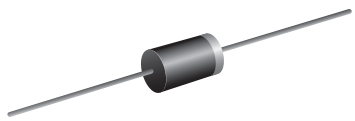
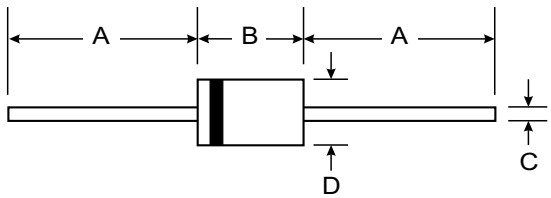
ULCE6.5A(CA) - ULCE90A(CA)

ULTRA LOW CAPACITANCE TRANSIENT VOLTAGE SUPPRESSOR DIODES

VOLTAGE RANGE: 6.5- 90 V
POWER: 1500 Watts





Features

- 1500W Peak Pulse Surge reverse
- capability on 10/1000μs waveform
- Excellent clamping capability
- Low incremental surge resistance
- Fast response time : typically less than 5.0 ns from 0 volts to BV

Mechanical Data

- Case : DO-201 Molded plastic
- Epoxy : UL94V-O rate flame retardant
- Lead : Axial lead solderable per MIL-STD-202, method 208 guaranteed
- Polarity : Color band denotes positive end on the Transorb (cathode)
- Mounting position : Any
- Weight: 1.20 grams (approx.)

RoHS COMPLIANT

DO-201AD		
Dim	**Min**	**Max**
A	25.40	—
B	7.20	9.50
C	1.20	1.30
D	4.80	5.30
All Dimensions in mm		

Maximum Ratings

Rating at 25 °C ambient temperature unless otherwise specified.

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation on 10/1000μs waveform (Note 1, Figure 1)	P_{PPM}	Minimum 1500	Watts
Steady State Power Dissipation at T_L = 75 °C Lead Lengths 0.375", (9.5mm) (Note 2)	P_D	5.0	Watts
Peak Pulse Power Surge Current on 10/1000 μs Waveform (Fig. 3, Note 1)	I_{RSM}	See Table 1.	Amps.
Operating and Storage Temperature Range	T_J, T_{STG}	- 65 to + 175	°C

Note :

(1) Non-repetitive Current pulse, per Fig. 3 and derated above Ta = 25 °C per Fig. 2

(2) 8.3 ms single half sine-wave, duty cycle = 4 pulses per minutes maximum.

ELECTRICAL CHARACTERISTICS Rating at 25° C ambient temperature unless otherwise specified

