

## TVS Diodes - Surface Mount - 400 Watt Specifications - P4SMAJ Series Electrical Characteristics

Part Number*	Uni Part Marking	Bi Part Marking	Rated Standoff Voltage V <sub>wm</sub> (Volts)	Breakdown Voltage		Maximum Stand By Current @V <sub>wm</sub> + I <sub>d</sub> (μA)	10/1000μs Maximum Clamping Voltage @I <sub>ppm</sub> # V <sub>c</sub> Max (Volts)	10/1000μs Rated Peak Impulse Current I <sub>ppm</sub> # (Amperes)
				V <sub>br</sub> Min (Volts)	@I <sub>t</sub> (mA)			
P4SMAJ5.0	HD	TD	5.0	6.40	10	800.0	9.6	41.6
P4SMAJ5.0A	HE	TE	5.0	6.40	10	800.0	9.2	43.5
P4SMAJ6.0	HF	TF	6.0	6.67	10	800.0	11.4	35.1
P4SMAJ6.0A	HG	TG	6.0	6.67	10	800.0	10.3	38.8
P4SMAJ6.5	HH	TH	6.5	7.22	10	500.0	12.3	32.5
P4SMAJ6.5A	HK	TK	6.5	7.22	10	500.0	11.2	35.7
P4SMAJ7.0	HL	TL	7.0	7.78	10	200.0	13.3	30.1
P4SMAJ7.0A	HM	TM	7.0	7.78	10	200.0	12.0	33.3
P4SMAJ7.5	HN	TN	7.5	8.33	1	100.0	14.3	28.0
P4SMAJ7.5A	HP	TP	7.5	8.33	1	100.0	12.9	31.0
P4SMAJ8.0	HQ	TQ	8.0	8.89	1	50.0	15.0	26.5
P4SMAJ8.0A	HR	TR	8.0	8.89	1	50.0	13.6	29.4
P4SMAJ8.5	HS	TS	8.5	9.44	1	10.0	15.9	25.1
P4SMAJ8.5A	HT	TT	8.5	9.44	1	10.0	14.4	27.7
P4SMAJ9.0	HU	TU	9.0	10.00	1	5.0	16.9	23.6
P4SMAJ9.0A	HV	TV	9.0	10.00	1	5.0	15.4	26.0
P4SMAJ10	HW	TW	10.0	11.10	1	5.0	18.8	21.2
P4SMAJ10A	HX	TX	10.0	11.10	1	5.0	17.0	23.5
P4SMAJ11	HY	TY	11.0	12.20	1	5.0	20.1	20.0
P4SMAJ11A	HZ	TZ	11.0	12.20	1	5.0	18.2	22.0
P4SMAJ12	ID	UD	12.0	13.30	1	5.0	22.0	18.1
P4SMAJ12A	IE	UE	12.0	13.30	1	5.0	19.9	20.1
P4SMAJ13	IF	UF	13.0	14.40	1	5.0	23.8	16.8
P4SMAJ13A	IG	UG	13.0	14.40	1	5.0	21.5	18.6
P4SMAJ14	IH	UH	14.0	15.60	1	5.0	25.8	15.5
P4SMAJ14A	IK	UK	14.0	15.60	1	5.0	23.2	17.2

\* = Add "C" or "CA" suffix for bidirectional device types.

+ = For Bidirectional Types Having V<sub>wm</sub> ≤ 10V, their I<sub>d</sub> limit is doubled.

