

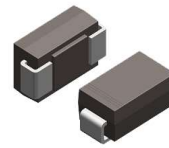
Zener Diode

Voltage: 6.2 to 200 Volts

Power: 1.5 Watts

RoHS Device

Halogen Free

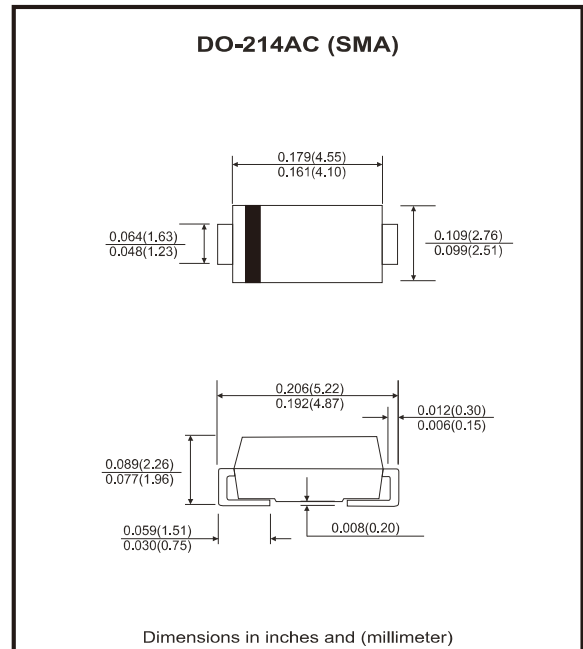


Features

- Glass passivated chip.
- Low leakage.
- Built-in strain relief.
- Low inductance.
- High peak reverse power dissipa.
- For use in stabilizing and clipping circuits with high power.

Mechanical data

- Case: DO-214AC(SMA) , Molded plastic.
- Epoxy: UL 94V-0 rate flame retardant.
- Terminals: Solderable per MIL-STD-750 ,method 2026.
- Polarity: Color band denotes cathode.
- Mounting position: Any.



Circuit Diagram



Maximum Rating (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
DC power dissipation at T _L = 75°C	P _D	1.5	W
Maximun forward voltage at I _F =200mA	V _F	1.5	V
Junction temperature range	T _J	-55 to +175	°C
Storage temperature range	T _{STG}	-55 to +175	°C

Electrical Characteristics (T_A=25°C unless otherwise noted)

