



ZIBO MICRO COMMERCIAL COMPONENTS CORP.



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**SMAJ4728A-TPX01  
THRU  
SMAJ4764A-TPX01**

**Features**

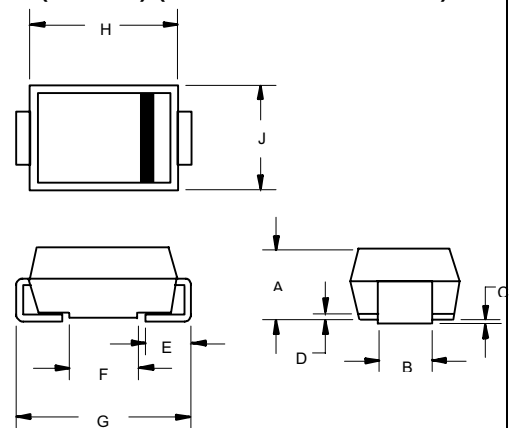
- Low Zener Impedance
- Low Regulation Factor
- $V_z$  – tolerance: A suffix  $\pm 5\%$ , B suffix  $\pm 2\%$ .
- For Surface Mount Applications
- Glass Passivated Junction
- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

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

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

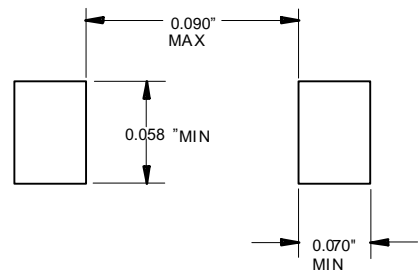
Parameters	Test Conditions	Symbol	Value	Unit
Power Dissipation	$T_{amb} \leq 50^\circ C$	$P_d$	1	W
Z-Current		$I_z$	$P_d/V_z$	mA
Operating Junction Temperature		$T_j$	-65--+150	$^\circ C$
Storage Temperature		$T_{stg}$	-65--+150	$^\circ C$
Thermal Resistance	FR-4 Board, MCC's Suggested Solder Pad	$R_{\theta ja}$	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 $V_z(1)$ 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-TPX01	3.3	76	10	100	1	400	1.0	728A
SMAJ4729A-TPX01	3.6	69	10	100	1	400	1.0	729A
SMAJ4730A-TPX01	3.9	64	9	50	1	400	1.0	730A
SMAJ4731A-TPX01	4.3	58	9	10	1	400	1.0	731A
SMAJ4732A-TPX01	4.7	53	8	10	1	500	1.0	732A
SMAJ4733A-TPX01	5.1	49	7	10	1	550	1.0	733A
SMAJ4734A-TPX01	5.6	45	5	10	2	600	1.0	734A
SMAJ4735A-TPX01	6.2	41	2	10	3	700	1.0	735A
SMAJ4736A-TPX01	6.8	37	3.5	10	4	700	1.0	736A
SMAJ4737A-TPX01	7.5	34	4.0	10	5	700	0.5	737A
SMAJ4738A-TPX01	8.2	31	4.5	10	6	700	0.5	738A
SMAJ4739A-TPX01	9.1	28	5.0	10	7	700	0.5	739A
SMAJ4740A-TPX01	10	25	7	10	7.6	700	0.25	740A
SMAJ4741A-TPX01	11	23	8	5	8.4	700	0.25	741A
SMAJ4742A-TPX01	12	21	9	5	9.1	700	0.25	742A
SMAJ4743A-TPX01	13	19	10	5	9.9	700	0.25	743A
SMAJ4744A-TPX01	15	17	14	5	11.4	700	0.25	744A
SMAJ4745A-TPX01	16	15.5	16	5	12.2	700	0.25	745A
SMAJ4746A-TPX01	18	14	20	5	13.7	750	0.25	746A
SMAJ4747A-TPX01	20	12.5	22	5	15.2	750	0.25	747A
SMAJ4748A-TPX01	22	11.5	23	5	16.7	750	0.25	748A
SMAJ4749A-TPX01	24	10.5	25	5	18.2	750	0.25	749A
SMAJ4750A-TPX01	27	9.5	35	5	20.6	750	0.25	750A
SMAJ4751A-TPX01	30	8.5	40	5	22.8	1000	0.25	751A
SMAJ4752A-TPX01	33	7.5	45	5	25.1	1000	0.25	752A
SMAJ4753A-TPX01	36	7.0	50	5	27.4	1000	0.25	753A
SMAJ4754A-TPX01	39	6.5	60	5	29.7	1000	0.25	754A
SMAJ4755A-TPX01	43	6.0	70	5	32.7	1500	0.25	755A
SMAJ4756A-TPX01	47	5.5	80	5	35.8	1500	0.25	756A
SMAJ4757A-TPX01	51	5.0	95	5	38.8	1500	0.25	757A
SMAJ4758A-TPX01	56	4.5	110	5	42.6	2000	0.25	758A
SMAJ4759A-TPX01	62	4.0	125	5	47.1	2000	0.25	759A
SMAJ4760A-TPX01	68	3.7	150	5	51.7	2000	0.25	760A
SMAJ4761A-TPX01	75	3.3	175	5	56.0	2000	0.25	761A
SMAJ4762A-TPX01	82	3.0	200	5	62.2	3000	0.25	762A
SMAJ4763A-TPX01	91	2.8	250	5	69.2	3000	0.25	763A
SMAJ4764A-TPX01	100	2.5	350	5	76.0	3000	0.25	764A

