



Micro Commercial Components

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

SMCJ5348 THRU SMCJ5366

Silicon

5.0 Watt

Zener Diodes

Features

- Surface Mount Application
- 11 thru 39 Volt Voltage Range
- Built-in strain relief
- Glass passivated junction
- Low inductance

Mechanical Data

- Case: JEDEC DO-214AB Molded plastic over passivated junction
- Terminals solderable per MIL-STD-750, Method 2026
- Standard Packaging: 16mm tape(EIA-481)
- Maximum temperature for soldering: 260°C for 10 seconds.
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O

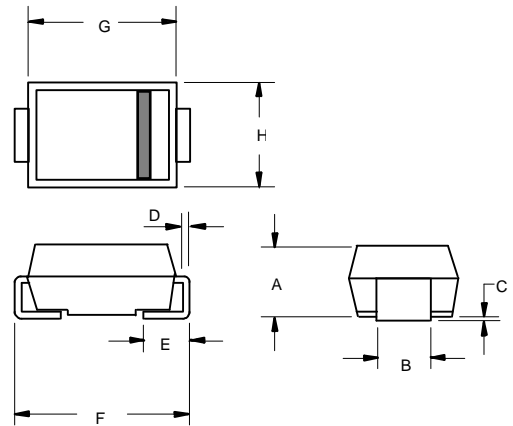
Maximum Ratings @ 25°C Unless Otherwise Specified

DC Power Dissipation	P_D	5.0W	(Note: 1)
Peak forward Surge Current 8.3ms single half	I_{FSM}	See Fig.5	(Note:1,2)
Operation And Storage Temperature	T_J, T_{STG}	-55°C to +150°C	

NOTES:

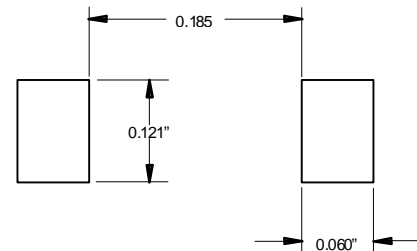
1. Mounted on 8.0mm² copper pads to each terminal.
2. 8.3ms single half sine-wave, or equivalent square wave, duty cycle = 4 pulses per minute maximum.

DO-214AB (SMC) (LEAD FRAME)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.079	.103	2.00	2.62	
B	.108	.128	2.75	3.25	
C	.002	.008	0.051	0.203	
D	.006	.012	0.152	0.305	
E	.030	.050	0.76	1.27	
F	.305	.320	7.75	8.13	
G	.260	.280	6.60	7.11	
H	.220	.245	5.59	6.22	

SUGGESTED SOLDER PAD LAYOUT



ELECTRICAL CHARACTERISTICS ($T_A=25\text{ }^\circ\text{C}$ unless otherwise noted, $V_F=1.2\text{ Max @ }I_F=1\text{A}$ for all types.Micro Commercial Components TM

Type No. (Note 1.)	Nominal Zener Voltage V_Z @ I_{ZT} volts (Note 2.)	Test current I_{ZT} mA	Maximum Zener Impedance		Max reverse Leakage Current			Max Surge Current I_R Amps (Note 3.)	Max Voltage Regulation V_Z , Volts (Note 4.)	Maximum Regulator Current I_{ZM} mA (Note 5.)	Device Marking Code
			Z_{ZT} @ I_{ZT} Ohms (Note 2.)	Z_{ZK} @ $I_{ZK} = 1$ mA Ohms (Note 2.)	I_R u A	@ V_R Volts					
						Non & A Suffix	B-Suffix				
SMCJ5348	11	125	2.5	125	5	8	8.4	8	0.25	430	348B
SMCJ5349	12	100	2.5	125	2	8.6	9.1	7.5	0.25	395	349B
SMCJ5350	13	100	2.5	100	1	9.4	9.9	7	0.25	365	350B
SMCJ5351	14	100	2.5	75	1	10.1	10.6	6.7	0.25	340	351B
SMCJ5352	15	75	2.5	75	1	10.8	11.5	6.3	0.25	315	352B
SMCJ5353	16	75	2.5	75	1	11.5	12.2	6	0.3	295	353B
SMCJ5354	17	70	2.5	75	0.5	12.2	12.9	5.8	0.35	280	354B
SMCJ5355	18	65	2.5	75	0.5	13	13.7	5.5	0.4	265	355B
SMCJ5356	19	65	3	75	0.5	13.7	14.4	5.3	0.4	250	356B
SMCJ5357	20	65	3	75	0.5	14.4	15.2	5.1	0.4	237	357B
SMCJ5358	22	50	3.5	75	0.5	15.8	16.7	4.7	0.45	216	358B
SMCJ5359	24	50	3.5	100	0.5	17.3	18.2	4.4	0.55	198	359B
SMCJ5360	25	50	4	110	0.5	18	19	4.3	0.55	190	360B
SMCJ5361	27	50	5	120	0.5	19.4	20.6	4.1	0.6	176	361B
SMCJ5362	28	50	6	130	0.5	20.1	21.2	3.9	0.6	170	362B
SMCJ5363	30	40	8	140	0.5	21.6	22.8	3.7	0.6	158	363B
SMCJ5364	33	40	10	150	0.5	23.8	25.1	3.5	0.6	144	364B
SMCJ5365	36	30	11	160	0.5	25.9	27.4	3.3	0.65	132	365B
SMCJ5366	39	30	14	170	0.5	28.1	29.7	3.1	0.65	122	366B

