Certificate Number: Q10561

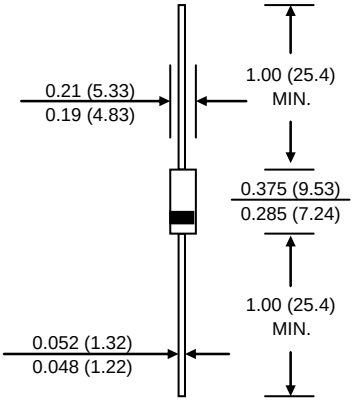
Certificate Number: E17276

1N6267L - 1N6303AL

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

MECHANICAL DATA

* Case : DO-201AD Molded plastic
* Epoxy : UL94V-O rate flame retardant
* Lead : Axial lead solderable per MIL-STD-202, method 208 guaranteed
* Polarity : Color band denotes cathode end except Bipolar.
* Mounting position : Any
* Weight : 1.21 grams

DEVICES FOR BIPOLAR APPLICATIONS

For bi-directional use C or CA Suffix
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
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) (Note 3)	I_{FSM}	200	A
Operating and Storage Temperature Range	T_J, T_{STG}	- 65 to + 175	°C

Notes :

(1) Non-repetitive Current pulse, per Fig. 5 and derated above Ta = 25 °C per Fig. 1
(2) Mounted on Copper Lead area of 1.57 in^2(40mm^2).
(3) 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 (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)
1N6267L	6.12	7.48	10	5.50	1000	139	10.8	0.057
1N6267AL	6.45	7.14	10	5.80	1000	143	10.5	0.057
1N6268L	6.75	8.25	10	6.05	500	128	11.7	0.061
1N6268AL	7.13	7.88	10	6.40	500	132	11.3	0.061
1N6269L	7.38	9.02	10	6.63	200	120	12.5	0.065
1N6269AL	7.79	8.61	10	7.02	200	124	12.1	0.065
1N6270L	8.19	10.0	1.0	7.37	50	109	13.8	0.068
1N6270AL	8.65	9.55	1.0	7.78	50	112	13.4	0.068
1N6271L	9.00	11.0	1.0	8.10	10	100	15.0	0.073
1N6271AL	9.50	10.5	1.0	8.55	10	103	14.5	0.073
1N6272L	9.90	12.1	1.0	8.92	5.0	93.0	16.2	0.075
1N6272AL	10.5	11.6	1.0	9.40	5.0	96.0	15.6	0.075
1N6273L	10.8	13.2	1.0	9.72	5.0	87.0	17.3	0.078
1N6273AL	11.4	12.6	1.0	10.2	5.0	90.0	16.7	0.078
1N6274L	11.7	14.3	1.0	10.5	5.0	79.0	19.0	0.081
1N6274AL	12.4	13.7	1.0	11.1	5.0	82.0	18.2	0.081
1N6275L	13.5	16.5	1.0	12.1	5.0	68.0	22.0	0.084
1N6275AL	14.3	15.8	1.0	12.8	5.0	71.0	21.2	0.084
1N6276L	14.4	17.6	1.0	12.9	5.0	64.0	23.5	0.086
1N6276AL	15.2	16.8	1.0	13.6	5.0	67.0	22.5	0.086
1N6277L	16.2	19.8	1.0	14.5	5.0	56.5	26.5	0.088
1N6277AL	17.1	18.9	1.0	15.3	5.0	59.5	25.2	0.088
1N6278L	18.0	22.0	1.0	16.2	5.0	51.5	29.1	0.090
1N6278AL	19.0	21.0	1.0	17.1	5.0	54.0	27.7	0.090
1N6279L	19.8	24.2	1.0	17.8	5.0	47.0	31.9	0.092
1N6279AL	20.9	23.1	1.0	18.8	5.0	49.0	30.6	0.092
1N6280L	21.6	26.4	1.0	19.4	5.0	43.0	34.7	0.094
1N6280AL	22.8	25.2	1.0	20.5	5.0	45.0	33.2	0.094
1N6281L	24.3	29.7	1.0	21.8	5.0	38.5	39.1	0.096
1N6281AL	25.7	28.4	1.0	23.1	5.0	40.0	37.5	0.096
1N6282L	27.0	33.0	1.0	24.3	5.0	34.5	43.5	0.097
1N6282AL	28.5	31.5	1.0	25.6	5.0	36.0	41.4	0.097
1N6283L	29.7	36.3	1.0	26.8	5.0	31.5	47.7	0.098
1N6283AL	31.4	34.7	1.0	28.2	5.0	33.0	45.7	0.098
1N6284L	32.4	39.6	1.0	29.1	5.0	29.0	52.0	0.099
1N6284AL	34.2	37.8	1.0	30.8	5.0	30.0	49.9	0.099
1N6285L	35.1	42.9	1.0	31.6	5.0	26.5	56.4	0.100
1N6285AL	37.1	41.0	1.0	33.3	5.0	28.0	53.9	0.100
1N6286L	38.7	47.3	1.0	34.8	5.0	24.0	61.9	0.101
1N6286AL	40.9	45.2	1.0	36.8	5.0	25.3	59.3	0.101
1N6287L	42.3	51.7	1.0	38.1	5.0	22.2	67.8	0.101
1N6287AL	44.7	49.4	1.0	40.2	5.0	23.2	64.8	0.101
1N6288L	45.9	56.1	1.0	41.3	5.0	20.4	73.5	0.102
1N6288AL	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)
1N6289L	50.4	61.6	1.0	45.4	5.0	18.6	80.5	0.103
1N6289AL	53.2	58.8	1.0	47.8	5.0	19.5	77.0	0.103
1N6290L	55.8	68.2	1.0	50.2	5.0	16.9	89.0	0.104
1N6290AL	58.9	65.1	1.0	53.0	5.0	17.7	85.0	0.104
1N6291L	61.2	74.8	1.0	55.1	5.0	15.3	98.0	0.104
1N6291AL	64.6	71.4	1.0	58.1	5.0	16.3	92.0	0.104
1N6292L	67.5	82.5	1.0	60.7	5.0	13.9	108	0.105
1N6292AL	71.3	78.8	1.0	64.1	5.0	14.6	103	0.105
1N6293L	73.8	90.2	1.0	66.4	5.0	12.7	118	0.105
1N6293AL	77.9	86.1	1.0	70.1	5.0	13.3	113	0.105
1N6294L	81.9	100	1.0	73.7	5.0	11.4	131	0.106
1N6294AL	86.5	95.5	1.0	77.8	5.0	12.0	125	0.106
1N6295L	90.0	110	1.0	81.0	5.0	10.4	144	0.106
1N6295AL	95.0	105	1.0	85.5	5.0	11.0	137	0.106
1N6296L	99.0	121	1.0	89.2	5.0	9.5	158	0.107
1N6296AL	105	116	1.0	94.0	5.0	9.9	152	0.107
1N6297L	108	132	1.0	97.2	5.0	8.7	173	0.107
1N6297AL	114	126	1.0	102	5.0	9.1	165	0.107
1N6298L	117	143	1.0	105	5.0	8.0	187	0.107
1N6298AL	124	137	1.0	111	5.0	8.4	179	0.107
1N6299L	135	165	1.0	121	5.0	7.0	215	0.108
1N6299AL	143	158	1.0	128	5.0	7.2	207	0.108
1N6300L	144	176	1.0	130	5.0	6.5	230	0.108
1N6300AL	152	168	1.0	136	5.0	6.8	219	0.108
1N6301L	153	187	1.0	138	5.0	6.2	244	0.108
1N6301AL	162	179	1.0	145	5.0	6.4	234	0.108
1N6302L	162	198	1.0	146	5.0	5.8	258	0.108
1N6302AL	171	189	1.0	154	5.0	6.1	246	0.108
1N6303L	180	220	1.0	162	5.0	5.2	287	0.108
1N6303AL	190	210	1.0	171	5.0	5.5	274	0.108

