

MDE Semiconductor, Inc.

78-150 Calle Tampico, Unit 210, La Quinta, CA. U.S.A. 92253 Tel: 760-564-8656 • Fax: 760-564-2414

1-800-831-4881 Email: sales@mdesemiconductor.com Web: www.mdesemiconductor.com

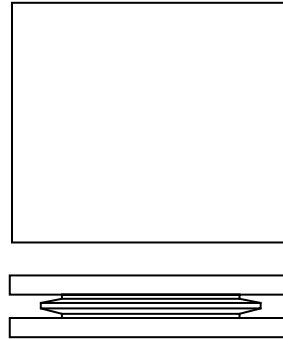
MAX™ 40 Cell Series

HIGH CURRENT TRANSIENT VOLTAGE SUPPRESSOR (TVS) DIODE STAND-OFF VOLTAGE 12 to 150 Volts

40000 Watt Peak Pulse Power

FEATURES

- Glass passivated junction
- Bidirectional
- 40000W Peak Pulse Power capability on 10x1000 μ s waveform
- Excellent clamping capability
- Repetition rate (duty cycle):0.05%
- Sharp breakdown voltage
- Low incremental surge resistance
- Fast response time: typically less than 1.0 ps from 0 volts to BV
- Typical IR less than 20 μ A above 10V
- Operation Temperature: -55°C to +150°C



See Dimensions on Page 4

MECHANICAL DATA

Terminals: Ag Plated Axial leads, solderable per MIL-STD-750, Method 2026

Mounting Position: Any

Weight: 1.490 \pm 0.149g (0.053 \pm 0.005 ounces)

DEVICES FOR BIPOLAR APPLICATIONS

Bidirectional use CA Suffix. Electrical characteristics apply in both directions.

Unidirectional A Suffix available as a special order

MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/1000 μ s waveform	Pppm	Minimum 20000	Watts
Peak Pulse Current of on 10-1000 μ s waveform	Ippm	SEE CURVE	Amps

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MAX- 40™ Cell Series

PART NUMBER	Numbers of Cell	REVERSE STAND-OFF VOLTAGE $V_{RWM}(V)$	BREAKDOWN VOLTAGE $V_{BR}(V)$ MIN. @ I_T	TEST CURRENT I_T (mA)	PEAK PULSE CURRENT I_{pp} (A)	REVERSE LEAKAGE @ V_{RWM} $I_R(\mu A)$	MAXIMUM CLAMPING VOLTAGE @ $I_{PP} V_C$ (V)
MAX40-12CA	2	12	14.0	50	2010.1	2000	19.9
MAX40-13CA	2	13	15.2	50	1860.5	2000	21.5
MAX40-14CA	2	14	16.4	50	1724.1	2000	23.2
MAX40-15CA	2	15	17.6	5	1639.3	500	24.4
MAX40-16CA	2	16	18.8	5	1538.5	200	26.0
MAX40-17CA	2	17	19.9	5	1449.3	50	27.6
MAX40-18CA	2	18	21.1	5	1369.6	20	29.2
MAX40-20CA	2	20	23.4	5	1234.6	20	32.4
MAX40-22CA	2	22	25.7	5	1126.8	20	35.5
MAX40-24CA	2	24	28.1	5	1028.3	20	38.9
MAX40-26CA	2	26	30.4	5	950.1	20	42.1
MAX40-28CA	2	28	32.8	5	881.1	20	45.4
MAX40-30CA	2	30	35.1	5	826.4	20	48.4
MAX40-33CA	2	33	38.7	5	750.5	20	53.3
MAX40-36CA	2	36	42.1	5	688.5	20	58.1
MAX40-40CA	2	40	46.8	5	620.2	20	64.5
MAX40-43CA	3	43	50.3	5	576.4	20	69.4
MAX40-45CA	3	45	52.7	5	550.2	20	72.7
MAX40-48CA	3	48	56.1	5	516.8	20	77.4
MAX40-51CA	3	51	59.7	5	485.4	20	82.4
MAX40-54CA	3	54	63.2	5	459.2	20	87.1
MAX40-58CA	4	58	67.8	5	427.4	20	93.6
MAX40-60CA	4	60	70.2	5	413.2	20	96.8
MAX40-64CA	4	64	74.9	5	388.3	20	103.0
MAX40-70CA	4	70	81.9	5	354.0	20	113.0
MAX40-75CA	4	75	87.7	5	330.6	20	121.0
MAX40-78CA	4	78	91.3	5	317.5	20	126.0
MAX40-85CA	6	85	99.2	5	292.0	20	137.0
MAX40-90CA	6	90	105.5	5	274.0	20	145
MAX40-100CA	6	100	117.0	5	246.9	20	162
MAX40-110CA	6	110	128.5	5	226.0	20	177
MAX40-120CA	6	120	140.0	5	207.3	20	193
MAX40-130CA	6	130	151.5	5	191.4	20	209
MAX40-150CA	8	150	176.0	5	164.6	20	243