NOTE:

1. TOLERANCE AND VOLTAGE DESIGNATION - The JEDEC type numbers shown indicate a tolerance of 10% with guaranteed limits on only V_Z , I_R , I_F , and V_F as shown in the electrical characteristics table. Units with guaranteed limits on all seven parameters are indicated by suffix "B" for 5% tolerance.
2. ZENER VOLTAGE (V_Z) AND IMPEDANCE (Z_{ZT} & Z_{ZK}) - Test conditions for Zener voltage and impedance are as follows; I_Z is applied 40 10 ms prior to reading. Mounting contacts are located from the inside edge of mounting clips to the body of the diode. ($T_A=25$).

TEMPERATURE COEFFICIENTS

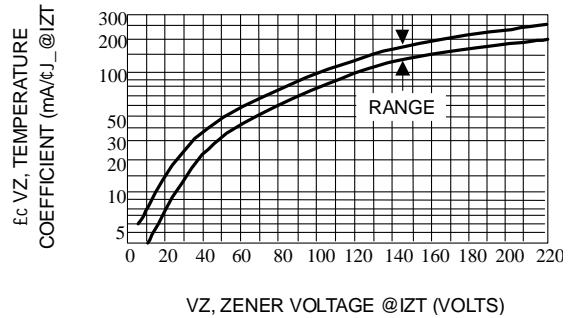
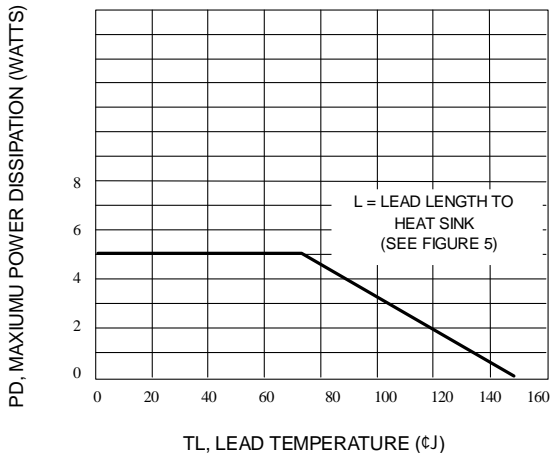


