SMA SURFACE MOUNT ZENER DIODES

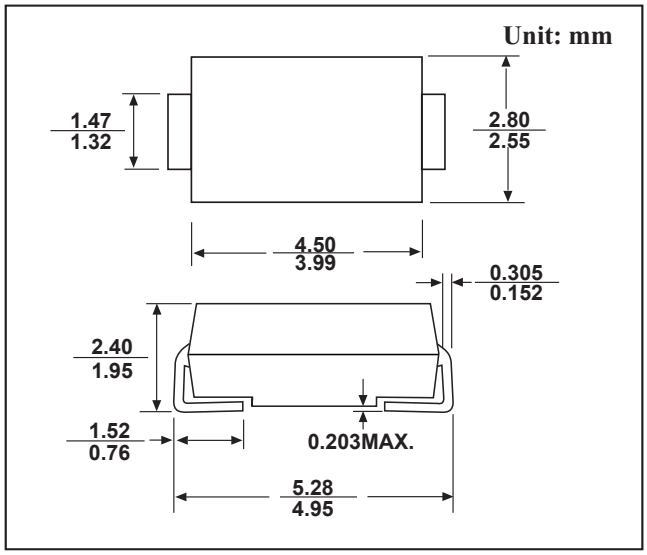
ZENER VOLTAGE RANGE: 3.3 --- 100V PEAK PULSE POWER:1000mW

FEATURES

- Low Reverse Leakage
- Low Zener Impedance
- High Stability and High Reliability

MECHANICAL DATA

- Case:SMA
- Polarity: Color band denotes cathode end
- Mounting Position: Any



MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25 C ambient temperature unless otherwise specified

Parameters	SYMBOLS	**VALUE**	UNITS
Power Dissipation	P_D	1000	mW
Operating junction temperature	TJ	15	℃
Storage temperature range	T_{STG}	-65 to + 150	℃

Note:1. Valid provided that electrodes are kept at ambient temperature.

Electrical Specification (T_A=25°C unless otherwise specified)

Part Number	Nominal Zener voltage	Test current	Maximum dynamic impedance resistance			Maximum reverse leakage current		Max Surge current
	V_Z @I_{ZT}	I_{ZT}	Z_{ZT} at I_{ZT}	Z_{ZK} at I_{ZK}	I_{ZK}	IR	Test voltage V_R	I_{RM}(2)
	V	mA	Ω	Ω	mA	μ A	V	mA
1SMA4728A	3.3	76	10	400	1	100	1	1380
1SMA4729A	3.6	69	10	400	1	100	1	1260
1SMA4730A	3.9	64	9	400	1	50	1	1190
1SMA4731A	4.3	58	9	400	1	10	1	1070
1SMA4732A	4.7	53	8	500	1	10	1	970
1SMA4733A	5.1	49	7	550	1	10	1	890
1SMA4734A	5.6	45	5	600	1	10	2	810
1SMA4735A	6.2	41	2	700	1	10	3	730
1SMA4736A	6.8	37	3.5	700	1	10	4	660

Electrical Specification (T_A=25°C unless otherwise specified)

Part Number	Nominal Zener voltage	Test current	Maximum dynamic impedance resistance			Maximum reverse leakage current		Max Surge current
	V_Z [1] at I_{ZT}	I_{ZT}	Z_{ZT} at I_{ZT}	Z_{ZK} at I_{ZK}	I_{ZK}	IR	Test voltage V_R	I_{RM} [2]
	V	mA	Ω	Ω	mA	μA	V	mA
1SMA4737A	7.5	34	4	700	0.5	10	5	605
1SMA4738A	8.2	31	4.5	700	0.5	10	6	550
1SMA4739A	9.1	28	5	700	0.5	10	7	500
1SMA4740A	10	25	7	700	0.25	10	7.6	454
1SMA4741A	11	23	8	700	0.25	5	8.4	414
1SMA4742A	12	21	9	700	0.25	5	9.1	380
1SMA4743A	13	19	10	700	0.25	5	9.9	344
1SMA4744A	15	17	14	700	0.25	5	11.4	304
1SMA4745A	16	15.5	16	700	0.25	5	12.2	285
1SMA4746A	18	14	20	750	0.25	5	13.7	250
1SMA4747A	20	12.5	22	750	0.25	5	15.2	225
1SMA4748A	22	11.5	23	750	0.25	5	16.7	205
1SMA4749A	24	10.5	25	750	0.25	5	18.2	190
1SMA4750A	27	9.5	35	750	0.25	5	20.6	170
1SMA4751A	30	8.5	40	1000	0.25	5	22.8	150
1SMA4752A	33	7.5	45	1000	0.25	5	25.1	135
1SMA4753A	36	7	50	1000	0.25	5	27.4	125
1SMA4754A	39	6.5	60	1000	0.25	5	29.7	115
1SMA4755A	43	6	70	1500	0.25	5	32.7	110
1SMA4756A	47	5.5	80	1500	0.25	5	35.8	95
1SMA4757A	51	5	95	1500	0.25	5	38.8	90
1SMA4758A	56	4.5	110	2000	0.25	5	42.6	80
1SMA4759A	62	4	125	2000	0.25	5	47.1	70
1SMA4760A	68	3.7	150	2000	0.25	5	51.7	65
1SMA4761A	75	3.3	175	2000	0.25	5	56	60
1SMA4762A	82	3.0	200	3000	0.25	5	62.2	55
1SMA4763A	91	2.8	250	3000	0.25	5	69.2	50
1SMA4764A	100	2.5	350	3000	0.25	5	76.0	45

