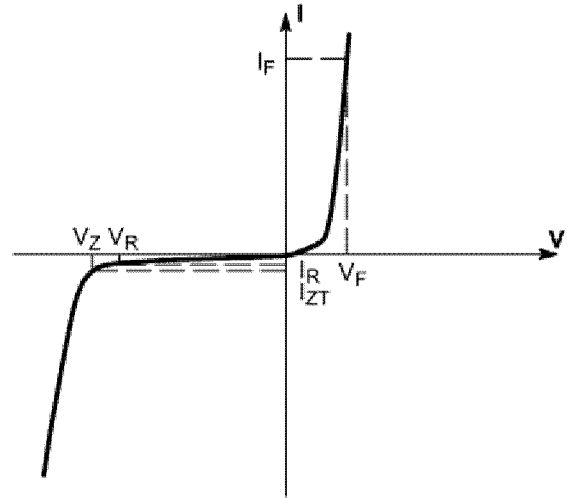


Figure 1. Zener voltage regulator

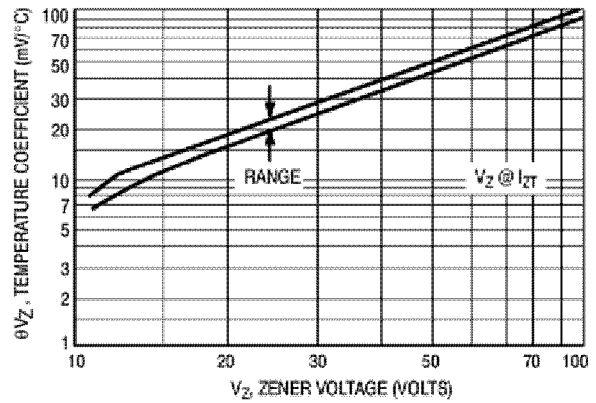
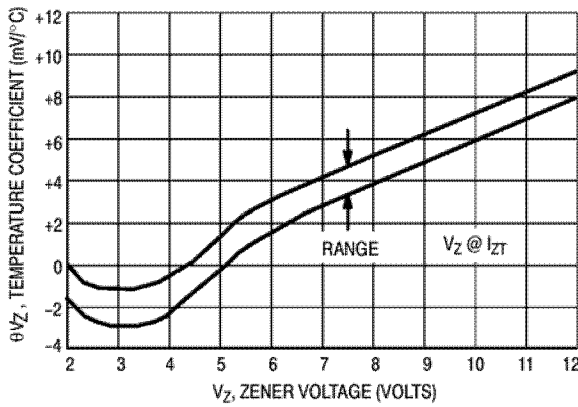


Figure 2. Temperature coefficients

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

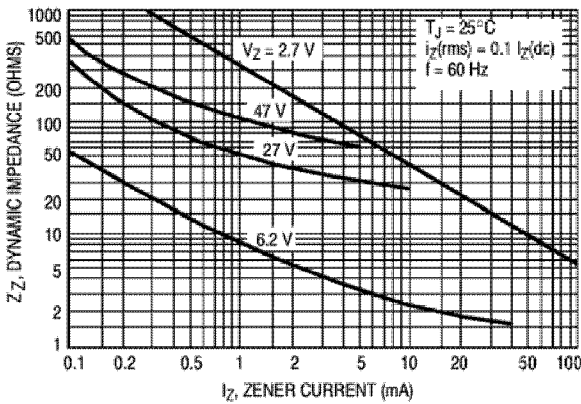


Figure 3. Effect of zener current on zener impedance

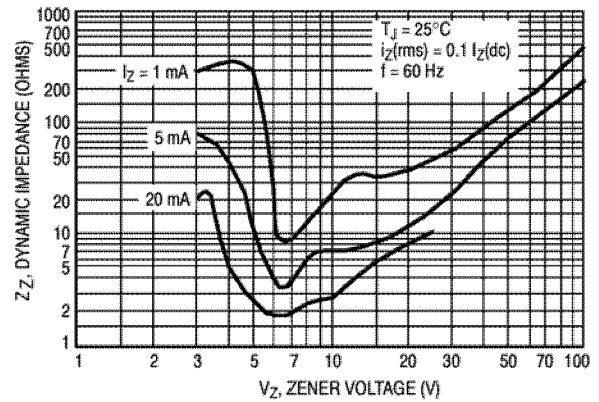


Figure 4. Effect of zener voltage on zener impedance



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### Ordering Information :

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

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

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

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

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

Counterfeiting of semiconductor parts is a growing problem in the industry. ZiBo Micro Commercial Components Corp. is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. ZBMCC strongly encourages customers to purchase ZBMCC parts either directly from ZBMCC or from Authorized ZBMCC Distributors who are listed by country on our web page cited below. Products customers buy either from ZBMCC directly or from Authorized ZBMCC Distributors are genuine parts, have full traceability, meet ZBMCC's quality standards for handling and storage. ZBMCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources. ZBMCC 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.