Fig. 1-POWER TEMPERATURE DERATING CURVE

Fig. 2-TEMPERATURE COEFFICIENT-RANGE FOR UNITS 6 TO 220 VOLTS

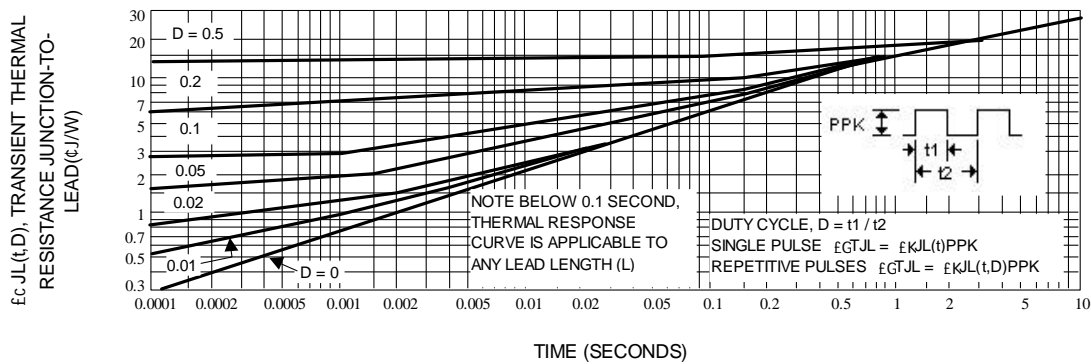


Fig. 3-TYPICAL THERMAL RESPONSE

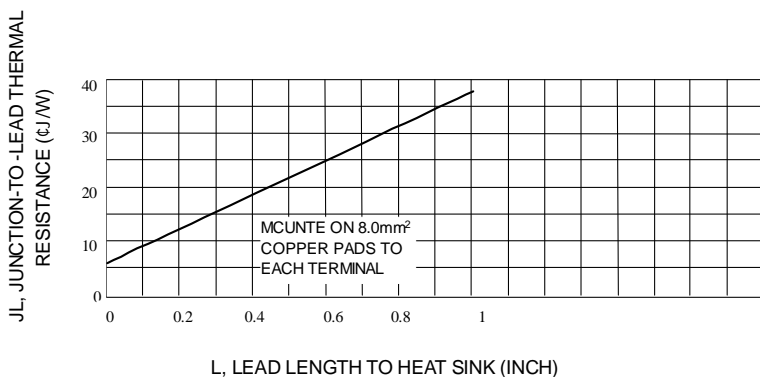


Fig. 4-TYPICAL THERMAL RESISTANCE

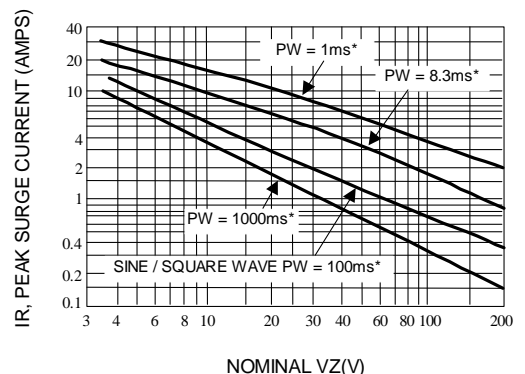


Fig. 5-MAXIMUM NON-REPETITIVE SURGE CURRENT VERSUS NOMINAL ZENER VOLTAGE (SEE NOTE 3)

SMCJ5348 thru SMCJ5366

RATING AND CHARACTERISTICS CURVES



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ZENER VOLTAGE VERSUS ZENER CURRENT (FIGURES 7,8, AND 9)

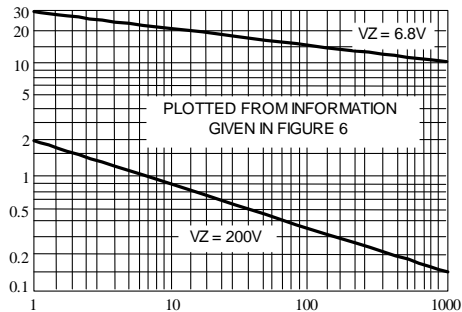


Fig. 6-PEAK SURGE CURRENT VERSUS PULSE WIDTH(SEE NOTE 3)

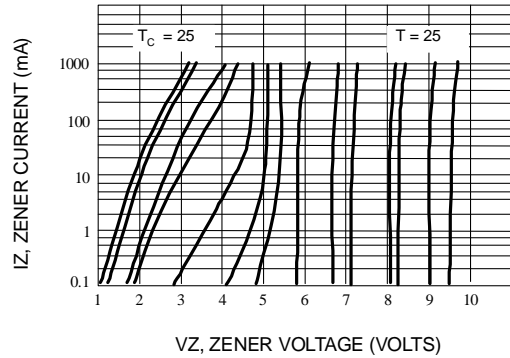


Fig. 7-ZENER VOLTAGE VERSUS ZENER CURRENT
VZ = 6.8 THRU 10 VOLTS

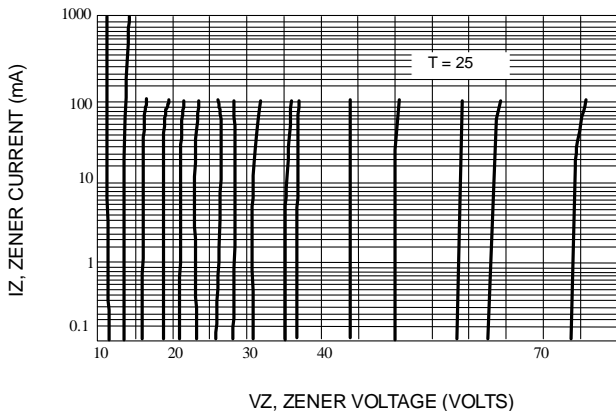


Fig. 8-ZENER VOLTAGE VERSUS ZENER CURRENT
VZ = 11 THRU 75 VOLTS

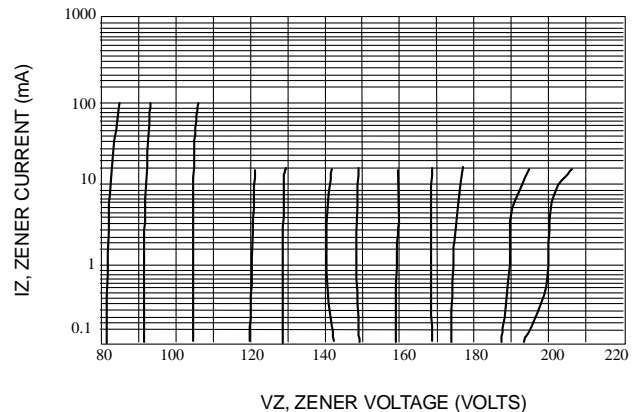


Fig. 9-ZENER VOLTAGE VERSUS ZENER CURRENT
VZ = 82 THRU 200 VOLTS

*** Data of Figure 3 should not be used to compute surge capability. Surge limitations are given in Figure 5. They are lower than would be expected by considering only junction temperature, as current crowding effects cause temperatures to be extremely high in small spots resulting in device degradation should the limits of Figure. 5 be exceeded