To Order use Part Number Plus - Cell
Example: MAX 40-XXX-CA-Cell

MAX-40

Rating Characteristic Curves

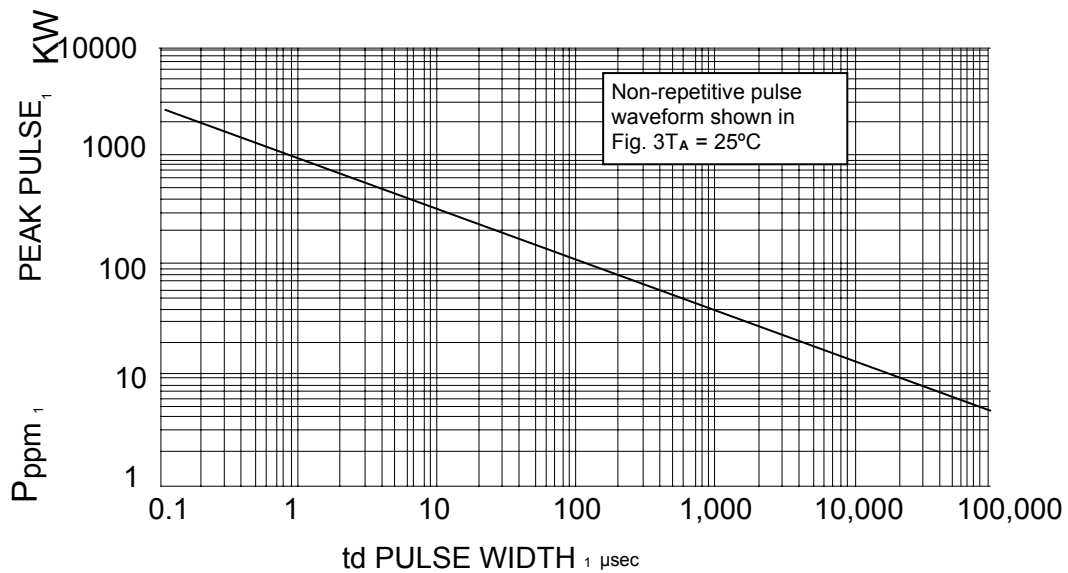


FIG. 1 PEAK PULSE POWER RATING

Fig.2 - Pulse Derating Curve

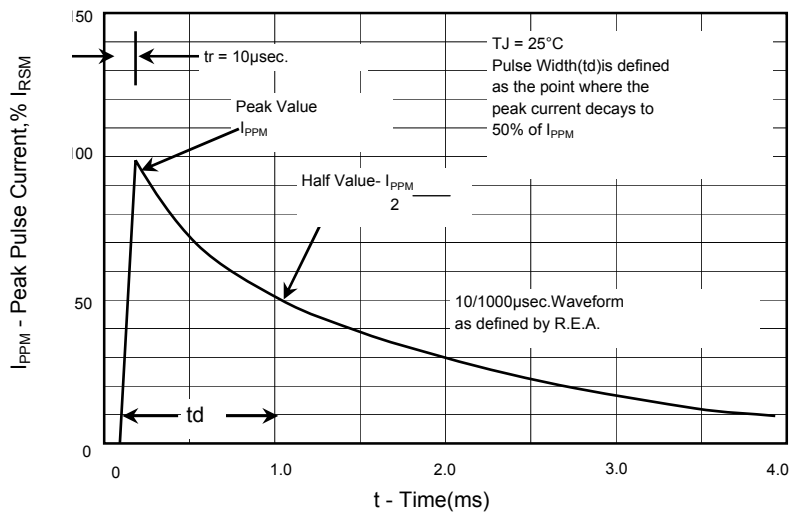
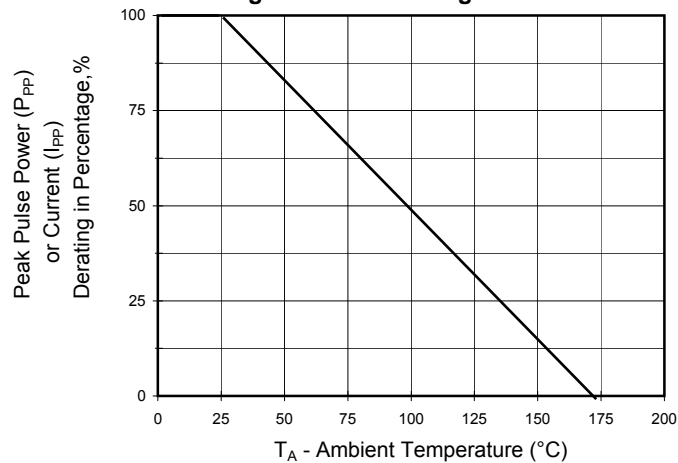


Fig.3 - Pulse Waveform

