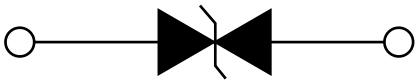
1.Features

- For surface mounted applications in order to optimize board space
- Glass passivated junction
- Built-in strain relief
- Excellent clamping capability
- Low profile package
- Low inductance
- Excellent clamping capability
- Fast response time: typically less than 1.0 ps from 0 volts to BV min
- Typical IR less than 1μA above 10V
- High temperature soldering guaranteed: 250°C/10 seconds at terminals

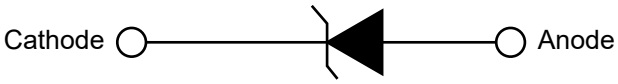
2.Mechanical Data

- Case: JEDEC DO-214AC Molded plastic
- Terminal： Solder plated, solderable per MIL-STD-750, Method 2026
- Weight: 0.002 ounces, 0.061 grams
- Polarity: Color band denoted positive end (cathode) except Bipolar
- Standard Packaging: 12mm tape (EIA STD RS-481)

3.Pinning information



Bi-directional



Uni-directional

SMA

4.Maximum Ratings And Electrical Characteristics

Parameter		Symbol	Value	Units
Peak Pulse Power Dissipation at T_A=25 °C, T_P=1ms (Note 1)		P_{PPM}	400	Watts
Maximum Instantaneous Forward Voltage at 25.0A for Unidirectional Only		V_F	3.5	Volts
Steady State Power Dissipation at T_L = 75°C Lead lengths .375", 9.5mm (Note 2)		P_D	3.3	Watts
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load, (JEDEC Method)(Note 3)		I_{FSM}	40	Amps
ESD Voltage per IEC6100-4-2	Contact	V_{ESD1}	±30	kV
	Air	V_{ESD2}	±30	kV
Junction Temperature and Storage Temperature Range		T_J,T_{STG}	-55 to 150	°C

Notes:

1. Non-repetitive current pulse, per Fig.3 and derated above T_A=25°C per Fig.2.
2. Mounted on 5.0mm ^{2} (0.03mm thick) Copper Pads to each termina.
3. 8.3ms single half sine-wave, or equivalent square wave, Duty cycle=4 pulses per minutes maximum.

5.Electrical Characteristics (T_A=25 °C unless otherwise noted)

P4SMA PART NUMBER			MARKING CODE		REVERSE STAND-OFF VOLTAGE	BREAKDOWN VOLTAGE	BREAKDOWN VOLTAGE	TEST CURRENT	MAXIMUM CLAMPING VOLTAGE	PEAK PULSE CURRENT	REVERSE LEAKAGE
			UNI-POLAR	BI-POLAR	V_{RWM}(V)	V_{BR}(V)	V_{BR}(V)	I_T	@I_{PP}		@V_{RWM}
						MIN.@I_T	MAX.@I_T	(mA)	V_C(V)	I_{PP}(A)	I_R(μA)
P4SMA	6.8A	6.8CA	6V8A	6V8C	5.8	6.45	7.14	10	10.5	39	1000
P4SMA	7.5A	7.5CA	7V5A	7V5C	6.4	7.13	7.88	10	11.3	36.3	500
P4SMA	8.2A	8.2CA	8V2A	8V2C	7.02	7.79	8.61	10	12.1	33.9	200
P4SMA	9.1A	9.1CA	9V1A	9V1C	7.78	8.65	9.55	1	13.4	30.6	50
P4SMA	10A	10CA	10A	10C	8.55	9.5	10.5	1	14.5	28.3	10
P4SMA	11A	11CA	11A	11C	9.4	10.5	11.6	1	15.6	26.3	5
P4SMA	12A	12CA	12A	12C	10.2	11.4	12.6	1	16.7	24.6	5
P4SMA	13A	13CA	13A	13C	11.1	12.4	13.7	1	18.2	22.5	1
P4SMA	15A	15CA	15A	15C	12.8	14.3	15.8	1	21.2	19.3	1
P4SMA	16A	16CA	16A	16C	13.6	15.2	16.8	1	22.5	18.2	1
P4SMA	18A	18CA	18A	18C	15.3	17.1	18.9	1	25.5	16.1	1
P4SMA	20A	20CA	20A	20C	17.1	19	21	1	27.7	14.8	1
P4SMA	22A	22CA	22A	22C	18.8	20.9	23.1	1	30.6	13.4	1
P4SMA	24A	24CA	24A	24C	20.5	22.8	25.2	1	33.2	12.3	1
P4SMA	27A	27CA	27A	27C	23.1	25.7	28.4	1	37.5	10.9	1
P4SMA	30A	30CA	30A	30C	25.6	28.5	31 5	1	41.4	9.9	1
P4SMA	33A	33CA	33A	33C	28.2	31.4	34.7	1	45.7	9	1
P4SMA	36A	36CA	36A	36C	30.8	34.2	37.8	1	49.9	8.2	1
P4SMA	39A	39CA	39A	39C	33.3	37.1	41	1	53.9	7.6	1
P4SMA	43A	43CA	43A	43C	36.8	40.9	45.2	1	59.3	6.9	1
P4SMA	47A	47CA	47A	47C	40.2	44.7	49.4	1	64.8	6.3	1
P4SMA	51A	51CA	51A	51C	43.6	48.5	53.6	1	70.1	5.8	1