1) Based on DC-measurement at thermal equilibrium while maintaining the lead temperature( $T_L$ ) at 30°C

**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 @ $I_F$

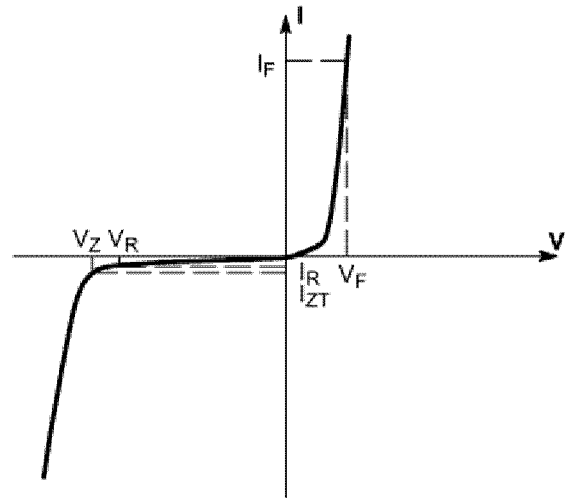


Figure 1. Zener voltage regulator

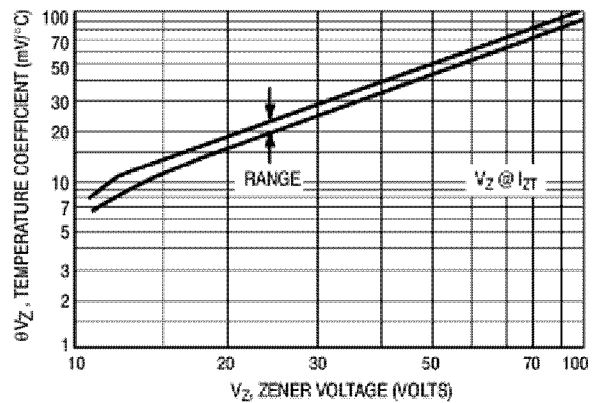
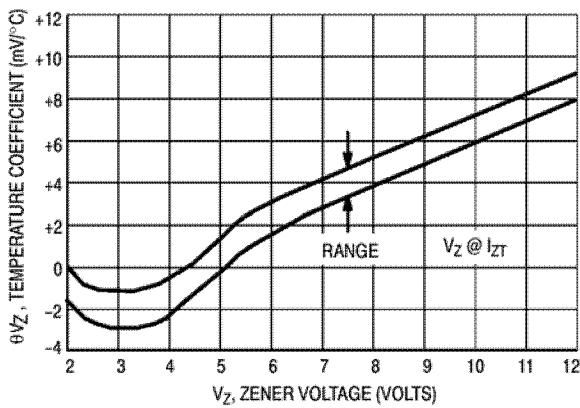


Figure 2. Temperature coefficients

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

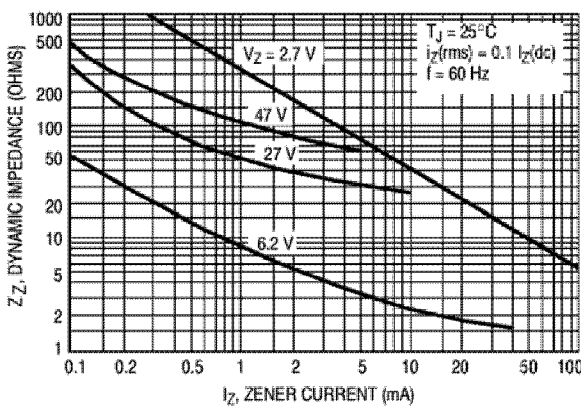


Figure 3. Effect of zener current on zener impedance

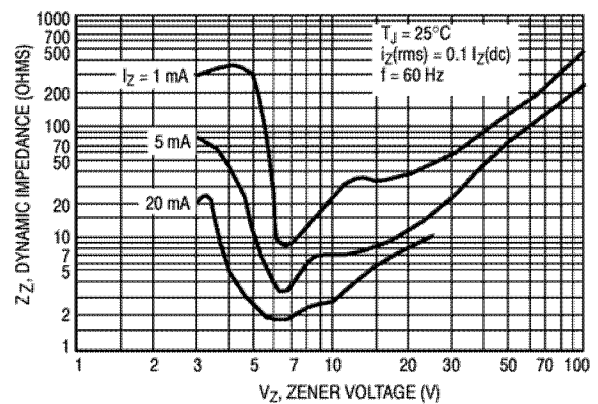


Figure 4. Effect of zener voltage on zener impedance



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**Ordering Information :**

Device	Packing
SMAJ4728A-TPX01~SMAJ4764A-TPX01	Tape&Reel: 7.5Kpcs/Reel

**\*\*\*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\*\*\***

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