TYPE	Breakdown Voltage @ It			Reverse Stand-off Voltage	Maximum Reverse Leakage @ V_{RWM}	Maximum Clamping Voltage @ I_{RSM}	Maximum Reverse Current	Maximum Junction Capacitance @ 0 Volt	Working Inverse Blocking Voltage	Max. Inverse Blocking Current @ V_{WIB}	Peak Inverse Blocking Voltage
	V_{BR} (V)		It	V_{RWM}	I_R	V_{RSM}	I_{RSM}		V_{WIB}	I_{IB}	V_{PIB}
	Min.	Max.	(mA)	(V)	(μA)	(V)	(A)	pF	(V)	mA	(V)
ULCE6.5CA	7.22	8.82	10	6.5	1000	12.3	100	35	75	1.0	100
ULCE6.5A	7.22	7.98	10	6.5	1000	11.2	100	35	75	1.0	100
ULCE7.0CA	7.78	9.51	10	7.0	500	13.3	100	35	75	1.0	100
ULCE7.0A	7.78	8.60	10	7.0	500	12.0	100	35	75	1.0	100
ULCE7.5CA	8.33	10.2	10	7.5	250	14.3	100	35	75	1.0	100
ULCE7.5A	8.33	9.21	10	7.5	250	12.9	100	35	75	1.0	100
ULCE8.0CA	8.89	10.9	10	8.0	100	15.0	100	35	75	1.0	100
ULCE8.0A	8.89	9.83	10	8.0	100	13.6	100	35	75	1.0	100
ULCE8.5CA	9.44	11.5	1.0	8.5	50	15.9	94	35	75	1.0	100
ULCE8.5A	9.44	10.4	1.0	8.5	50	14.4	100	35	75	1.0	100
ULCE9.0CA	10.0	12.2	1.0	9.0	10.0	16.9	89	35	75	1.0	100
ULCE9.0A	10.0	11.1	1.0	9.0	10.0	15.4	97	35	75	1.0	100
ULCE10CA	11.1	13.6	1.0	10	5.0	18.8	80	35	75	1.0	100
ULCE10A	11.1	12.3	1.0	10	5.0	17.0	88	35	75	1.0	100
ULCE11CA	12.2	14.9	1.0	11	5.0	20.1	74	35	75	1.0	100
ULCE11A	12.2	13.5	1.0	11	5.0	18.2	82	35	75	1.0	100
ULCE12CA	13.3	16.3	1.0	12	5.0	22.0	68	35	75	1.0	100
ULCE12A	13.3	14.7	1.0	12	5.0	19.9	75	35	75	1.0	100
ULCE13CA	14.4	17.6	1.0	13	5.0	23.8	63	35	75	1.0	100
ULCE13A	14.4	15.9	1.0	13	5.0	21.5	70	35	75	1.0	100
ULCE14CA	15.6	19.1	1.0	14	5.0	25.8	58	35	75	1.0	100
ULCE14A	15.6	17.2	1.0	14	5.0	23.2	65	35	75	1.0	100
ULCE15CA	16.7	20.4	1.0	15	5.0	26.9	56	35	75	1.0	100
ULCE15A	16.7	18.5	1.0	15	5.0	24.4	61	35	75	1.0	100
ULCE16CA	17.8	21.8	1.0	16	5.0	28.8	52	35	75	1.0	100
ULCE16A	17.8	19.7	1.0	16	5.0	26.0	57	35	75	1.0	100
ULCE17CA	18.9	23.1	1.0	17	5.0	30.5	49	35	75	1.0	100
ULCE17A	18.9	20.9	1.0	17	5.0	27.6	54	35	75	1.0	100
ULCE18CA	20	24.4	1.0	18	5.0	32.2	46	35	75	1.0	100
ULCE18A	20	22.1	1.0	18	5.0	29.2	51	35	75	1.0	100
ULCE20CA	22.2	27.1	1.0	20	5.0	35.8	42	35	75	1.0	100
ULCE20A	22.2	24.5	1.0	20	5.0	32.4	46	35	75	1.0	100
ULCE22CA	24.4	29.8	1.0	22	5.0	39.4	38	35	75	1.0	100
ULCE22A	24.4	26.9	1.0	22	5.0	35.5	42	35	75	1.0	100
ULCE24CA	26.7	32.6	1.0	24	5.0	43.0	35	35	75	1.0	100
ULCE24A	26.7	29.5	1.0	24	5.0	38.9	39	35	75	1.0	100
ULCE26CA	28.9	35.3	1.0	26	5.0	46.6	32	35	75	1.0	100
ULCE26A	28.9	31.9	1.0	26	5.0	42.1	36	35	75	1.0	100
ULCE28CA	31.1	38.0	1.0	28	5.0	50.1	30	35	75	1.0	100
ULCE28A	31.1	34.4	1.0	28	5.0	45.5	33	35	75	1.0	100
ULCE30CA	33.3	40.7	1.0	30	5.0	53.5	28	35	75	1.0	100
ULCE30A	33.3	36.8	1.0	30	5.0	48.4	31	35	75	1.0	100
ULCE33CA	36.7	44.9	1.0	33	5.0	59.0	25.4	35	75	1.0	100
ULCE33A	36.7	40.6	1.0	33	5.0	53.3	28.1	35	75	1.0	100
ULCE36CA	40.0	48.9	1.0	36	5.0	64.3	23.3	35	75	1.0	100
ULCE36A	40.0	44.2	1.0	36	5.0	58.1	25.8	35	75	1.0	100
ULCE40CA	44.4	54.3	1.0	40	5.0	71.4	21	35	75	1.0	100
ULCE40A	44.4	49.1	1.0	40	5.0	64.5	23.3	35	75	1.0	100
ULCE43CA	47.8	58.4	1.0	43	5.0	76.7	19.5	35	150	1.0	200
ULCE43A	47.8	52.8	1.0	43	5.0	69.4	21.6	35	150	1.0	200

ELECTRICAL CHARACTERISTICS Rating at 25° C ambient temperature unless otherwise specified

