

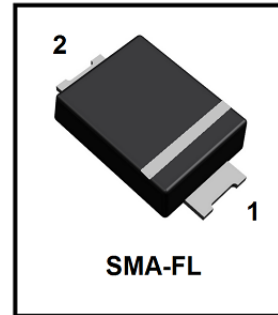
# S-SZAF \*\*\*A Series

Zener voltage regulator diodes

1 Watt Steady State

## Feature

- \* 1 W SMA-FL
- \* Zener voltage regulator diodes
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* We declare that the material of product compliance with RoHS requirements.
- \* Guarding for over voltage protection
- \* High temperature soldering guaranteed: 260°C/10 seconds at terminals
- \* IEC61000-4-2 ESD Air Contact  $\geq \pm 15KV$
- \* MSL: 1
- \* We declare that the material of product compliance with RoHS requirements and Halogen Free.
- \* S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.



## Mechanical Data

**Case:** JEDEC SMA-FL molded plastic

**Terminals :**Plated terminals, solderable per MIL-STD-750,Method 2026

**Polarity:** Color band denoted cathode except Bipolar

**Mounting Position:** Any

**Weight :** Approximated 0.0327 gram

## 1.Electrical Characteristic

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

RATING	SYMBOL	VALUE	UNITS
Steady State Power Dissipation at $T_A = 50^\circ C$ (Note1)	$P_{M(AV)}$	1	Watts
Z-current	$I_Z$	PV/VZ	mA
Operating and Storage Temperature Range	$T_J, T_{STG}$	-50 to +150	°C

NOTES:

1. 8.0mm<sup>2</sup> (.013mm thick) land areas

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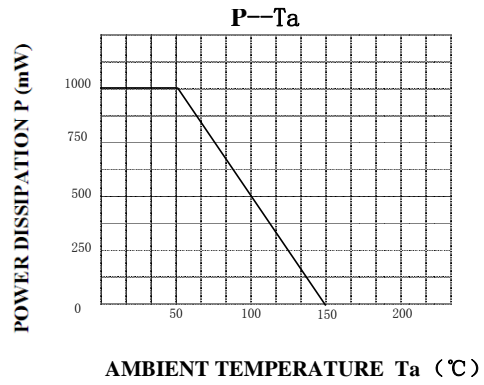
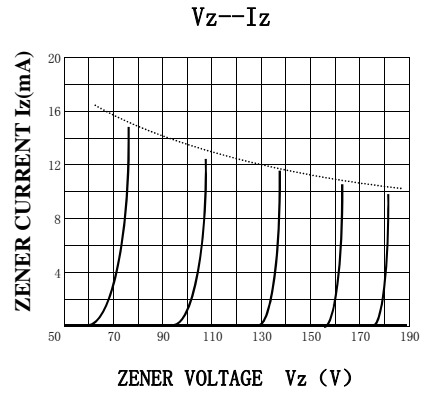
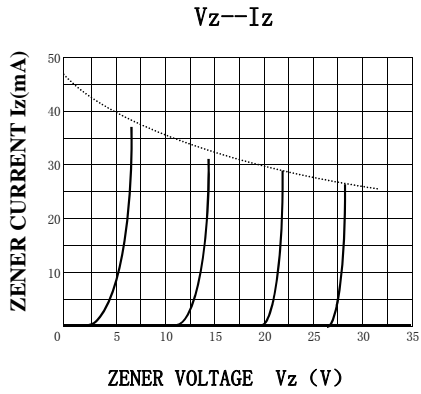
## 2.Product Characteristic

