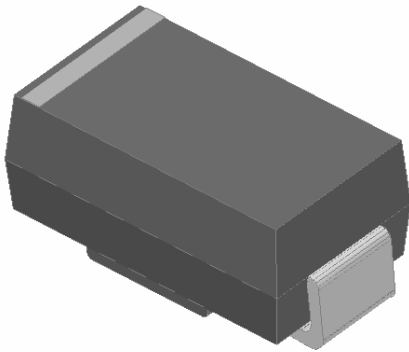




Surface Mount Zener Diodes

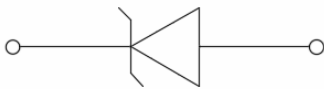


Features

- 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	Units	Symbol	Value
Maximum instantaneous forward voltage @ I _F = 20.0 mA	V	V _F	1.5
Maximum junction temperature	°C	T _j	-55 to +150
Storage temperature range	°C	T _{stg}	-55 to +150

■Thermal Characteristics T_a=25 °C Unless otherwise specified

PARAMETER	Units	Value
Thermal resistance from junction to ambient	°C/W	12.0

Note: Thermal resistance from junction to ambient and from junction to lead are measured on P.C.B. with 0.4 " x 0.4 " (10 mm x 10 mm) pads.



SMA2Z6.8AQ THRU SMA2Z220AQ

■Electrical Characteristics $T_a=25$ Unless otherwise specified

Part Number	Nominal Zener voltage			Test current	Maximum dynamic impedance resistance			Maximum reverse leakage current		Maximum DC Zener Current
	Min VZ ⁽¹⁾ at IZT	Typ. VZ ⁽¹⁾ at IZT	Max VZ ⁽¹⁾ at IZT	IZT	ZZT at IZT	ZZK at IZK	IZK	IR	Test voltage VR	IZM
	V	V	V	mA	Ω	Ω	mA	μ A	V	mA
SMA2Z6.8AQ	6.46	6.8	7.14	73.5	2.0	700	1.00	10.0	4.0	266.0
SMA2Z7.5AQ	7.13	7.5	7.88	66.5	2.0	700	0.50	10.0	5.0	242.0
SMA2Z8.2AQ	7.79	8.2	8.61	61.0	2.3	700	0.50	10.0	6.0	220.0
SMA2Z9.1AQ	8.65	9.1	9.56	55.0	2.5	700	0.50	10.0	7.0	200.0
SMA2Z10AQ	9.50	10.0	10.50	50.0	3.5	700	0.25	10.0	7.6	182.0 SMA2Zm η



■ Characteristics (Typical)

Fig1 Power Temperature Derating Curve

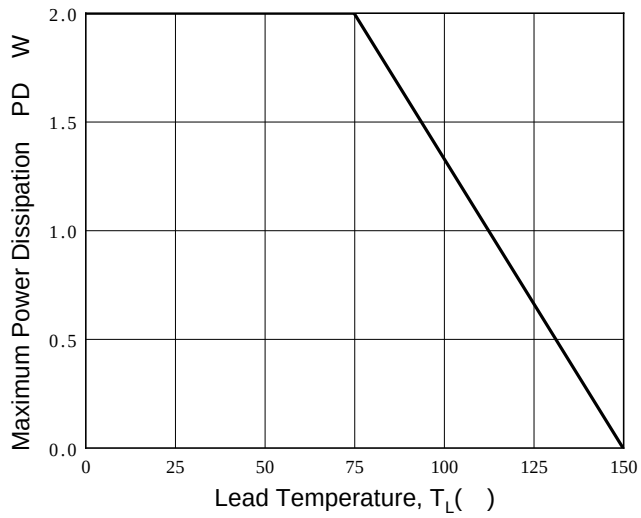
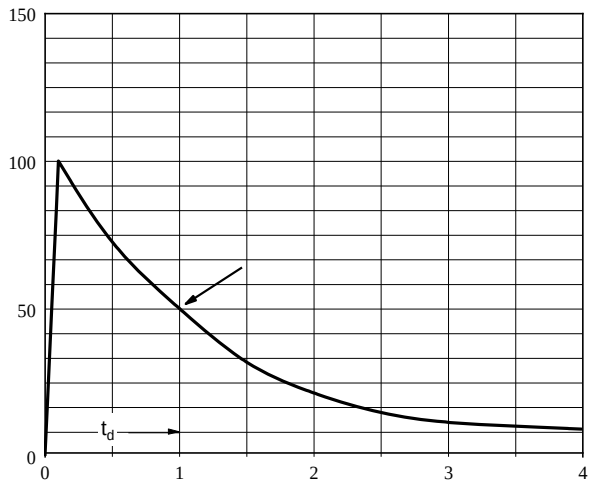


Fig.3 Pulse $\bar{O} = 3$

2 M $\frac{3}{4}$ s



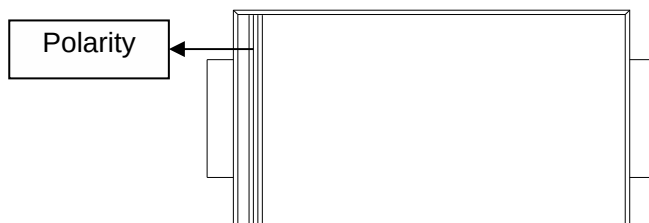


SMA2Z6.8AQ THRU SMA2Z220AQ

■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SMA2Z6.8AQ~SMA2Z220AQ	F2	Approximate 0.067	7500	120000	13" reel

■ Marking Information



Note:
1. All marking is at middle of the product body
2. All marking is in laser printing

■ 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	1.7	2.1

■ Suggested Pad Layout

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



SMA2Z6.8AQ THRU SMA2Z220AQ

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