Notes:

1.Based on dc-measurement at thermal equilibrium

2.Surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I_{ZT} per JEDEC method

RATINGS AND CHARACTERISTIC CURVES

FIG1: Maximum Continuous Power Dissipation

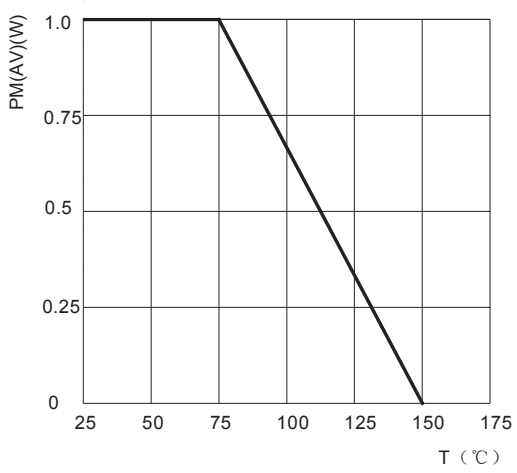


FIG2:Typical Zener Impedance

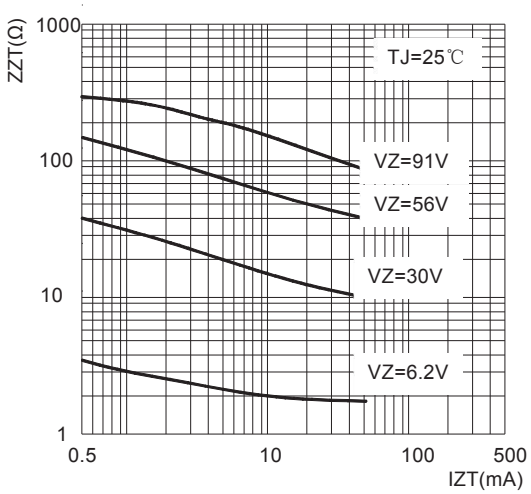


FIG3: Typical Temperature Coefficients

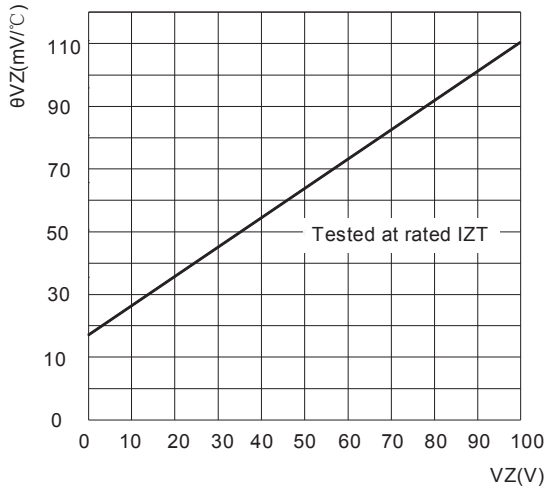


FIG4:Typical Instantaneous Forward Characteristics

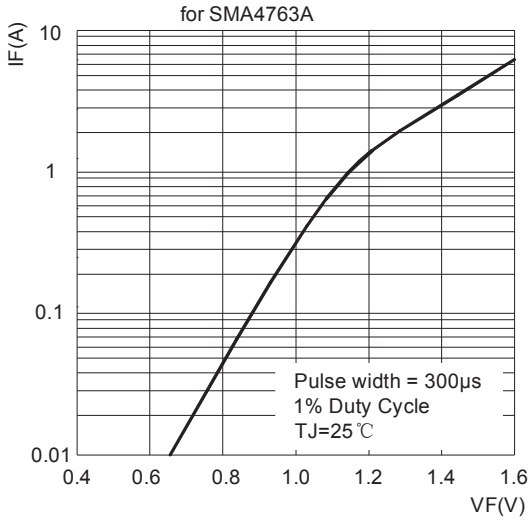


FIG5:Typical Reverse Characteristics