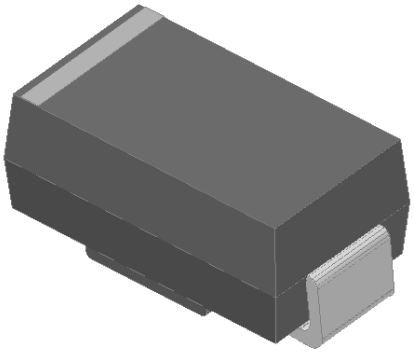
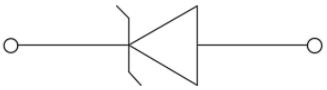
Surface Mount Zener Diodes





Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

Mechanical Data

- **Package**: DO-214AC (SMA)
  Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

■Maximum Ratings (T_a=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	MAX
DC power dissipation at TL = 75 °C	P_D	W	1
Maximum instantaneous forward voltage@ I_F=500mA	V_F	V	1.5
Maximum junction temperature	T_j	℃	-55 to +150
Storage temperature range	T_{stg}	℃	-55 to +150

■Thermal Characteristics （T_a=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	Conditions	VALUE
Thermal resistance(Typical)	$R_{\theta J\text{-}L}$(1)	℃/W	junction to lead	30
	$R_{\theta J\text{-}A}$(1)	℃/W	junction to ambient	170

Note

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

■Electrical Characteristics（T_a=25℃ Unless otherwise specified）

Part Number	Nominal Zener voltage			Test current	Maximum dynamic impedance resistance			Maximum reverse leakage current		Maximum Surge Current	Maximum DC Zener Current
	Min V_Z(1) at I_{ZT}	Typ. V_Z(1) at I_{ZT}	Max V_Z(1) at I_{ZT}	I_{ZT}	Z_{ZT} at I_{ZT}	Z_{ZK} at I_{ZK}	I_{ZK}	I_R	Test voltage V_R	I_{RM}(2)	I_{ZM}
	V	V	V	mA	Ω	Ω	mA	μA	V	mA	mA
SMA4728A	3.14	3.3	3.47	76.0	10.0	400	1.00	100.0	1.0	1370	274.0
SMA4729A	3.42	3.6	3.78	69.0	10.0	400	1.00	100.0	1.0	1255	251.0
SMA4730A	3.71	3.9	4.10	64.0	9.0	400	1.00	50.0	1.0	1160	232.0
SMA4731A	4.09	4.3	4.52	58.0	9.0	400	1.00	10.0	1.0	1050	210.0
SMA4732A	4.47	4.7	4.94	53.0	8.0	500	1.00	10.0	1.0	960	192.0

