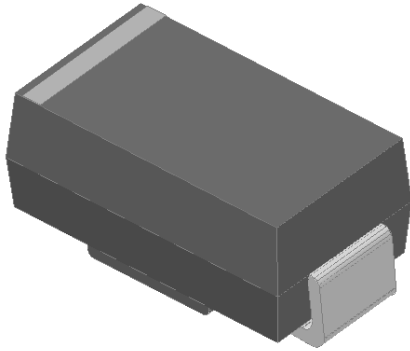


Surface Mount Zener Diodes



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
- Part no. with suffix "Q" means AEC-Q101 qualified

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°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MAX
DC power dissipation at T _L = 75 °C	P _D	W	1
Maximum instantaneous forward voltage@ I _F =200mA	V _F	V	1.2
Maximum junction temperature	T _j	°C	-55 to +150
Storage temperature range	T _{stg}	°C	-55 to +150

■Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	Conditions	VALUE
Thermal resistance(Typical)	R _{θJ-L} ⁽¹⁾	°C/W	junction to lead	30
	R _{θJ-A} ⁽¹⁾	°C/W	junction to ambient	120

Note

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.4" x 0.4" (10 mm x 10 mm) copper pad areas



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■Electrical Characteristics (T_a=25°C Unless otherwise specified)

Part Number	Nominal Zener voltage			Test current	Maximum dynamic impedance resistance			Maximum reverse leakage 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 _{ZM}
	V	V	V	mA	Ω	Ω	mA	μA	V	mA
SMA4735AQ	5.89	6.2	6.51	41.0	2.0	700	1.00	10.0	3.0	146.0
SMA4736AQ	6.46	6.8	7.14	37.0	3.5	700	1.00	10.0	4.0	133.0
SMA4737AQ	7.13	7.5	7.88	34.0	4.0	700	0.50	10.0	5.0	121.0
SMA4738AQ	7.79	8.2	8.61	31.0	4.5	700	0.50	10.0	6.0	110.0
SMA4739AQ	8.65	9.1	9.56	28.0	5.0	700	0.50	10.0	7.0	100.0
SMA4740AQ	9.50	10.0	10.50	25.0	7.0	700	0.25	10.0	7.6	91.0
SMA4741AQ	10.45	11.0	11.55	23.0	8.0	700	0.25	5.0	8.4	83.0
SMA4742AQ	11.40	12.0	12.60	21.0	9.0	700	0.25	5.0	9.1	76.0
SMA4743AQ	12.35	13.0	13.65	19.0	10.0	700	0.25	5.0	9.9	69.0
SMA4744AQ	14.25	15.0	15.75	17.0	14.0	700	0.25	5.0	11.4	61.0
SMA4745AQ	15.20	16.0	16.80	15.5	16.0	700	0.25	5.0	12.2	57.0
SMA4746AQ	17.10	18.0	18.90	14.0	20.0	750	0.25	5.0	13.7	50.0
SMA4747AQ	19.00	20.0	21.00	12.5	22.0	750	0.25	5.0	15.2	45.0
SMA4748AQ	20.90	22.0	23.10	11.5	23.0	750	0.25	5.0	16.7	41.0
SMA4749AQ	22.80	24.0	25.20	10.5	25.0	750	0.25	5.0	18.2	38.0
SMA4750AQ	25.65	27.0	28.35	9.5	35.0	750	0.25	5.0	20.6	34.0
SMA4751AQ	28.50	30.0	31.50	8.5	40.0	1000	0.25	5.0	22.8	30.0
SMA4752AQ	31.35	33.0	34.65	7.5	45.0	1000	0.25	5.0	25.1	27.0
SMA4753AQ	34.20	36.0	37.80	7.0	50.0	1000	0.25	5.0	27.4	25.0
SMA4754AQ	37.05	39.0	40.95	6.5	60.0	1000	0.25	5.0	29.7	23.0
SMA4755AQ	40.85	43.0	45.15	6.0	70.0	1500	0.25	5.0	32.7	22.0
SMA4756AQ	44.65	47.0	49.35	5.5	80.0	1500	0.25	5.0	35.8	19.0
SMA4757AQ	48.45	51.0	53.55	5.0	95.0	1500	0.25	5.0	38.8	18.0
SMA4758AQ	53.20	56.0	58.80	4.5	110.0	2000	0.25	5.0	42.6	16.0
SMA4759AQ	58.90	62.0	65.10	4.0	125.0	2000	0.25	5.0	47.1	14.0
SMA4760AQ	64.60	68.0	71.40	3.7	150.0	2000	0.25	5.0	51.7	13.0
SMA4761AQ	71.25	75.0	78.75	3.3	175.0	2000	0.25	5.0	56.0	12.0
SMA4762AQ	77.90	82.0	86.10	3.0	200.0	3000	0.25	5.0	62.2	11.0
SMA4763AQ	86.45	91.0	95.55	2.8	250.0	3000	0.25	5.0	69.2	10.0
SMA4764AQ	95.00	100.0	105.00	2.5	350.0	3000	0.25	5.0	76.0	9.0

Notes:

(1) Nominal Zener voltage Range: 95% Typ.V_Z (1)at I_{ZT}----105% Typ.V_Z (1)at I_{ZT}



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■ Characteristics (Typical)