P4SMA	56A	56CA	56A	56C	47.8	53.2	58.8	1	77	5.3	1
P4SMA	62A	62CA	62A	62C	53	58.9	65.1	1	85	4.8	1
P4SMA	68A	68CA	68A	68C	58.1	64.6	71.4	1	92	4.5	1
P4SMA	75A	75CA	75A	75C	64.1	71.3	78.8	1	103	4	1
P4SMA	82A	82CA	82A	82C	70.1	77.9	86.1	1	113	3.6	1
P4SMA	91A	91CA	91A	91C	77.8	86.5	95.5	1	125	3.3	1
P4SMA	100A	100CA	100A	100C	85.5	95	105	1	137	3	1
P4SMA	110A	110CA	110A	110C	94	105	116	1	152	2.7	1
P4SMA	120A	120CA	120A	120C	102	114	126	1	165	2.5	1
P4SMA	130A	130CA	130A	130C	111	124	137	1	179	2.3	1
P4SMA	150A	150CA	150A	150C	128	143	158	1	207	2	1
P4SMA	160A	160CA	160A	160C	136	152	168	1	219	1.9	1
P4SMA	170A	170CA	170A	170C	145	162	179	1	234	1.8	1
P4SMA	180A	180CA	180A	180C	154	171	189	1	246	7	1
P4SMA	200A	200CA	200A	200C	171	190	210	1	274	1.5	1
P4SMA	220A	220CA	220A	220C	185	209	231	1	328	1.3	1
P4SMA	250A	250CA	250A	250C	214	237	263	1	344	1.2	1
P4SMA	300A	300CA	300A	300C	256	285	315	1	414	1	1
P4SMA	350A	350CA	350A	350C	300	332	368	1	482	0.9	1
P4SMA	400A	400CA	400A	400C	342	380	420	1	548	0.8	1
P4SMA	440A	440CA	440A	440C	376	418	462	1	602	0.7	1
P4SMA	480A	480CA	480A	480C	408	456	504	1	658	0.6	1
P4SMA	510A	510CA	510A	510C	434	485	535	1	698	0.6	1
P4SMA	530A	530CA	530A	530C	450	503.5	556.5	1	725	0.6	1
P4SMA	540A	540CA	540A	540C	459	513	567	1	740	0.5	1
P4SMA	550A	550CA	550A	550C	467	522.5	577.5	1	760	0.5	1

Notes:

For bidirectional type having V_{RWM} of 10 volts and less, the I_R limit is double.