# = See General Information for Impulse Current Waveform.

## TVS Diodes - Surface Mount - 400 Watt Specifications - P4SMAJ Series Electrical Characteristics - (Continued)

Part Number*	Uni Part Marking	Bi Part Marking	Rated Standoff Voltage V <sub>wm</sub> (Volts)	Breakdown Voltage		Maximum Stand By Current @V <sub>wm</sub> + I <sub>d</sub> ( $\mu$ A)	10/1000 $\mu$ s Maximum Clamping Voltage @I <sub>ppm</sub> # V <sub>c</sub> Max (Volts)	10/1000 $\mu$ s Rated Peak Impulse Current I <sub>ppm</sub> # (Amperes)
				V <sub>br</sub> Min (Volts)	@I <sub>t</sub> (mA)			
P4SMAJ15	IL	UL	15.0	16.70	1	5.0	26.9	14.8
P4SMAJ15A	IM	UM	15.0	16.70	1	5.0	24.4	16.4
P4SMAJ16	IN	UN	16.0	17.80	1	5.0	28.8	13.8
P4SMAJ16A	IP	UP	16.0	17.80	1	5.0	26.0	15.3
P4SMAJ17	IQ	UQ	17.0	18.90	1	5.0	30.5	13.1
P4SMAJ17A	IR	UR	17.0	18.90	1	5.0	27.6	14.5
P4SMAJ18	IS	US	18.0	20.00	1	5.0	32.2	12.4
P4SMAJ18A	IT	UT	18.0	20.00	1	5.0	29.2	13.7
P4SMAJ20	IU	UU	20.0	22.20	1	5.0	35.8	11.1
P4SMAJ20A	IV	UV	20.0	22.20	1	5.0	32.4	12.3
P4SMAJ22	IW	UW	22.0	24.40	1	5.0	39.4	10.1
P4SMAJ22A	IX	UX	22.0	24.40	1	5.0	35.5	11.2
P4SMAJ24	IY	UY	24.0	26.70	1	5.0	43.0	9.3
P4SMAJ24A	IZ	UZ	24.0	26.70	1	5.0	38.9	10.3
P4SMAJ26	JD	VD	26.0	28.90	1	5.0	46.6	8.6
P4SMAJ26A	JE	VE	26.0	28.90	1	5.0	42.1	9.5
P4SMAJ28	JF	VF	28.0	31.10	1	5.0	50.0	8.0
P4SMAJ28A	JG	VG	28.0	31.10	1	5.0	45.4	8.8
P4SMAJ30	JH	VH	30.0	33.30	1	5.0	53.5	7.5
P4SMAJ30A	JK	VK	30.0	33.30	1	5.0	48.4	8.3
P4SMAJ33	JL	VL	33.0	36.70	1	5.0	59.0	6.8
P4SMAJ33A	JM	VM	33.0	36.70	1	5.0	53.3	7.5
P4SMAJ36	JN	VN	36.0	40.00	1	5.0	64.3	6.2
P4SMAJ36A	JP	VP	36.0	40.00	1	5.0	58.1	6.9
P4SMAJ40	JQ	VQ	40.0	44.40	1	5.0	71.4	5.6
P4SMAJ40A	JR	VR	40.0	44.40	1	5.0	64.5	6.2

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**TVS Diodes - Surface Mount - 400 Watt Specifications - P4SMAJ Series Electrical Characteristics - (Continued)**

Part Number*	Uni Part Marking	Bi Part Marking	Rated Standoff Voltage Vwm (Volts)	Breakdown Voltage		Maximum Stand By Current @Vwm+ Id ( $\mu$ A)	10/1000 $\mu$ s Maximum Clamping Voltage @Ippm# Vc Max (Volts)	10/1000 $\mu$ s Rated Peak Impulse Current Ippm# (Amperes)
				Vbr Min (Volts)	@It (mA)			
				P4SMAJ43	JS			
P4SMAJ43A	JT	VT	43.0	47.80	1	5.0	69.4	5.7
P4SMAJ45	JU	VU	45.0	50.00	1	5.0	80.3	5.0
P4SMAJ45A	JV	VV	45.0	50.00	1	5.0	72.7	5.5
P4SMAJ48	JW	VW	48.0	53.30	1	5.0	85.5	4.7
P4SMAJ48A	JX	VX	48.0	53.30	1	5.0	77.4	5.2
P4SMAJ51	JY	VY	51.0	56.70	1	5.0	91.1	4.4
P4SMAJ51A	JZ	VZ	51.0	56.70	1	5.0	82.4	4.9
P4SMAJ54	RD	WD	54.0	60.00	1	5.0	96.3	4.2
P4SMAJ54A	RE	WE	54.0	60.00	1	5.0	87.1	4.6
P4SMAJ58	RF	WF	58.0	64.40	1	5.0	103.0	3.9
P4SMAJ58A	RG	WG	58.0	64.40	1	5.0	93.6	4.3
P4SMAJ60	RH	WH	60.0	66.70	1	5.0	107.0	3.7
P4SMAJ60A	RK	WK	60.0	66.70	1	5.0	96.8	4.1
P4SMAJ64	RL	WL	64.0	71.10	1	5.0	114.0	3.5
P4SMAJ64A	RM	WM	64.0	71.10	1	5.0	103.0	3.9
P4SMAJ70	RN	WN	70.0	77.80	1	5.0	125.0	3.2
P4SMAJ70A	RP	WP	70.0	77.80	1	5.0	113.0	3.5
P4SMAJ75	RQ	WQ	75.0	83.30	1	5.0	134.0	3.0
P4SMAJ75A	RR	WR	75.0	83.30	1	5.0	121.0	3.3
P4SMAJ78	RS	WS	78.0	86.70	1	5.0	139.0	2.9
P4SMAJ78A	RT	WT	78.0	86.70	1	5.0	126.0	2.2
P4SMAJ85	RU	WU	85.0	94.40	1	5.0	151.0	2.6
P4SMAJ85A	RV	WV	85.0	94.40	1	5.0	137.0	2.9
P4SMAJ90	RW	WW	90.0	100.00	1	5.0	160.0	2.5
P4SMAJ90A	RX	WX	90.0	100.00	1	5.0	146.0	2.7