Fig1 : Power Temperature Derating Curve

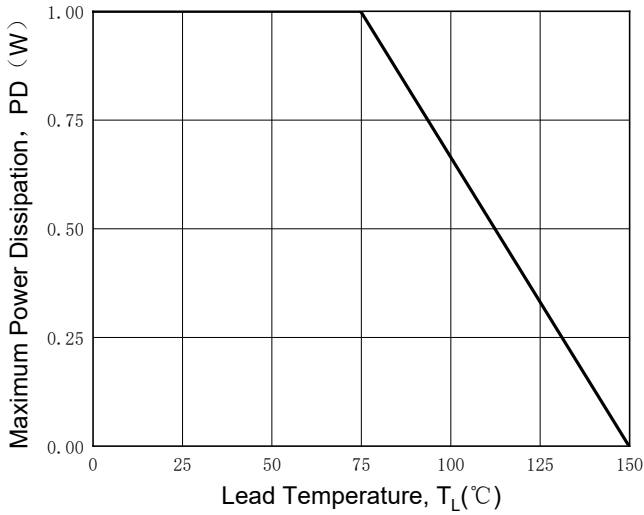


Fig2 : Typical Zener Breakdown Characteristics

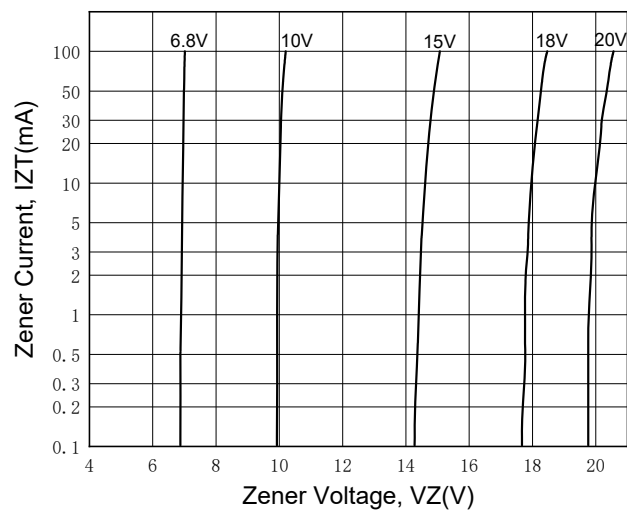
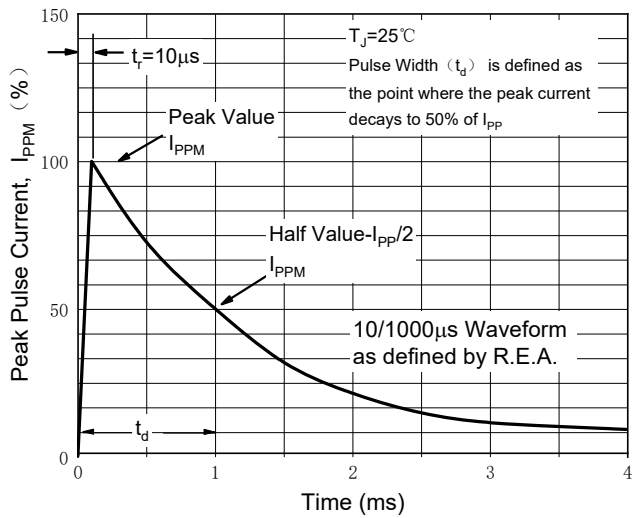


Fig.3 Pulse Waveform





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Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SMA4735AQ ~ SMA4764AQ	F2	Approximate 0.067	7500	120000	13" reel

Marking Information

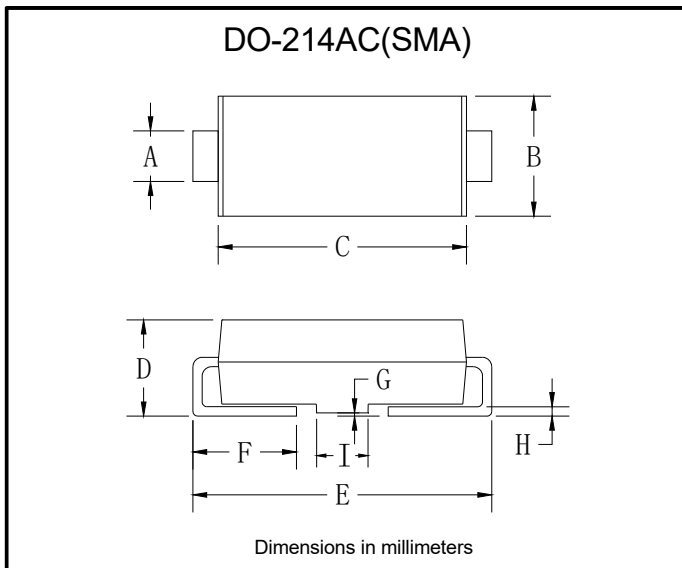


Note:

- All marking is at middle of the product body
- All marking is in laser printing
- XXXXX is marking code, like SMA4735AQ marking code is 4735
- Body color: Black
- YWW is date code, "Y" is year. "WW" is week.

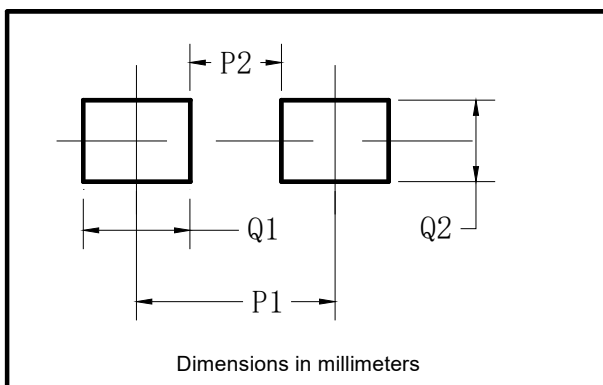
For instance:
 The 45th week of 2021, date code is 145
 The 45th week of 2022, date code is 245

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
Q1	2.50
Q2	1.70



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