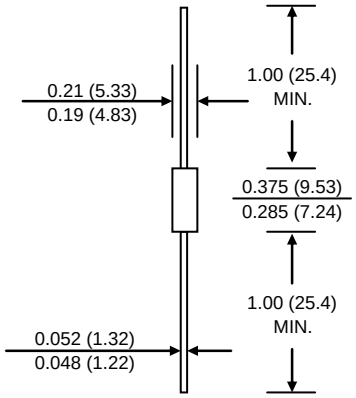
Leiditech

1N6267CL - 1N6303CAL

BIDIRECTIONAL TRANSIENT VOLTAGE SUPPRESSOR

V_{BR} : 6.8 - 200 Volts
P_{PK} : 1500 Watts

DO-201AD



Dimensions in inches and (millimeters)

FEATURES :

* 1500W surge capability at 1ms
* Excellent clamping capability
* Low zener impedance
* Fast response time : typically less then 1.0 ps from 0 volt to $V_{BR(min.)}$
* Typical I_R less then 1μA above 10V
* Pb / RoHS Free
* AEC-Q101 qualified.

MECHANICAL DATA

* Case : DO-201AD Molded plastic
* Epoxy : UL94V-O rate flame retardant
* Lead : Axial lead solderable per MIL-STD-202, method 208 guaranteed
* Mounting position : Any
* Weight : 1.21 grams

DEVICES FOR UNIPOLAR APPLICATIONS

For uni-directional without "C"
Electrical characteristics apply in both directions

MAXIMUM RATINGS

Rating at 25 °C ambient temperature unless otherwise specified

Rating	Symbol	Value	Unit
Peak Power Dissipation at Ta = 25 °C, Tp=1ms (Note1)	P_{PK}	1500	W
Steady State Power Dissipation at T_L = 75 °C Lead Lengths 0.375", (9.5mm) (Note 2)	P_D	5.0	W
Operating and Storage Temperature Range	T_J, T_{STG}	- 65 to + 175	°C

Notes :

(1) Non-repetitive Current pulse, per Fig. 2 and derated above Ta = 25 °C per Fig. 1
(2) Mounted on Copper Lead area of 1.57 in^2 (40mm^2).

ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

TYPE	Breakdown Voltage @ It (Note 1)			Working Peak Reverse Voltage	Maximum Reverse Leakage @ V_{RWM}	Maximum Reverse Current	Maximum Clamping Voltage @ I_{RSM}	Maximum Temperature Co-efficient of V_{BR}
	V_{BR} (V)		It	V_{RWM}	I_R	I_{RSM}	V_{RSM}	
	Min.	Max.	(mA)	(V)	(μA)	(A)	(V)	(% / °C)
1N6267CL	6.12	7.48	10	5.50	2000	139	10.8	0.057
1N6267CAL	6.45	7.14	10	5.80	2000	143	10.5	0.057
1N6268CL	6.75	8.25	10	6.05	1000	128	11.7	0.061
1N6268CAL	7.13	7.88	10	6.40	1000	132	11.3	0.061
1N6269CL	7.38	9.02	10	6.63	400	120	12.5	0.065
1N6269CAL	7.79	8.61	10	7.02	400	124	12.1	0.065
1N6270CL	8.19	10.0	1.0	7.37	100	109	13.8	0.068
1N6270CAL	8.65	9.55	1.0	7.78	100	112	13.4	0.068
1N6271CL	9.00	11.0	1.0	8.10	10	100	15.0	0.073
1N6271CAL	9.50	10.5	1.0	8.55	10	103	14.5	0.073
1N6272CL	9.90	12.1	1.0	8.92	10	93.0	16.2	0.075
1N6272CAL	10.5	11.6	1.0	9.40	10	96.0	15.6	0.075
1N6273CL	10.8	13.2	1.0	9.72	10	87.0	17.3	0.078
1N6273CAL	11.4	12.6	1.0	10.2	5.0	90.0	16.7	0.078
1N6274CL	11.7	14.3	1.0	10.5	5.0	79.0	19.0	0.081
1N6274CAL	12.4	13.7	1.0	11.1	5.0	82.0	18.2	0.081
1N6275CL	13.5	16.5	1.0	12.1	5.0	68.0	22.0	0.084
1N6275CAL	14.3	15.8	1.0	12.8	5.0	71.0	21.2	0.084
1N6276CL	14.4	17.6	1.0	12.9	5.0	64.0	23.5	0.086
1N6276CAL	15.2	16.8	1.0	13.6	5.0	67.0	22.5	0.086
1N6277CL	16.2	19.8	1.0	14.5	5.0	56.5	26.5	0.088
1N6277CAL	17.1	18.9	1.0	15.3	5.0	59.5	25.2	0.088
1N6278CL	18.0	22.0	1.0	16.2	5.0	51.5	29.1	0.090
1N6278CAL	19.0	21.0	1.0	17.1	5.0	54.0	27.7	0.090
1N6279CL	19.8	24.2	1.0	17.8	5.0	47.0	31.9	0.092
1N6279CAL	20.9	23.1	1.0	18.8	5.0	49.0	30.6	0.092
1N6280CL	21.6	26.4	1.0	19.4	5.0	43.0	34.7	0.094
1N6280CAL	22.8	25.2	1.0	20.5	5.0	45.0	33.2	0.094
1N6281CL	24.3	29.7	1.0	21.8	5.0	38.5	39.1	0.096
1N6281CAL	25.7	28.4	1.0	23.1	5.0	40.0	37.5	0.096
1N6282CL	27.0	33.0	1.0	24.3	5.0	34.5	43.5	0.097
1N6282CAL	28.5	31.5	1.0	25.6	5.0	36.0	41.4	0.097
1N6283CL	29.7	36.3	1.0	26.8	5.0	31.5	47.7	0.098
1N6283CAL	31.4	34.7	1.0	28.2	5.0	33.0	45.7	0.098
1N6284CL	32.4	39.6	1.0	29.1	5.0	29.0	52.0	0.099
1N6284CAL	34.2	37.8	1.0	30.8	5.0	30.0	49.9	0.099
1N6285CL	35.1	42.9	1.0	31.6	5.0	26.5	56.4	0.100
1N6285CAL	37.1	41.0	1.0	33.3	5.0	28.0	53.9	0.100
1N6286CL	38.7	47.3	1.0	34.8	5.0	24.0	61.9	0.101
1N6286CAL	40.9	45.2	1.0	36.8	5.0	25.3	59.3	0.101
1N6287CL	42.3	51.7	1.0	38.1	5.0	22.2	67.8	0.101
1N6287CAL	44.7	49.4	1.0	40.2	5.0	23.2	64.8	0.101
1N6288CL	45.9	56.1	1.0	41.3	5.0	20.4	73.5	0.102
1N6288CAL	48.5	53.6	1.0	43.6	5.0	21.4	70.1	0.102

ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

TYPE	Breakdown Voltage @ It (Note 1)			Working Peak Reverse Voltage	Maximum Reverse Leakage @ V_{RWM}	Maximum Reverse Current	Maximum Clamping Voltage @ I_{RSM}	Maximum Temperature Co-efficient of V_{BR}
	V_{BR} (V)		It	V_{RWM}	I_R	I_{RSM}	V_{RSM}	
	Min.	Max.	(mA)	(V)	(μA)	(A)	(V)	(% / °C)
1N6289CL	50.4	61.6	1.0	45.4	5.0	18.6	80.5	0.103
1N6289CAL	53.2	58.8	1.0	47.8	5.0	19.5	77.0	0.103
1N6290CL	55.8	68.2	1.0	50.2	5.0	16.9	89.0	0.104
1N6290CAL	58.9	65.1	1.0	53.0	5.0	17.7	85.0	0.104
1N6291CL	61.2	74.8	1.0	55.1	5.0	15.3	98.0	0.104
1N6291CAL	64.6	71.4	1.0	58.1	5.0	16.3	92.0	0.104
1N6292CL	67.5	82.5	1.0	60.7	5.0	13.9	108	0.105
1N6292CAL	71.3	78.8	1.0	64.1	5.0	14.6	103	0.105
1N6293CL	73.8	90.2	1.0	66.4	5.0	12.7	118	0.105
1N6293CAL	77.9	86.1	1.0	70.1	5.0	13.3	113	0.105
1N6294CL	81.9	100	1.0	73.7	5.0	11.4	131	0.106
1N6294CAL	86.5	95.5	1.0	77.8	5.0	12.0	125	0.106
1N6295CL	90.0	110	1.0	81.0	5.0	10.4	144	0.106
1N6295CAL	95.0	105	1.0	85.5	5.0	11.0	137	0.106
1N6296CL	99.0	121	1.0	89.2	5.0	9.5	158	0.107
1N6296CAL	105	116	1.0	94.0	5.0	9.9	152	0.107
1N6297CL	108	132	1.0	97.2	5.0	8.7	173	0.107
1N6297CAL	114	126	1.0	102	5.0	9.1	165	0.107
1N6298CL	117	143	1.0	105	5.0	8.0	187	0.107
1N6298CAL	124	137	1.0	111	5.0	8.4	179	0.107
1N6299CL	135	165	1.0	121	5.0	7.0	215	0.108
1N6299CAL	143	158	1.0	128	5.0	7.2	207	0.108
1N6300CL	144	176	1.0	130	5.0	6.5	230	0.108
1N6300CAL	152	168	1.0	136	5.0	6.8	219	0.108
1N6301CL	153	187	1.0	138	5.0	6.2	244	0.108
1N6301CAL	162	179	1.0	145	5.0	6.4	234	0.108
1N6302CL	162	198	1.0	146	5.0	5.8	258	0.108
1N6302CAL	171	189	1.0	154	5.0	6.1	246	0.108
1N6303CL	180	220	1.0	162	5.0	5.2	287	0.108
1N6303CAL	190	210	1.0	171	5.0	5.5	274	0.108