Part Number	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current	Marking Code
	V _Z @ I _{ZT}	I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}	I _{ZK}	I _R @ V _R		I _{ZM}	
	(V)	(mA)	(Ohm)	(Ohm)	(mA)	(μA)	(V)	(mA)	
1SMA5920B	6.2	60.5	2.0	200	1.0	2.5	4.0	120	920B
1SMA5921B	6.8	55.1	2.5	200	1.0	2.5	5.2	220	921B
1SMA5922B	7.5	50.0	3.0	400	0.5	2.5	6.0	200	922B
1SMA5923B	8.2	45.7	3.5	400	0.5	2.5	6.5	182	923B
1SMA5924B	9.1	41.2	4.0	500	0.5	2.5	7.0	164	924B
1SMA5925B	10	37.5	4.5	500	0.25	2.5	8.0	150	925B
1SMA5926B	11	34.1	5.5	550	0.25	0.5	8.4	136	926B
1SMA5927B	12	31.2	6.5	550	0.25	0.5	9.1	125	927B
1SMA5928B	13	28.8	7.0	550	0.25	0.5	9.9	115	928B
1SMA5929B	15	25.0	9.0	600	0.25	0.5	11.4	100	929B
1SMA5930B	16	23.4	10	600	0.25	0.5	12.2	93	930B
1SMA5931B	18	20.8	12	650	0.25	0.5	13.7	83	931B
1SMA5932B	20	18.7	14	650	0.25	0.5	15.2	75	932B
1SMA5933B	22	17.0	18	650	0.25	0.5	16.7	68	933B
1SMA5934B	24	15.6	19	700	0.25	0.5	18.2	62	934B
1SMA5935B	27	13.9	23	700	0.25	0.5	20.6	55	935B
1SMA5936B	30	12.5	26	750	0.25	0.5	22.8	50	936B
1SMA5937B	33	11.4	33	800	0.25	0.5	25.1	45	937B
1SMA5938B	36	10.4	38	850	0.25	0.5	27.4	41	938B
1SMA5939B	39	9.6	45	900	0.25	0.5	29.7	38	939B
1SMA5940B	43	8.7	53	950	0.25	0.5	32.7	34	940B
1SMA5941B	47	8.0	67	1000	0.25	0.5	35.8	31	941B
1SMA5942B	51	7.3	70	1100	0.25	0.5	38.8	29	942B
1SMA5943B	56	6.7	86	1300	0.25	0.5	42.6	26	943B
1SMA5944B	62	6.0	100	1500	0.25	0.5	47.1	24	944B
1SMA5945B	68	5.5	120	1700	0.25	0.5	51.7	22	945B
1SMA5946B	75	5.0	140	2000	0.25	0.5	56.0	20	946B
1SMA5947B	82	4.6	160	2500	0.25	0.5	62.2	18	947B
1SMA5948B	91	4.1	200	3000	0.25	0.5	69.2	16	948B
1SMA5949B	100	3.7	250	3100	0.25	0.5	76.0	15	949B
1SMA5950B	110	3.4	300	4000	0.25	0.5	83.6	13	950B
1SMA5951B	120	3.1	380	4500	0.25	0.5	91.2	12	951B
1SMA5952B	130	2.9	450	5000	0.25	0.5	98.8	11	952B
1SMA5953B	150	2.5	600	6000	0.25	0.5	114.0	10	953B
1SMA5954B	160	2.3	700	6500	0.25	0.5	121.6	9	954B
1SMA5955B	180	2.1	900	7000	0.25	0.5	136.8	8	955B
1SMA5956B	200	1.9	1200	8000	0.25	0.5	152.0	7	956B

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.