The available parts are "A" type only, the parts without A (V_{BR} is ± 10%) are not available.

6.Typical characteristic

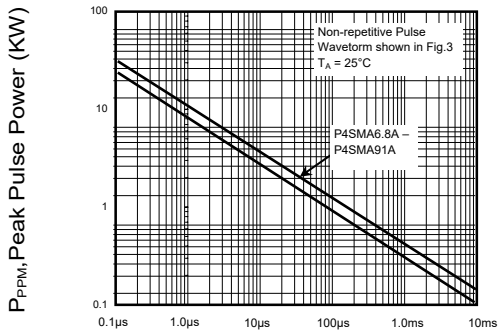


Figure 1: Peak Pulse Power Rating Curve

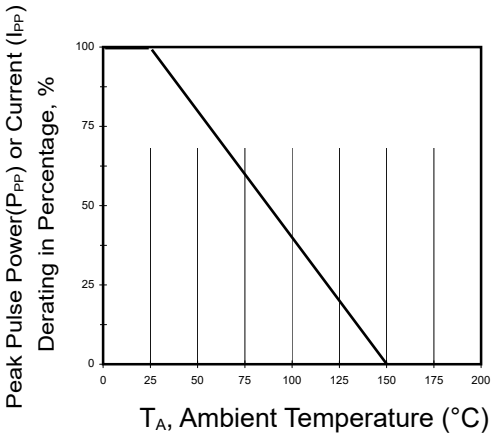


Figure 2: Pulse Derating Curve

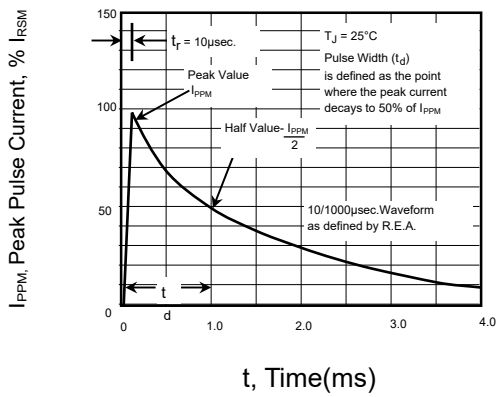


Figure 3: Pulse Waveform

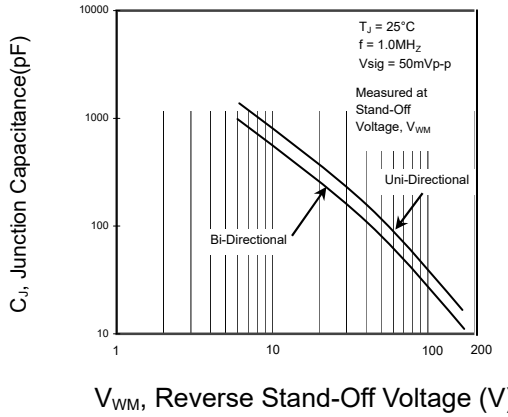


Figure 4: Typical Junction Capacitance

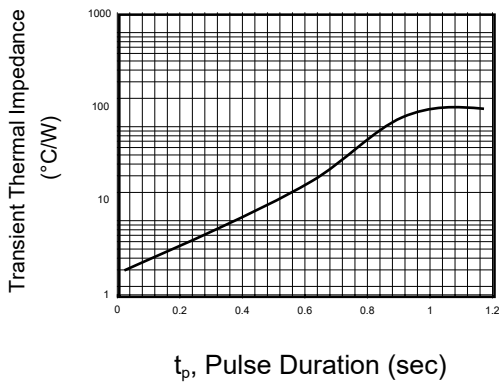


Figure 5: Transient Thermal Impedance

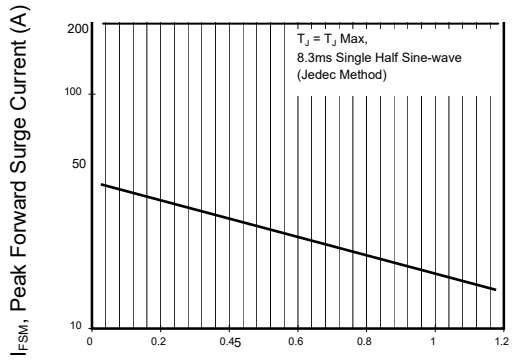