Part Number	Nominal Zener voltage			Test current	Maximum dynamic impedance resistance			Maximum reverse leakage current		Maximum Surge Current	Maximum DC Zener Current
	Min V_Z[1] at I_{ZT}	Typ. V_Z[1] at I_{ZT}	Max V_Z[1] at I_{ZT}	I_{ZT}	Z_{ZT} at I_{ZT}	Z_{ZK} at I_{ZK}	I_{ZK}	I_R	Test voltage V_R	I_{RM}[2]	I_{ZM}
	V	V	V	mA	Ω	Ω	mA	μA	V	mA	mA
SMA4733A	4.85	5.1	5.36	49.0	7.0	550	1.00	10.0	1.0	885	177.0
SMA4734A	5.32	5.6	5.88	45.0	5.0	600	1.00	10.0	2.0	805	161.0
SMA4735A	5.89	6.2	6.51	41.0	2.0	700	1.00	10.0	3.0	730	146.0
SMA4736A	6.46	6.8	7.14	37.0	3.5	700	1.00	10.0	4.0	660	133.0
SMA4737A	7.13	7.5	7.88	34.0	4.0	700	0.50	10.0	5.0	605	121.0
SMA4738A	7.79	8.2	8.61	31.0	4.5	700	0.50	10.0	6.0	550	110.0
SMA4739A	8.65	9.1	9.56	28.0	5.0	700	0.50	10.0	7.0	500	100.0
SMA4740A	9.50	10.0	10.50	25.0	7.0	700	0.25	10.0	7.6	454	91.0
SMA4741A	10.45	11.0	11.55	23.0	8.0	700	0.25	5.0	8.4	414	83.0
SMA4742A	11.40	12.0	12.60	21.0	9.0	700	0.25	5.0	9.1	380	76.0
SMA4743A	12.35	13.0	13.65	19.0	10.0	700	0.25	5.0	9.9	344	69.0
SMA4744A	14.25	15.0	15.75	17.0	14.0	700	0.25	5.0	11.4	304	61.0
SMA4745A	15.20	16.0	16.80	15.5	16.0	700	0.25	5.0	12.2	285	57.0
SMA4746A	17.10	18.0	18.90	14.0	20.0	750	0.25	5.0	13.7	250	50.0
SMA4747A	19.00	20.0	21.00	12.5	22.0	750	0.25	5.0	15.2	225	45.0
SMA4748A	20.90	22.0	23.10	11.5	23.0	750	0.25	5.0	16.7	205	41.0
SMA4749A	22.80	24.0	25.20	10.5	25.0	750	0.25	5.0	18.2	190	38.0
SMA4750A	25.65	27.0	28.35	9.5	35.0	750	0.25	5.0	20.6	170	34.0
SMA4751A	28.50	30.0	31.50	8.5	40.0	1000	0.25	5.0	22.8	150	30.0
SMA4752A	31.35	33.0	34.65	7.5	45.0	1000	0.25	5.0	25.1	135	27.0
SMA4753A	34.20	36.0	37.80	7.0	50.0	1000	0.25	5.0	27.4	125	25.0
SMA4754A	37.05	39.0	40.95	6.5	60.0	1000	0.25	5.0	29.7	115	23.0
SMA4755A	40.85	43.0	45.15	6.0	70.0	1500	0.25	5.0	32.7	110	22.0
SMA4756A	44.65	47.0	49.35	5.5	80.0	1500	0.25	5.0	35.8	95	19.0
SMA4757A	48.45	51.0	53.55	5.0	95.0	1500	0.25	5.0	38.8	90	18.0
SMA4758A	53.20	56.0	58.80	4.5	110.0	2000	0.25	5.0	42.6	80	16.0
SMA4759A	58.90	62.0	65.10	4.0	125.0	2000	0.25	5.0	47.1	70	14.0
SMA4760A	64.60	68.0	71.40	3.7	150.0	2000	0.25	5.0	51.7	65	13.0
SMA4761A	71.25	75.0	78.75	3.3	175.0	2000	0.25	5.0	56.0	60	12.0
SMA4762A	77.90	82.0	86.10	3.0	200.0	3000	0.25	5.0	62.2	55	11.0
SMA4763A	86.45	91.0	95.55	2.8	250.0	3000	0.25	5.0	69.2	50	10.0
SMA4764A	95.00	100.0	105.00	2.5	350.0	3000	0.25	5.0	76.0	45	9.0
SZ1110A	104.50	110.0	115.50	2.3	450.0	4000	0.25	5.0	83.6	40	8.6
SZ1120A	114.00	120.0	126.00	2.0	550.0	4500	0.25	5.0	91.2	37	7.8
SZ1130A	123.50	130.0	136.50	1.9	700.0	5000	0.25	5.0	98.8	34	7.0

Part Number	Nominal Zener voltage			Test current	Maximum dynamic impedance resistance			Maximum reverse leakage current		Maximum Surge Current	Maximum DC Zener Current
	Min V_Z(1) at I_{ZT}	Typ. V_Z(1) at I_{ZT}	Max V_Z(1) at I_{ZT}	I_{ZT}	Z_{ZT} at I_{ZT}	Z_{ZK} at I_{ZK}	I_{ZK}	I_R	Test voltage V_R	I_{RM}(2)	I_{ZM}
	V	V	V	mA	Ω	Ω	mA	μA	V	mA	mA
SZ1150A	142.50	150.0	157.50	1.7	1000.0	6000	0.25	5.0	114.0	30	6.4
SZ1160A	152.00	160.0	168.00	1.6	1100.0	6500	0.25	5.0	121.6	28	5.8
SZ1180A	171.00	180.0	189.00	1.4	1200.0	7000	0.25	5.0	136.8	25	5.2
SZ1200A	190.00	200.0	210.00	1.2	1900.0	9990	0.25	5.0	152.0	22	4.7
SZ1220A	209.00	220.0	231.00	1.0	1600.0	8000	0.25	5.0	167.2	20	4.0

Notes:

（1）Nominal Zener voltage Range：95% Typ.Vz (1)at Izt----105% Typ.Vz (1)at Izt

（2）Surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on IZT per JEDEC method

■ **Characteristics** (Typical)

FIG1: Power Temperature Derating Crue

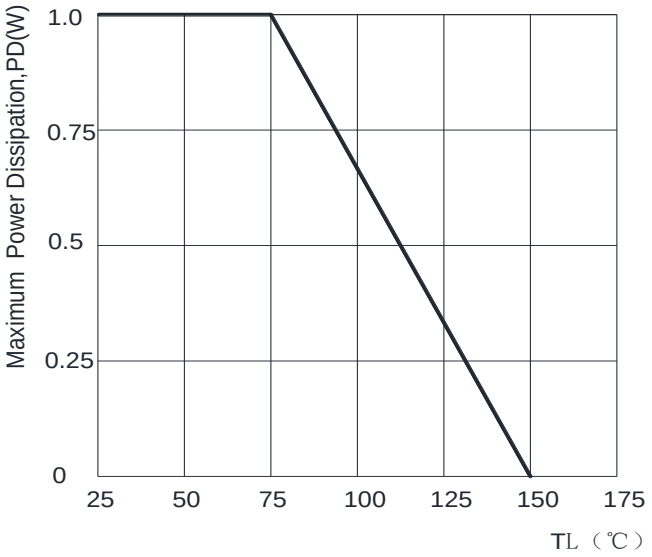


FIG2: Typical Temperature Coefficients

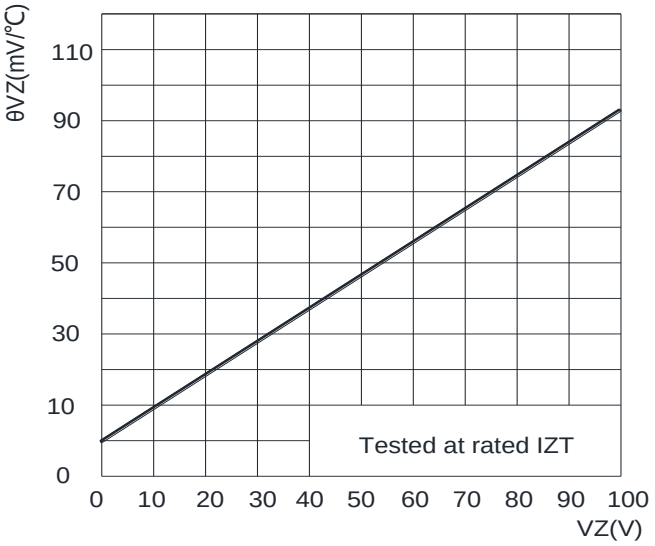


FIG3:Typical Instantaneous Forward Characteristics

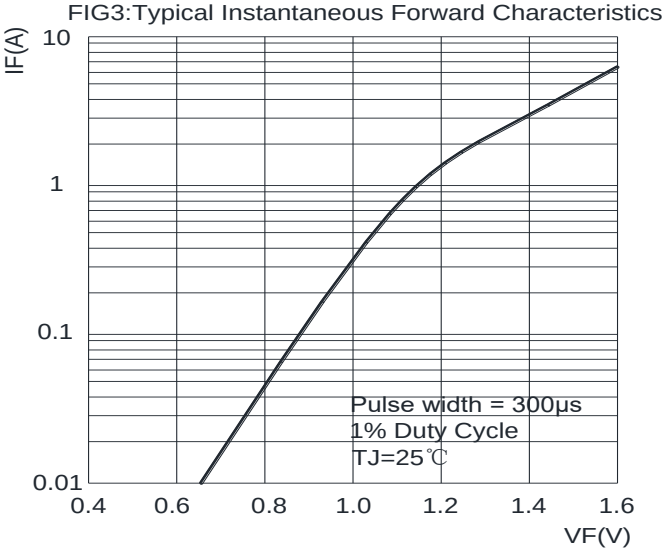
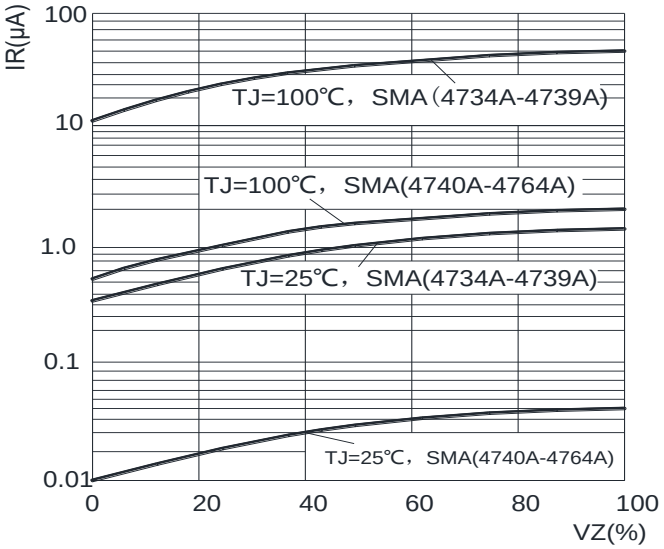


