

# MDE Semiconductor, Inc.

201 Shipyard Way, Unit C, Newport Beach, CA, U.S.A. 92663 Tel: 760-564-8656 • Fax: 760-564-2414

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

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## MAX™ 40 Series

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### HIGH CURRENT TRANSIENT VOLTAGE SUPPRESSOR (TVS) DIODE

VOLTAGE-12 TO 150 Volts

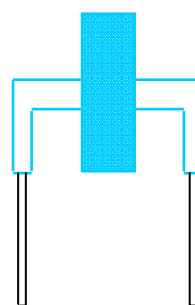
40000 Watt Peak Pulse Power

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#### FEATURES

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- Glass passivated junction
- Bidirectional
- 40000W Peak Pulse Power capability on 10x1000  $\mu$ 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 $\mu$ A above 10V
- Operation Temperature: -55°C to +150°C



See Dimensions on Page 4

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#### MECHANICAL DATA

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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)

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#### DEVICES FOR BIPOLAR APPLICATIONS

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

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#### MAXIMUM RATINGS AND CHARACTERISTICS

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Ratings at 25°C ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/1000 $\mu$ s waveform	Pppm	Minimum 40000	Watts
Peak Pulse Current of on 10-1000 $\mu$ s waveform	Ippm	SEE CURVE	Amps

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## MAX- 40™ 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

# MAX-40

## Rating Characteristic Curves

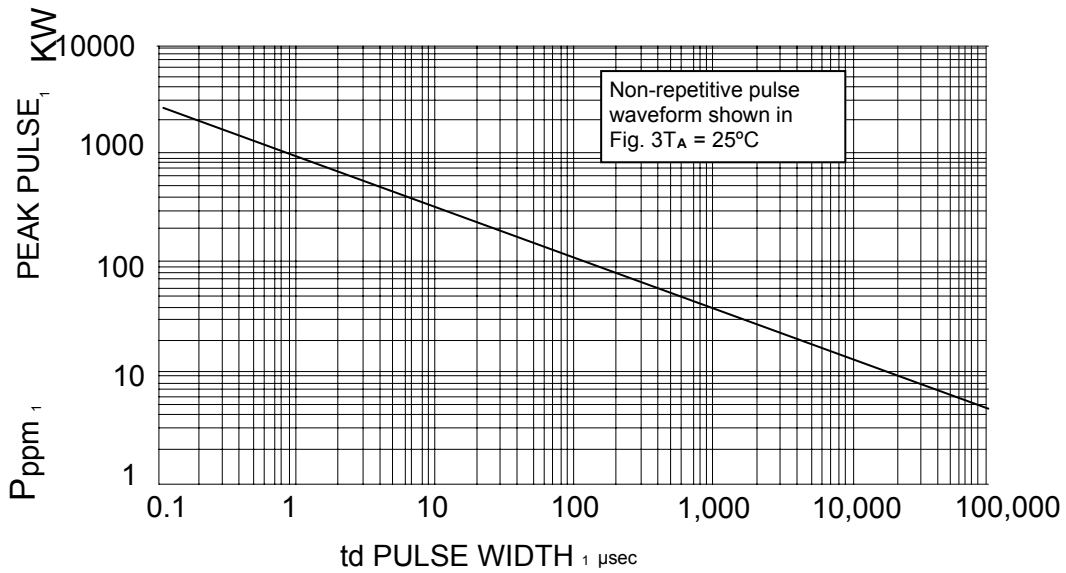


FIG. 1 PEAK PULSE POWER RATING

Fig.2 - Pulse Derating Curve

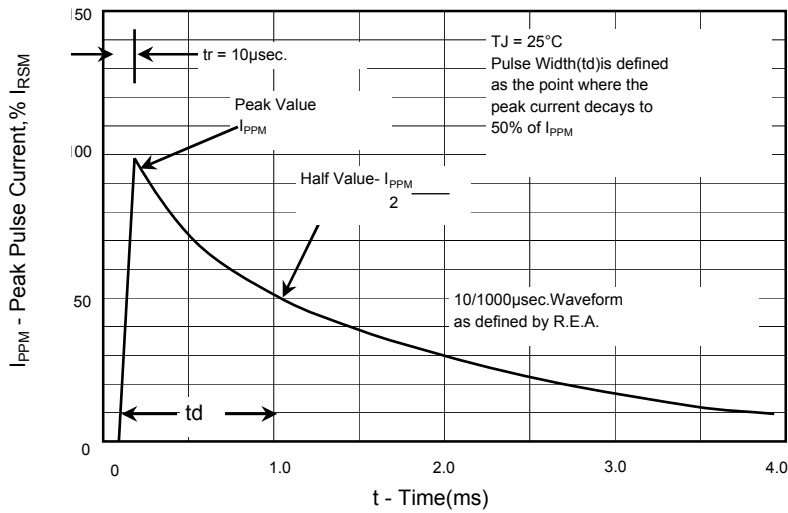
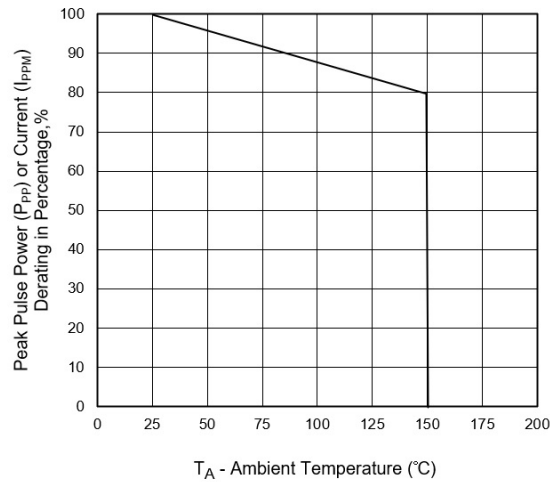


Fig.3 - Pulse Waveform

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