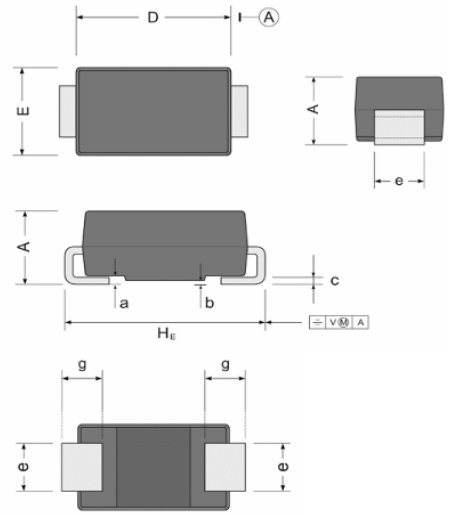
SMD Transient Voltage Suppressor Diodes

Primary characteristics		
Parameter	**Value**	**Unit**
V_R range nom.	200 to 440	V
Power rating	400	W

Features

- **SMA (DO-214AC)** case for easy automatic insertion.
- Pb-free and **RoHS** compliant
- Glass passivated junction
- Low inductance
- Plastic package has Underwriters Laboratory Flammability
- Terminals: Solderable per MIL-STD-750, Method 2026

Case dimensions



SMA (DO-214AC)

Unit	A	D	E	H_E	c	e	g	b	a
MIN	1.9	4.0	2.5	4.7	0.15	1.3	0.9	0.05	0.3
MAX	2.45	4.5	2.8	5.2	0.31	1.8	1.5	0.2	

Part numbering system		
SMAJ	**250**	**A**
↓	↓	↓
Series code	Reverse standoff voltage marking (see: Characteristics table)	Unidirectional: A Bidirectional: CA

Absolute maximum ratings and general electrical characteristics (T_a = 25°C)				
Parameter		**Symbol**	**Value**	**Unit**
Peak pulse power dissipation [1) 2)]		P_{PPM}	400	W
Peak forward surge current [3) 4)]		I_{FSM} (UNI)	40	A
Peak pulse current on 10/1000 µs waveform [1)]		I_{PPM}	Characteristics table	A
ESD voltage per IEC6100-4-2	Contact	V_{ESD1}	±30	kV
	Air	V_{ESD2}	±30	
Operating junction temperature and storage temperature range		T_j, T_s	-55 ~ 150	°C

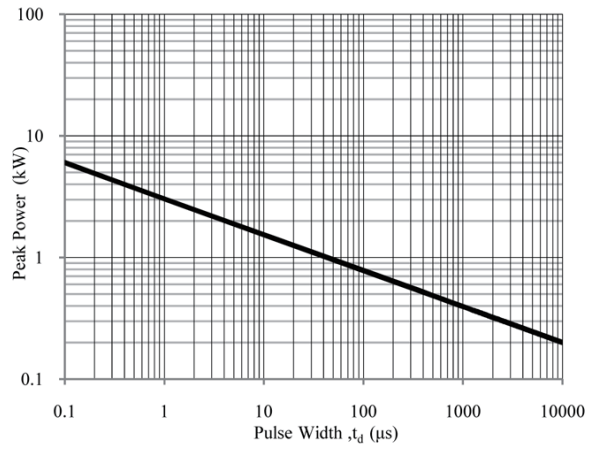
Notes:
1) Non-repetitive current pulse
2) Mounted on 5mm² copper pads to each terminal
3) Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load (JEDEC method)
4) Peak pulse power waveform is 10/1000µS

Characteristics table (T_a = 25°C)

