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# SMAJ4728 THRU SMAJ4777

## 1.0 WATT SURFACE MOUNTSILICON ZENER DIODES

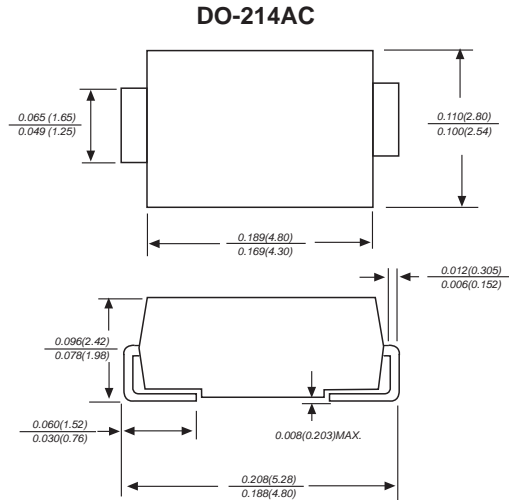
Zener Voltage:3.3-330V Peak Pulse Power:1.0W

### FEATURES

High reliability  
High temperature soldering guaranteed:  
260°C/10 seconds at terminals

### MECHANICAL DATA

**Case:** Molded plastic  
**Terminals:** Solder plated, solderable per MIL-STD-750,  
Method 2026  
**Polarity:** Color band denotes cathode  
**Mounting Position:** Any



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Units
Peak Power Dissipation (Note 1.) @ $T_L = 25^\circ\text{C}$ , Pulse Width = 1 ms	$P_{PK}$	1	W
Thermal Resistance Junction To Ambient Air	$R_{\theta JA}$	100	$^\circ\text{C/W}$
Thermal Resistance Junction To Leads	$R_{\theta JL}$	25	$^\circ\text{C/W}$
Storage Temperature Range	$T_{STG}$	-55 to 150	$^\circ\text{C}$
Operating Junction Temperature Range	$T_J$	-55 to 150	$^\circ\text{C}$

Note: Mounted on minimum recommended pad layout



Characteristics at Ta = 25°C

Type	Zener Voltag	Test Current	Dynamic Resistance		Test Current	Test Current		Maximum Regulated Current
	V <sub>Z</sub> (at I <sub>ZT</sub> )	I <sub>ZT</sub> I <sub>Z</sub>	Z <sub>zT</sub> (at I <sub>ZT</sub> )	Z <sub>zK</sub> (at I <sub>ZK</sub> )	I <sub>ZK</sub>	I <sub>R</sub>	V <sub>R</sub>	
	(V)	(mA)	Max (Ω)	Max (Ω)	(mA)	Max (μA)	(V)	I <sub>ZM</sub> (mA)
SMAJ4728	3.3	76.0	10	400	1.0	100	1.0	276
SMAJ4729	3.6	69.0	10	400	1.0	100	1.0	252
SMAJ4730	3.9	64.0	9.0	400	1.0	50	1.0	234
SMAJ4731	4.3	58.0	9.0	400	1.0	25	1.0	217
SMAJ4732	4.7	53.0	8.0	500	1.0	10	1.0	193
SMAJ4733	5.1	49.0	7.0	550	1.0	10	1.0	178
SMAJ4734	5.6	45.0	5.0	600	1.0	10	2.0	162
SMAJ4735	6.2	41.0	2.0	700	1.0	10	3.0	146
SMAJ4736	6.8	37.0	3.5	700	1.0	10	4.0	133
SMAJ4737	7.5	34.0	4.0	700	0.5	10	5.0	121
SMAJ4738	8.2	31.0	4.5	700	0.5	10	6.0	110
SMAJ4739	9.1	28.0	5.0	700	0.5	10	7.0	100
SMAJ4740	10	25.0	7.0	700	0.25	10	7.6	91
SMAJ4741	11	23.0	8.0	700	0.25	5	8.4	83
SMAJ4742	12	21.0	9.0	700	0.25	5	9.1	76
SMAJ4743	13	19.0	10	700	0.25	5	9.9	69
SMAJ4744	15	17.0	14	700	0.25	5	11.4	61
SMAJ4715	16	15.5	16	700	0.25	5	12.2	57
SMAJ4746	18	14.0	20	750	0.25	5	13.7	50
SMAJ4747	20	12.5	22	750	0.25	5	15.2	45
SMAJ4748	22	11.5	23	750	0.25	5	16.7	41
SMAJ4749	24	10.5	25	750	0.25	5	18.2	38
SMAJ4750	27	9.5	35	750	0.25	5	20.6	34
SMAJ4751	30	8.5	40	1000	0.25	5	22.8	30
SMAJ4752	33	7.5	45	1000	0.25	5	25.1	27
SMAJ4753	36	7.0	50	1000	0.25	5	27.4	25
SMAJ4754	39	6.5	60	1000	0.25	5	29.7	23
SMAJ4755	43	6.0	70	1500	0.25	5	32.7	22
SMAJ4756	47	5.5	80	1500	0.25	5	35.8	19
SMAJ4757	51	5.0	95	1500	0.25	5	38.8	18
SMAJ4758	56	4.5	110	2000	0.25	5	42.6	16
SMAJ4759	62	4.0	125	2000	0.25	5	47.1	14
SMAJ4760	68	3.7	150	2000	0.25	5	51.7	13
SMAJ4761	75	3.3	175	2000	0.25	5	56.0	12
SMAJ4762	82	3.0	200	3000	0.25	5	62.2	11
SMAJ4763	91	2.8	250	3000	0.25	5	69.2	10
SMAJ4764	100	2.5	350	3000	0.25	5	76.0	9.0
SMAJ4765	110	2.3	450	4000	0.25	5	83.6	8.6
SMAJ4766	120	2.0	550	4500	0.25	5	91.2	7.8
SMAJ4767	130	1.9	700	5000	0.25	5	98.8	7.0
SMAJ4768	150	1.7	1000	6000	0.25	5	114	6.4
SMAJ4769	160	1.6	1100	6500	0.25	5	121.6	5.8
SMAJ4770	180	1.4	1200	7000	0.25	5	136.8	5.2
SMAJ4771	200	1.2	1400	7500	0.25	5	152	4.7
SMAJ4772	220	1.0	1600	8000	0.25	5	167.2	4.0
SMAJ4773	240	1.0	1800	8500	0.25	5	182.4	3.8
SMAJ4774	250	1.0	2000	9000	0.25	5	190	3.6
SMAJ4775	270	0.9	2100	9000	0.25	5	205	3.3
SMAJ4776	300	0.8	2100	9000	0.25	5	228	3.0
SMAJ4777	330	0.8	2500	9000	0.25	5	245	2.7