Note:

(1) V_{BR} measured after It applied for 30μs., It = square wave pulse or equivalen

RATING AND CHARACTERISTIC CURVES (1N6267CL - 1N6303CAL)

FIG.1 - PULSE DERATING CURVE

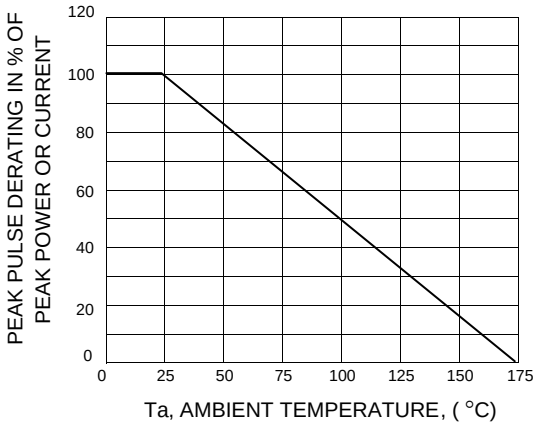


FIG.2 - PULSE WAVEFORM

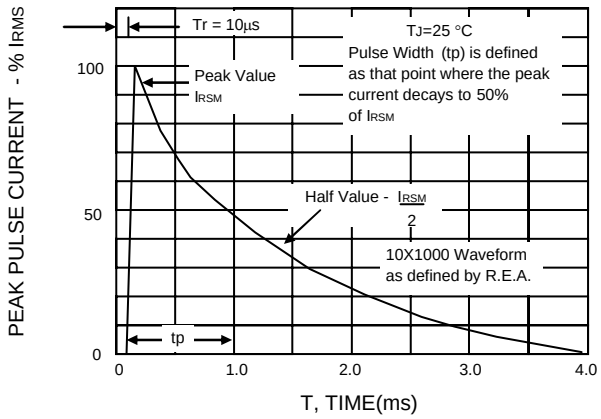


FIG.3 - STEADY STATE POWER DERATING

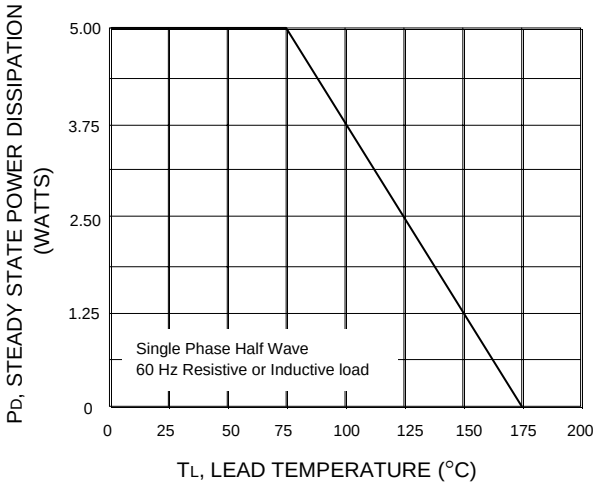
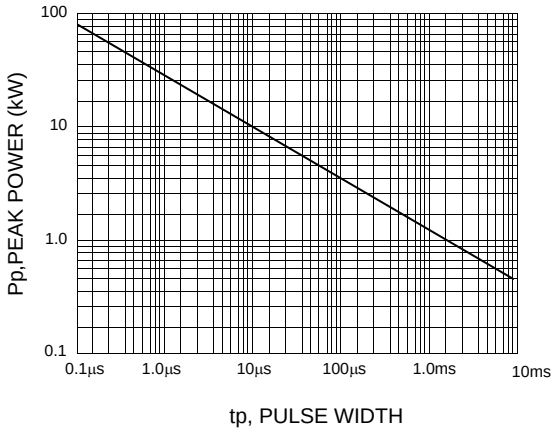


FIG.4 - PULSE RATING CURVE



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