Rating and Characteristic Curves

Fig.1 - Power Temperature Derating Curve

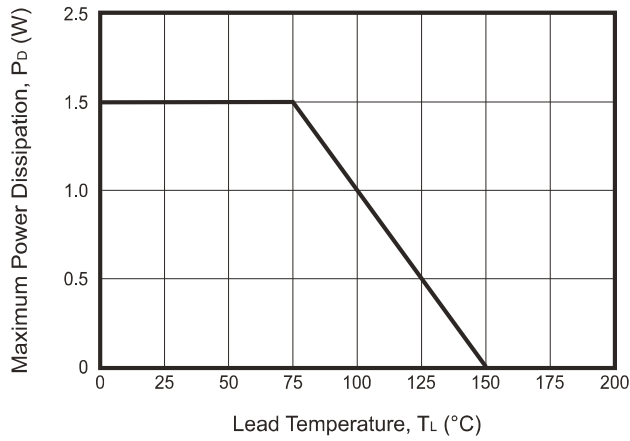


Fig.2 - Temperature Coefficients v.s. Zener Voltage

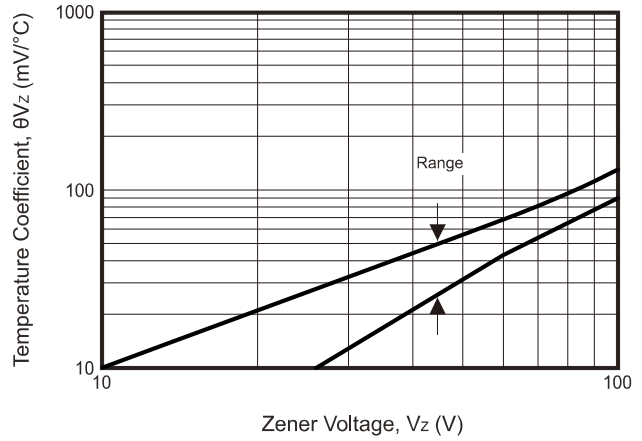


Fig.3 - Pulse Waveform

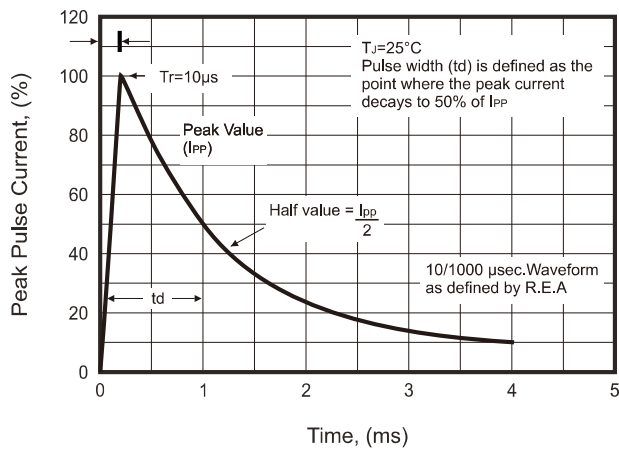
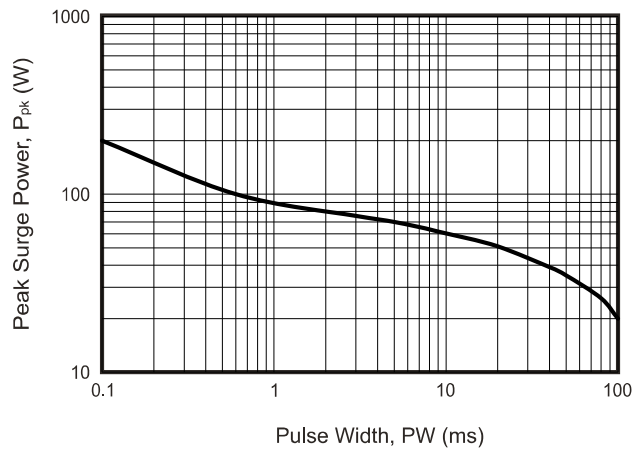
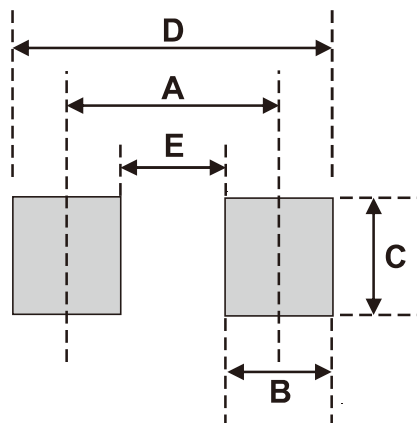


