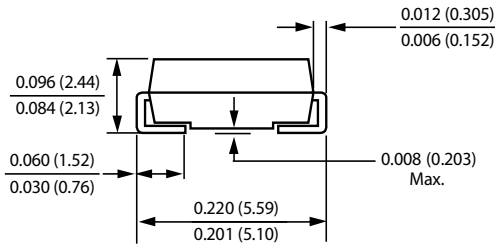
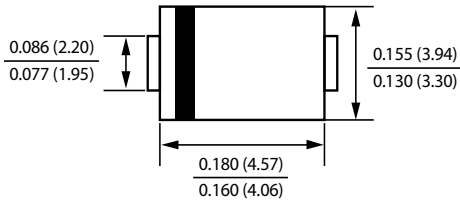




SMB2EZxxD5 SERIES



Surface Mount Device



DO-214AA(SMB)

Dimensions in inches and (millimeters)



Ordering Information	
Part Number	Compound
SMB2EZxxD5	General
SMB2EZxxD5-H	Halogen Free
SMB2EZxxD5-Q	Automotive

PRIMARY CHARACTERISTICS	
V_{RRM}	2.7~330V
T_J max	175°C

Features

- Glass passivated chip
- Low leakage
- Built-in strain relief
- Low inductance
- High peak reverse power dissipation
- Lead (Pb)-free component
- For use in stabilizing and clipping circuits with high power rating
- AEC-Q101 Qualified

Mechanical Data

- Case: DO-214AA (SMB)
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Laser band denotes cathode end
- Weight: 0.095 grams (approximate)

MAXIMUM RATINGS (TA=25°C unless otherwise noted)

Parameter	Symbol	Value	UNIT
DC Power Dissipation at $T_L = 50^\circ\text{C}$ (Note1)	P_D	2.0	W
Maximum Forward Voltage at $I_F = 200\text{ mA}$.	V_F	1.5	V
Junction Temperature Range	T_J	- 55 to + 175	°C
Storage Temperature Range	T_{STG}	- 55 to + 175	°C

NOTE: 1. T_L = Lead temperature at 3/8 " (9.5mm) from body.