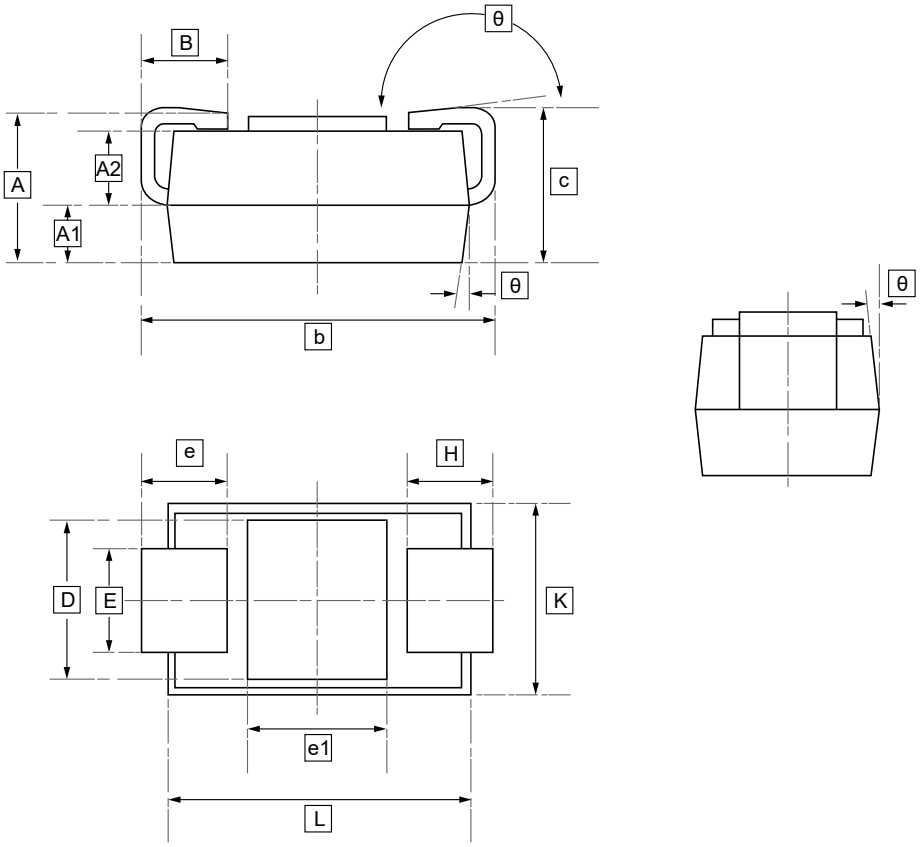


Figure 6: Maximum Non-Repetitive Peak Forward Surge Current Uni-Directional Only

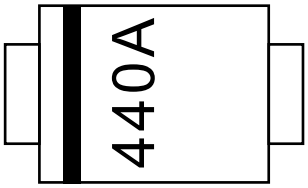
7.SMA Package Outline Dimensions



DIMENSIONS (mm are the original dimensions)

Symbol	A	A1	A2	B	b	c	D	E	e1	L	K	θ
Min	1.95	0.70	0.90	0.78	4.93	1.95	2.0	1.25	1.90	4.20	2.35	0°
Max	2.29	0.90	1.10	1.52	5.28	2.25	2.25	1.65	2.10	4.40	2.79	5°

8.Ordering information



Order Code	Package	Base QTY	Delivery Mode
UMW P4SMAxxA	SMA	1800	Tape and reel
UMW P4SMAxxCA	SMA	1800	Tape and reel

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