Fig.4 - Maximum Surge Power



Suggested PAD Layout

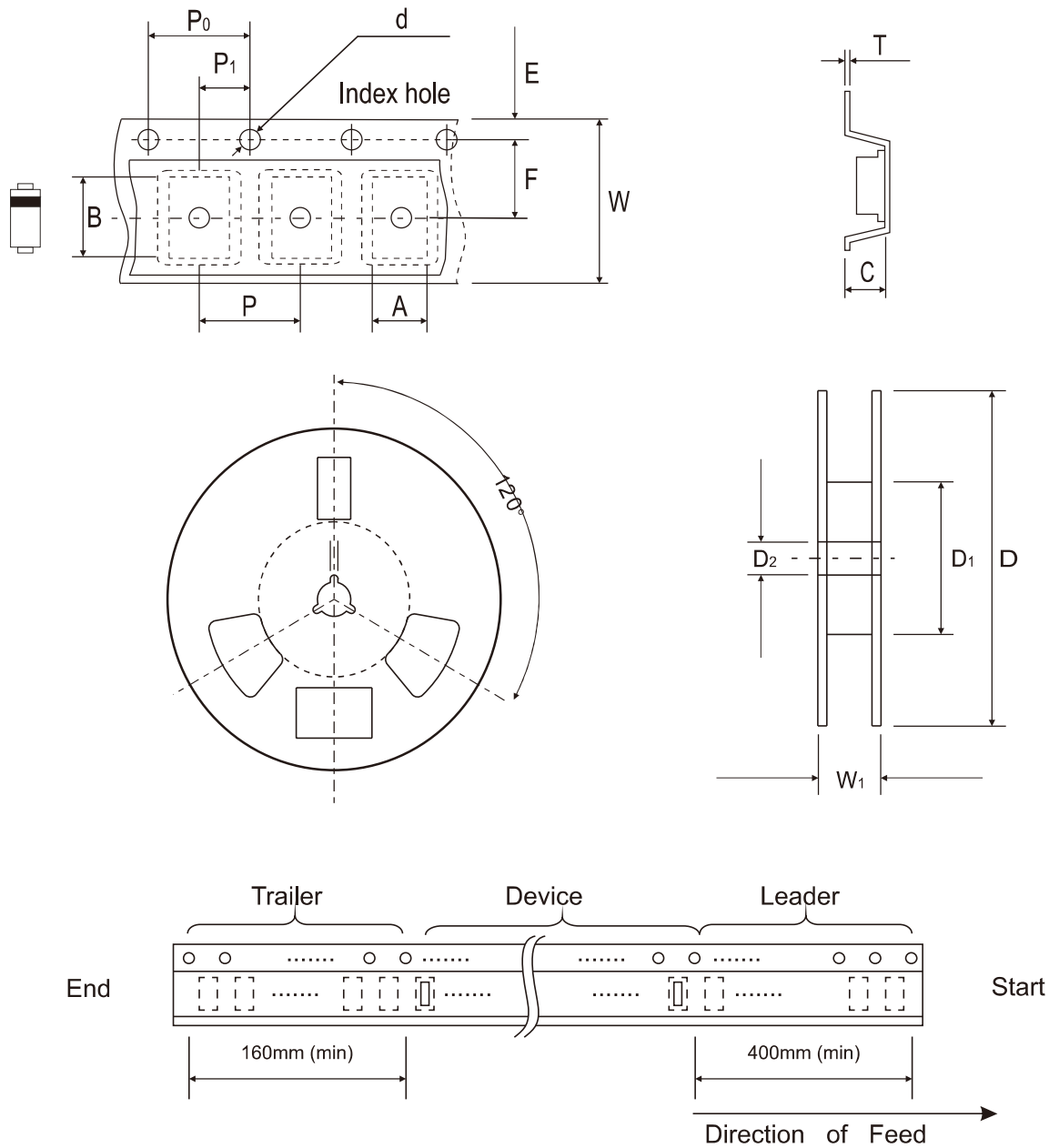
SIZE	DO-214AC(SMA)	
	(mm)	(inch)
A	3.80	0.150
B	1.60	0.063
C	2.80	0.110
D	5.40	0.213
E	2.20	0.087



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
DO-214AC (SMA)	5,000	13

Reel Taping Specification



SMA (DO-214AC)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	2.70 (max)	5.30 (max)	2.66 (max)	1.50 ± 0.10	330	50.0 MIN.	13.5 ± 1.00
	(inch)	0.106 (max)	0.209 (max)	0.105 (max)	0.059 ± 0.004	12.99	1.969 MIN.	0.531 ± 0.039

SMA (DO-214AC)	SYMBOL	E	F	P	P_0	P_1	W	W_1
	(mm)	1.75 ± 0.10	5.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	12.0 ± 0.20	18.4 (max)
	(inch)	0.689 ± 0.004	0.217 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.472 ± 0.008	0.724 (max)