SMB2EZxx SERIES



Surface Mount Device

2 Watt Surface Mount Zener Diodes / DO-214AA (SMB)

Part Number	Nominal Zener Voltage		Max. Zener Impedance				Max. Reverse Leakage Current		Max. DC Zener Current	Marking Code
	$V_Z @ I_{ZT}$		$Z_{ZT} @ I_{ZT}$		$Z_{ZK} @ I_{ZK}$		$I_R @ V_R$		I_{ZM}	
	Nom. V	mA	Ω	mA	Ω	mA	μA	V	mA	
SMB2EZ2.7D5	2.7	80.0	10.0	80.0	400	1.0	100.0	1.0	670	2H0
SMB2EZ3.0D5	3.0	160.0	8.0	160.0	400	1.0	100.0	1.0	603	2H1
SMB2EZ3.3D5	3.3	145.0	8.0	145.0	400	1.0	80.0	1.0	548	2H2
SMB2EZ3.6D5	3.6	139.0	5.0	139.0	400	1.0	80.0	1.0	502	2H3
SMB2EZ3.9D5	3.9	128.0	5.0	128.0	400	1.0	30.0	1.0	464	2H4
SMB2EZ4.3D5	4.3	116.0	4.5	116.0	400	1.0	20.0	1.0	421	2H5
SMB2EZ4.7D5	4.7	106.0	4.5	106.0	550	1.0	5.0	1.0	385	2H6
SMB2EZ5.1D5	5.1	90.0	3.5	90.0	600	1.0	5.0	1.0	354	2H7
SMB2EZ5.6D5	5.6	89.5	2.5	89.5	500	1.0	5.0	2.0	323	2H8
SMB2EZ6.2D5	6.2	80.5	1.5	80.5	700	1.0	5.0	3.0	292	2A0
SMB2EZ6.8D5	6.8	73.5	2.0	73.5	700	1.0	5.0	4.0	266	2A1
SMB2EZ7.5D5	7.5	66.5	2.0	66.5	700	0.5	5.0	5.0	242	2A2
SMB2EZ8.2D5	8.2	61.0	2.3	61.0	700	0.5	5.0	6.0	220	2A3
SMB2EZ9.1D5	9.1	55.0	2.5	55.0	700	0.5	3.0	7.0	200	2A4
SMB2EZ10D5	10	50.0	3.5	50.0	700	0.25	3.0	7.6	182	2A5
SMB2EZ11D5	11	45.5	4.0	45.5	700	0.25	1.0	8.4	166	2A6
SMB2EZ12D5	12	41.5	4.5	41.5	700	0.25	1.0	9.1	152	2A7
SMB2EZ13D5	13	38.5	5.0	38.5	700	0.25	0.5	9.9	138	2A8
SMB2EZ14D5	14	35.7	5.5	35.7	700	0.25	0.5	10.6	130	2A9
SMB2EZ15D5	15	33.4	7.0	33.4	700	0.25	0.5	11.4	122	2B0
SMB2EZ16D5	16	31.2	8.0	31.2	700	0.25	0.5	12.2	114	2B1
SMB2EZ17D5	17	29.4	9.0	29.4	750	0.25	0.5	13.0	107	2B2
SMB2EZ18D5	18	27.8	10.0	27.8	750	0.25	0.5	13.7	100	2B3
SMB2EZ19D5	19	26.3	11.0	26.3	750	0.25	0.5	14.4	95	2B4
SMB2EZ20D5	20	25.0	11.0	25.0	750	0.25	0.5	15.2	90	2B5
SMB2EZ22D5	22	22.8	12.0	22.8	750	0.25	0.5	16.7	82	2B6
SMB2EZ24D5	24	20.8	13.0	20.8	750	0.25	0.5	18.2	76	2B7
SMB2EZ27D5	27	18.5	18.0	18.5	750	0.25	0.5	20.6	68	2B8
SMB2EZ30D5	30	16.6	20	16.6	1000	0.25	0.5	22.5	60	2B9
SMB2EZ33D5	33	15.1	23	15.1	1000	0.25	0.5	25.1	55	2C0
SMB2EZ36D5	36	13.9	25	13.9	1000	0.25	0.5	27.4	50	2C1
SMB2EZ39D5	39	12.8	30	12.8	1000	0.25	0.5	29.7	47	2C2
SMB2EZ43D5	43	11.6	35	11.6	1500	0.25	0.5	32.7	43	2C3
SMB2EZ47D5	47	10.6	40	10.6	1500	0.25	0.5	35.8	39	2C4
SMB2EZ51D5	51	9.8	48	9.8	1500	0.25	0.5	38.8	36	2C5
SMB2EZ56D5	56	9.0	55	9.0	2000	0.25	0.5	42.6	32	2C6
SMB2EZ62D5	62	8.1	60	8.1	2000	0.25	0.5	47.1	29	2C7
SMB2EZ68D5	68	7.4	75	7.4	2000	0.25	0.5	51.7	27	2C8
SMB2EZ75D5	75	6.7	90	6.7	2000	0.25	0.5	56.0	24	2C9
SMB2EZ82D5	82	6.1	100	6.1	3000	0.25	0.5	62.2	22	2F0



SMB2EZxx SERIES



Surface Mount Device

2 Watt Surface Mount Zener Diodes / DO-214AA (SMB)

Part Number	Nominal Zener Voltage		Max. Zener Impedance				Max. Reverse Leakage Current		Max. DC Zener Current	Marking Code
	$V_Z @ I_{ZT}$		$Z_{ZT} @ I_{ZT}$		$Z_{ZK} @ I_{ZK}$		$I_R @ V_R$		I_{ZM}	
	Nom. V	mA	Ω	mA	Ω	mA	μA	V	mA	
SMB2EZ91D5	91	5.5	125	5.5	3000	0.25	0.5	69.2	20	2F1
SMB2EZ100D5	100	5.0	175	5.0	3000	0.25	0.5	76.0	18	2F2
SMB2EZ110D5	110	4.5	250	4.5	4000	0.25	0.5	83.6	17	2F3
SMB2EZ120D5	120	4.2	325	4.2	4500	0.25	0.5	91.2	15	2F4
SMB2EZ130D5	130	3.8	400	3.8	5000	0.25	0.5	98.8	14	2F5
SMB2EZ140D5	140	3.6	500	3.6	5500	0.25	0.5	106.4	13	2F6
SMB2EZ150D5	150	3.3	575	3.3	6000	0.25	0.5	114.0	12	2F7
SMB2EZ160D5	160	3.1	650	3.1	6500	0.25	0.5	121.6	11	2F8
SMB2EZ170D5	170	2.9	675	2.9	7000	0.25	0.5	130.4	11	2F9
SMB2EZ180D5	180	2.8	725	2.8	7000	0.25	0.5	136.8	10	2G1
SMB2EZ190D5	190	2.6	825	2.6	8000	0.25	0.5	144.8	10	2G2
SMB2EZ200D5	200	2.5	1900	2.5	9990	0.25	0.5	152.0	9	2G3
SMB2EZ220D5	220	2.0	2000	2.0	8500	0.25	0.5	167.0	8	2G4
SMB2EZ270D5	270	1.6	2200	1.6	8500	0.25	0.5	205.0	6.7	2G5
SMB2EZ300D5	300	1.5	2200	1.5	9000	0.25	0.5	228.0	5.9	2G6
SMB2EZ330D5	330	1.4	2300	1.4	9000	0.25	0.5	250.0	5.4	2G7