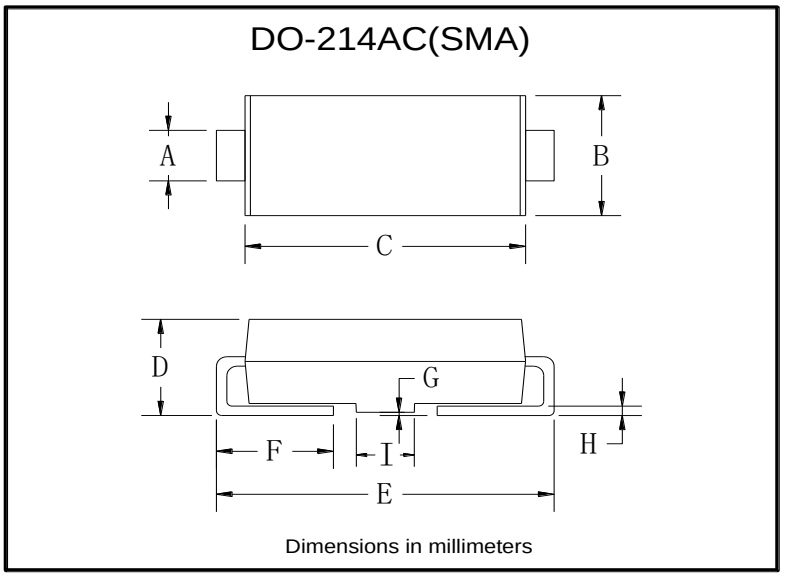
FIG4:Typical Reverse Characteristics



■Ordering Information (Example)

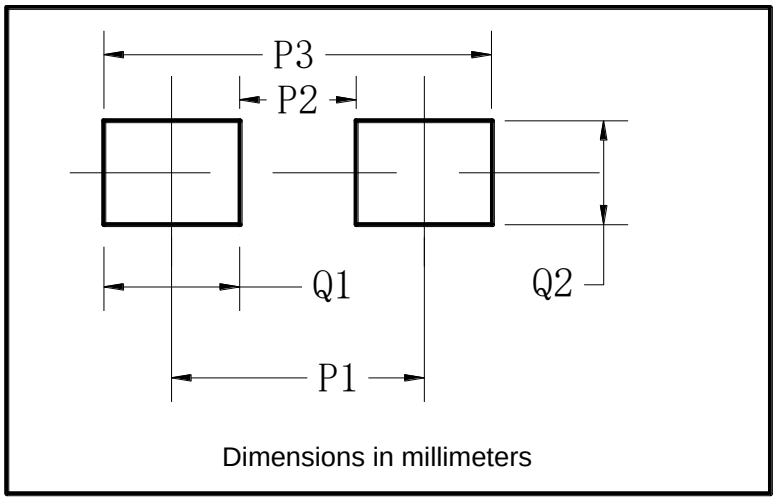
PREFERED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SMA47XXA SERIES	F1	Approximate 0.059	5000	/	80000	13” reel

■ Outline Dimensions



DO-214AC(SMA)		
Dim	Min	Max
A	1.25	1.58
B	2.40	2.83
C	4.00	4.75
D	1.90	2.30
E	4.93	5.28
F	0.76	1.41
G	0.05	0.20
H	0.15	0.31
I	1.70	2.10

■Suggested Pad Layout



DO-214AC(SMA)	
Dim	**Millimeters**
P1	4.00
P2	1.50
P3	6.50
Q1	2.50
Q2	1.70

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