(1) V<sub>ZT</sub> is tested with pulses (20 ms)



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# RATINGS AND CHARACTERISTIC CURVES SMAJ4728 THRU SMAJ4777

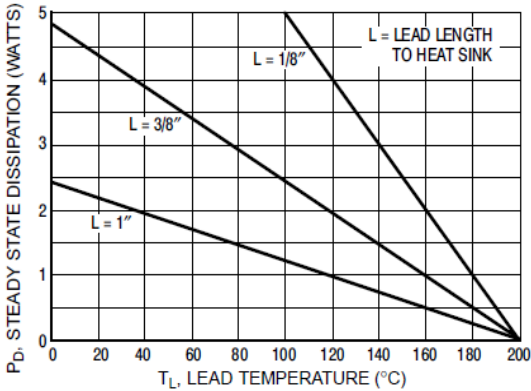


Figure 1. Power Temperature Derating Curve

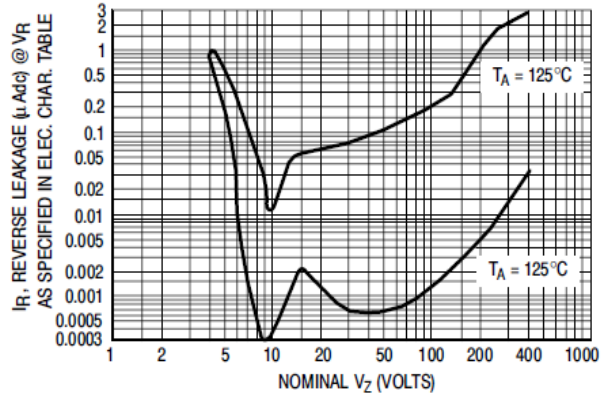


Figure 4. Typical Reverse Leakage

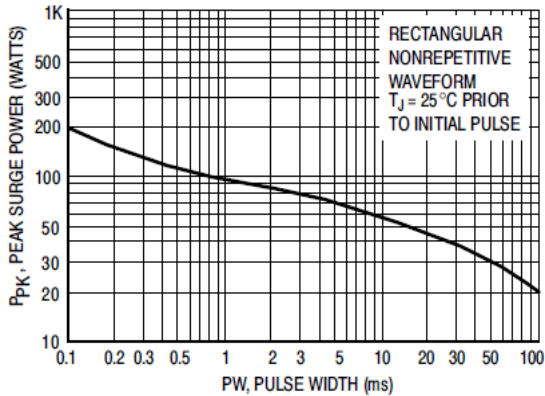


Figure 3. Maximum Surge Power

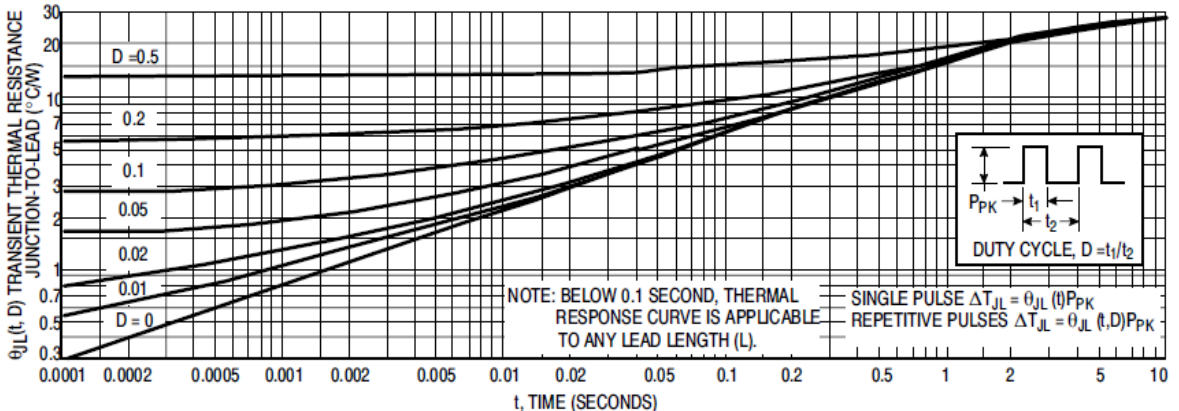


Figure 2. Typical Thermal Response L, Lead Length = 3/8 Inch