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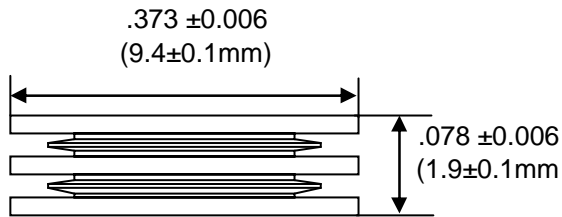
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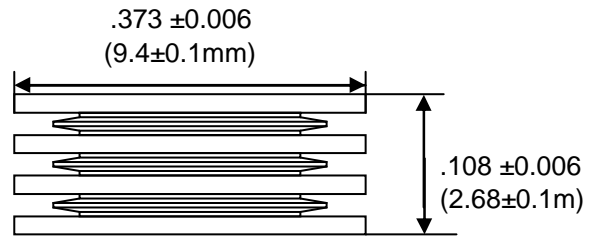
Cell Outline Dimensions

UNIT: Inch
(mm)

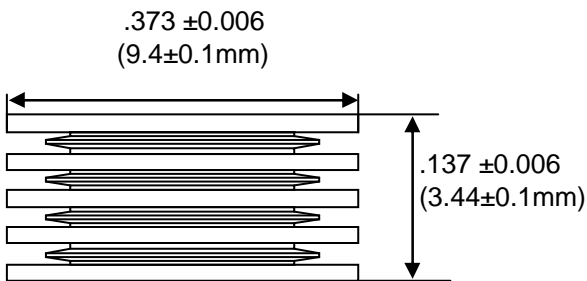
Stack 2 chip



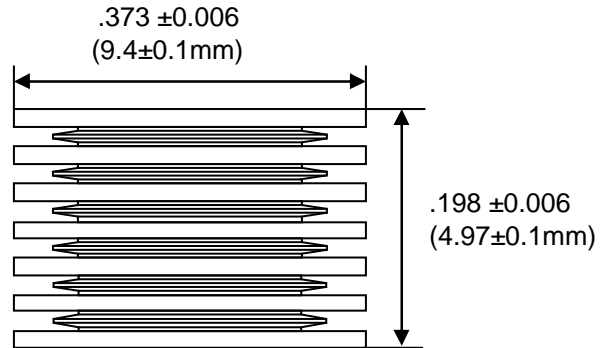
Stack 3 chip



Stack 4 chip



Stack 6 chip



Stack 8 chip