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**TVS Diodes - Surface Mount - 400 Watt Specifications - P4SMAJ Series Electrical Characteristics - (Continued)**

Part Number*	Uni Part Marking	Bi Part Marking	Rated Standoff Voltage V <sub>wm</sub> (Volts)	Breakdown Voltage		Maximum Stand By Current @V <sub>wm</sub> + Id ( $\mu$ A)	10/1000 $\mu$ s Maximum Clamping Voltage @I <sub>ppm</sub> # V <sub>c</sub> Max (Volts)	10/1000 $\mu$ s Rated Peak Impulse Current I <sub>ppm</sub> # (Amperes)
				V <sub>br</sub> Min (Volts)	@I <sub>t</sub> (mA)			
P4SMAJ100	RY	WY	100.0	111.00	1	5.0	179.0	2.2
P4SMAJ100A	RZ	WZ	100.0	111.00	1	5.0	162.0	2.5
P4SMAJ110	SD	XD	110.0	122.00	1	5.0	196.0	2.0
P4SMAJ110A	SE	XE	110.0	122.00	1	5.0	177.0	2.3
P4SMAJ120	SF	XF	120.0	133.00	1	5.0	214.0	1.9
P4SMAJ120A	SG	XG	120.0	133.00	1	5.0	193.0	2.0
P4SMAJ130	SH	XH	130.0	144.00	1	5.0	231.0	1.7
P4SMAJ130A	SK	XK	130.0	144.00	1	5.0	209.0	1.9
P4SMAJ150	SL	XL	150.0	167.00	1	5.0	268.0	1.5
P4SMAJ150A	SM	XM	150.0	167.00	1	5.0	243.0	1.6
P4SMAJ160	SN	XN	160.0	178.00	1	5.0	287.0	1.4
P4SMAJ160A	SP	XP	160.0	178.00	1	5.0	259.0	1.5
P4SMAJ170	SQ	XQ	170.0	189.00	1	5.0	304.0	1.3
P4SMAJ170A	SR	XR	170.0	189.00	1	5.0	275.0	1.4

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## TVS Diodes - Surface Mount - 400 Watt - P4SMAJ Series Features

### P4SMAJ Series Features

- 400 watt peak pulse power dissipation
- Available in voltages from 5.0V to 170V
- Unidirectional and bidirectional
- Glass passivated junction
- Low clamping factor
- Available in bulk or tape and reel (Reel quantity = 5,000 pieces)
- Each device 100% surge tested
- Tape and Reel to EIA Standard RS-481-A

### Absolute Maximum Ratings

- Peak pulse power dissipation (Pppm) at 25°C..... 400W
- Operating and storage temperatures..... -55°C to + 150°C

### Mechanical Characteristics

- DO214AC package
- UL94V-0 Thermoset Epoxy
- Solder plated terminals
- Solderable per MIL-STD-750 Method 2026

### Mechanical Dimensions