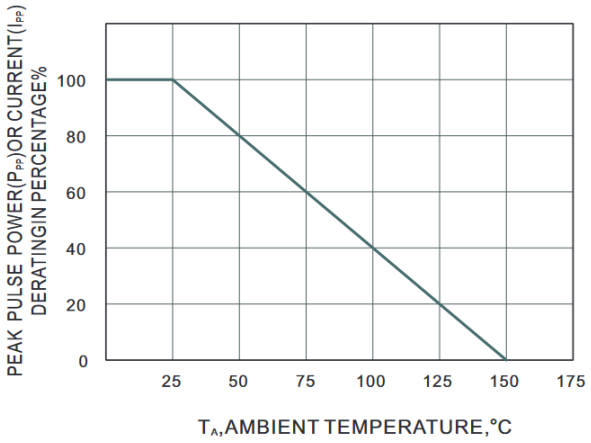
Part number (UNI)	Part number (BI)	Marking		Reverse stand off voltage	Breakdown voltage @I_T		Test current	Maximum clamping voltage @I_{PP}	Maximum peak pulse current	Maximum reverse leakage @V_R
					V_{BR}					
				V_R	MIN	MAX	I_T	V_C	I_{PP}	I_R
		UNI	BI	V	V	V	mA	V	A	µA
SMAJ200A	SMAJ200CA	SV	VV	200	224	247	1	324	1.2	1
SMAJ220A	SMAJ220CA	SX	VX	220	246	272	1	356	1.1	1
SMAJ250A	SMAJ250CA	SZ	VZ	250	279	309	1	405	1.0	1
SMAJ300A	SMAJ300CA	TE	UE	300	335	371	1	486	0.8	1
SMAJ350A	SMAJ350CA	TG	UG	350	391	432	1	567	0.7	1
SMAJ400A	SMAJ400CA	TK	UK	400	447	494	1	648	0.6	1
SMAJ440A	SMAJ440CA	TM	UM	440	492	543	1	713	0.6	1

For bidirectional type having V_{RWM} of 10 volts and less, the I_R limit is double.
For parts without A (V_{BR} is ± 10% and V_C is 5% higher than with A parts).

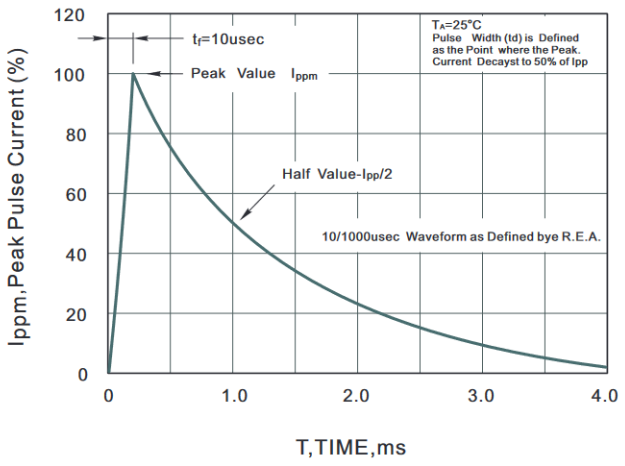
Peak pulse power rating curve



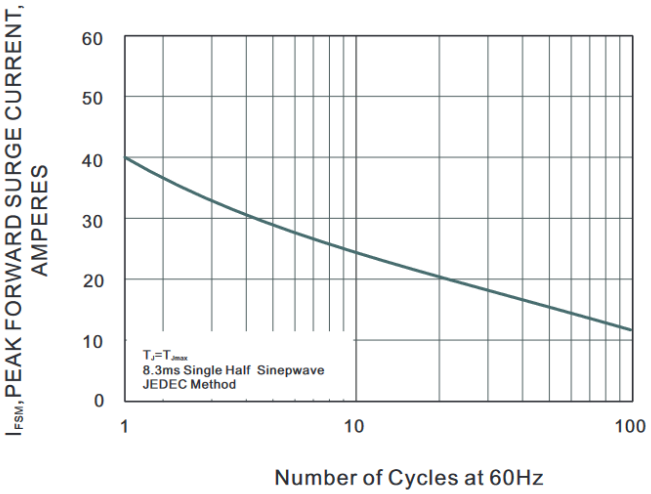
Forward current derating curve

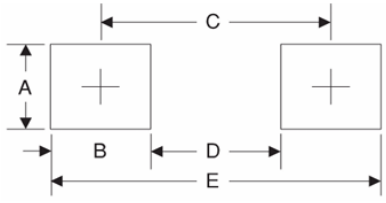


Peak pulse power rating curve



Forward current derating curve



Suggested soldering pad layout		
	**Symbol**	**Unit (mm)**
	A	1.68
	B	1.52
	C	3.90
	D	2.41
	E	5.45
SMA (DO-214AC)		

Ordering information		
Part Number	**Package**	**Shipping Quantity**
SMAJ200A(CA) ~ SMAJ440A(CA)	SMA (DO-214AC)	**7 500 pcs / reel**

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