TYPE	Breakdown Voltage @ It			Reverse Stand-off Voltage	Maximum Reverse Leakage @ V_{RWM}	Maximum Clamping Voltage @ I_{RSM}	Maximum Reverse Current	Maximum Junction Capacitance @ 0 Volt	Working Inverse Blocking Voltage	Max. Inverse Blocking Current @ V_{WIB}	Peak Inverse Blocking Voltage
	V_{BR} (V)		It	V_{RWM}	I_R	V_{RSM}	I_{RSM}		V_{WIB}	I_{IB}	V_{PIB}
	Min.	Max.	(mA)	(V)	(μA)	(V)	(A)	pF	(V)	mA	(V)
ULCE45CA	50.0	61.1	1.0	45	5.0	80.3	18.7	35	150	1.0	200
ULCE45A	50.0	55.3	1.0	45	5.0	72.7	20.6	35	150	1.0	200
ULCE48CA	53.3	65.1	1.0	48	5.0	85.5	17.5	35	150	1.0	200
ULCE48A	53.3	58.9	1.0	48	5.0	77.4	19.4	35	150	1.0	200
ULCE51CA	56.7	69.3	1.0	51	5.0	91.1	16.5	35	150	1.0	200
ULCE51A	56.7	62.7	1.0	51	5.0	82.4	18.2	35	150	1.0	200
ULCE54CA	60.0	73.3	1.0	54	5.0	96.3	15.6	35	150	1.0	200
ULCE54A	60.0	66.3	1.0	54	5.0	87.1	17.2	35	150	1.0	200
ULCE58CA	64.4	78.7	1.0	58	5.0	103	14.6	35	150	1.0	200
ULCE58A	64.4	71.2	1.0	58	5.0	93.6	16	35	150	1.0	200
ULCE60CA	66.7	81.5	1.0	60	5.0	107	14	35	150	1.0	200
ULCE60A	66.7	73.7	1.0	60	5.0	96.8	15.5	35	150	1.0	200
ULCE64CA	71.1	86.9	1.0	64	5.0	114	13.2	35	150	1.0	200
ULCE64A	71.1	78.6	1.0	64	5.0	103	14.6	35	150	1.0	200
ULCE70CA	77.8	95.1	1.0	70	5.0	125	12.0	35	150	1.0	200
ULCE70A	77.8	86.0	1.0	70	5.0	113	13.3	35	150	1.0	200
ULCE75CA	83.3	102	1.0	75	5.0	134	11.2	35	150	1.0	200
ULCE75A	83.3	92.1	1.0	75	5.0	121	12.4	35	150	1.0	200
ULCE80CA	88.7	108	1.0	80	5.0	142	10.6	35	150	1.0	200
ULCE80A	88.7	98.0	1.0	80	5.0	129	11.6	35	150	1.0	200
ULCE90CA	100	122	1.0	90	5.0	160	9.4	35	300	1.0	200
ULCE90A	100	111	1.0	90	5.0	146	10.3	35	300	1.0	200

FIG.1 - PEAK PULSE POWER RATING CURVE

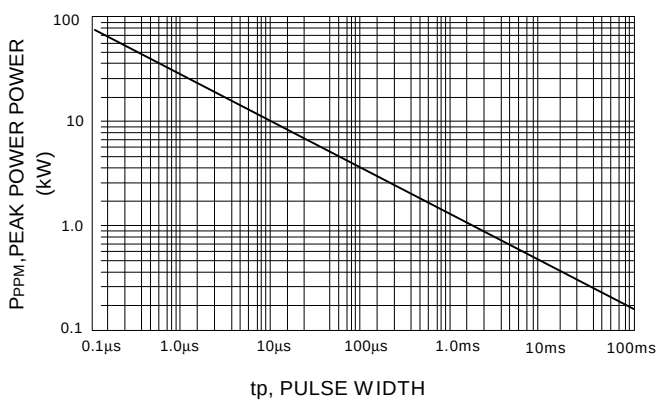


FIG.2 - PULSE DERATING CURVE

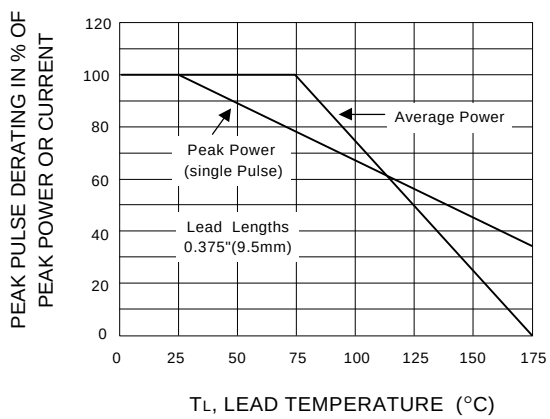


FIG.3 - PULSE WAVEFORM