Notes :

- (1) The type number listed have a standard tolerance on the nominal zener voltage of $\pm 5\%$.
- (2) The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I_{ZT} per JEDEC Method



Fig. 1 - Power Temperature Derating Curve

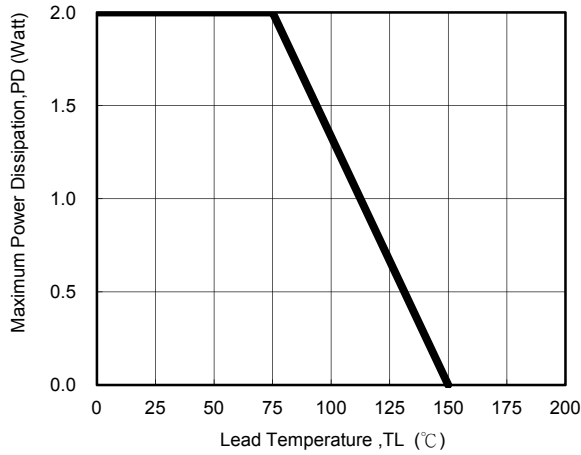


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

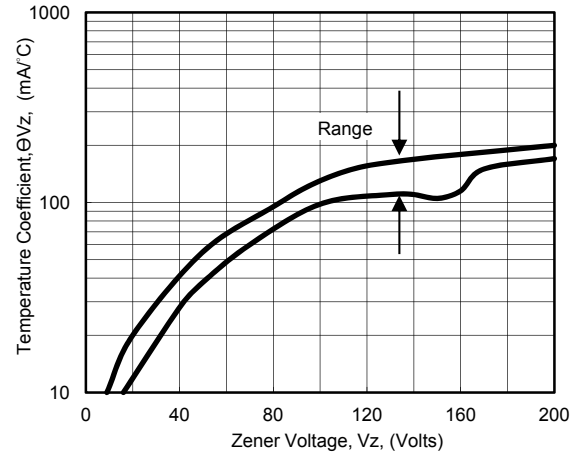


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

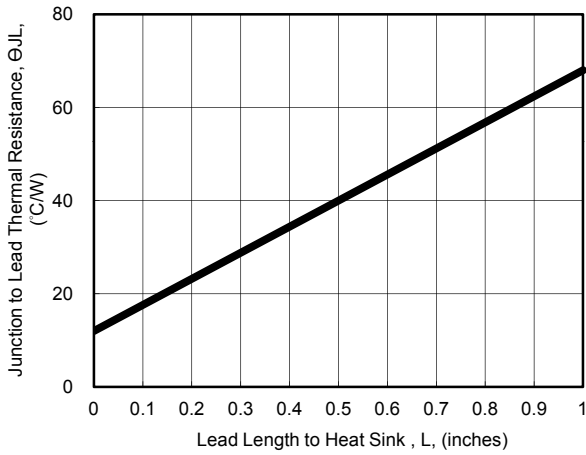


Fig. 4 - Maximum Surge Power

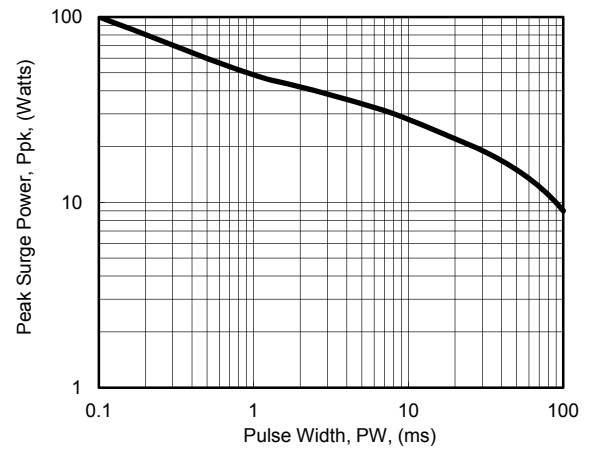


Fig. 5 - Typical Thermal Response L, Lead Length=3/8inch