Vz tolerance : ±5%; Ta=25°C Vfmax =1.2V @ IF = 200mA P=1 W

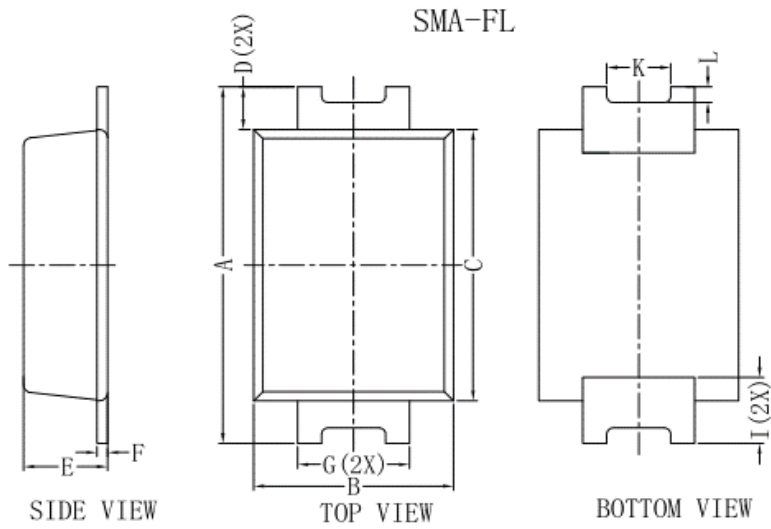
Type	Device marking code	Zener	Current	A and B Sufflx only			Leakage Current		Maximum Regulator Current2)
		Voltage	I zt	Z zt @ I zt	Z zk@ Izk	Z zk@ Izk	I <sub>R</sub>	V <sub>R</sub>	I <sub>ZM</sub> @ Tamb =50 ° C
		Vz@Lzt							
		Volts	mA	Ohms	Ohms	m A	uA Max	Volts	mA
S-SZAF2.4A	Z2.4	2.4	102	30	1200	1	100	1.0	378
S-SZAF2.5A	Z2.5	2.5	98	30	1250	1		1.0	362
S-SZAF2.7A	Z2.7	2.7	90	30	1300	1		1.0	334
S-SZAF2.8A	Z2.8	2.8	87	30	1400	1		1.0	324
S-SZAF3.0A	Z3.0	3.0	82	29	1600	1		1.0	302
S-SZAF3.3A	Z3.3	3.3	76	28	400	1		1.0	276
S-SZAF3.6A	Z3.6	3.6	69	24	400	1		1.0	252
S-SZAF3.9A	Z3.9	3.9	64	23	400	1		1.0	238
S-SZAF4.3A	Z4.3	4.3	58	22	400	1		1.0	214
S-SZAF4.7A	Z4.7	4.7	53	19	400	1		1.0	194
S-SZAF5.1A	Z5.1	5.1	49	7	550	1	1.0	178	
S-SZAF5.6A	Z5.6	5.6	45	5	600		2.0	164	
S-SZAF6.2A	Z6.2	6.2	41	2	700		3.0	146	
S-SZAF6.8A	Z6.8	6.8	37	4	1300		4	133	
S-SZAF7.5A	Z7.5	7.5	34	4.5	1300	0.5	70	5	121
S-SZAF8.2A	Z8.2	8.2	31	5.5	1300	0.5		6	110
S-SZAF9.1A	Z9.1	9.1	28	6	1300	0.5		7	100
S-SZAF10A	Z10	10	25	7	1300	0.25	2	7.6	91
S-SZAF11A	Z11	11	23	8	1300			8.4	83
S-SZAF12A	Z12	12	21	9	1300			9.1	76
S-SZAF13A	Z13	13	19	10	1300			9.9	69
S-SZAF15A	Z15	15	17	14	1300			11.4	61
S-SZAF16A	Z16	16	15.5	16	1300		12.2	57	
S-SZAF18A	Z18	18	14	20	1300		13.7	50	
S-SZAF20A	Z20	20	12.5	22	1300		15.2	45	
S-SZAF22A	Z22	22	11.5	23	1300		16.7	41	
S-SZAF24A	Z24	24	10.5	25	1300		18.2	38	
S-SZAF27A	Z27	27	9.5	35	1300	20.6	34		
S-SZAF30A	Z30	30	8.5	40	1500	22.8	30		
S-SZAF33A	Z33	33	7.5	45	1500	25.1	27		
S-SZAF36A	Z36	36	7	50	1500	27.4	25		
S-SZAF39A	Z39	39	6.5	60	1500	29.7	23		
S-SZAF43A	Z43	43	6	70	2500	32.7	22		
S-SZAF47A	Z47	47	5.5	80	2500	35.8	19		
S-SZAF51A	Z51	51	5	95	2500	38.8	18		
S-SZAF56A	Z56	56	4.5	110	2500	42.6	16		
S-SZAF62A	Z62	62	4	125	2500	47.1	14		
S-SZAF68A	Z68	68	3.7	150	2500	51.7	13		
S-SZAF75A	Z75	75	3.3	175	2500	56	12		
S-SZAF82A	Z82	82	3	200	3000	62.2	11		
S-SZAF91A	Z91	91	2.8	250	3000	69.2	10		
S-SZAF100A	Z100	100	2.5	350	3000	76	9		
S-SZAF110A	Z110	110	2	550	5000	83	8		
S-SZAF120A	Z120	120	1.5	750	5500	90	7		
S-SZAF130A	Z130	130	1	900	6000	98	6		
S-SZAF150A	Z150	150	1	1200	6500	113	6		
S-SZAF160A	Z160	160	1	1350	7000	120	6		
S-SZAF180A	Z180	180	1	1650	8500	135	5		
S-SZAF200A	Z200	200	1	1950	10000	150	4		
S-SZAF220A	Z220	220	1	2300	12000	165	4		

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## 3.Characteristic Curves



## 4. OUTLINE AND DIMENSIONS



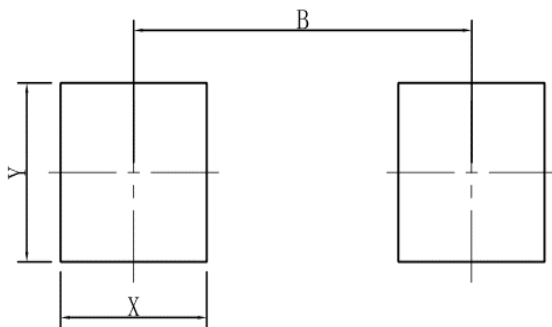
SMA-FL			
DIM	MIN	MAX	Typ.
A	4.40	4.80	4.60
B	2.30	2.70	2.60
C	3.30	3.70	3.50
D	-	-	0.55
E	0.90	1.20	1.05
F	0.11	0.21	0.17
G	1.30	1.50	1.40
I	-	-	0.90
K	-	-	0.80
L	-	-	0.20

All Dimensions in mm

### GENERAL NOTES

1. Top package surface finish  $Ra0.4 \pm 0.2 \mu m$
2. Bottom package surface finish  $Ra0.7 \pm 0.2 \mu m$

## 5. SOLDERING FOOTPRINT



SMA-FL	
DIM	(mm)
X	1.60
Y	1.80
B	3.70