Note:

(1) V_{BR} measured after It applied for 300μs., It = square wave pulse or equivalen

(2) V_F = 3.5 Vmax., I_F = 100 Amps. (6.8 Volts thru 91 Volts)
V_F = 5.0 Vmax., I_F = 100 Amps. (100 Volts thru 200 Volts) per 1/2 square or equivalent sine wave
PW = 8.3 ms, duty cycle = 4 pulses per minute maximum

RATING AND CHARACTERISTIC CURVES (1N6267L - 1N6303AL)

FIG.1 - PULSE DERATING CURVE

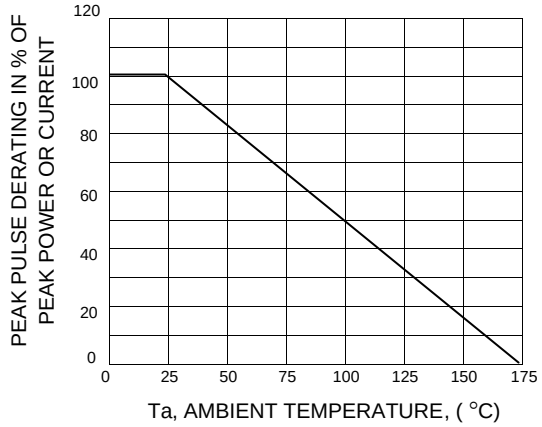


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

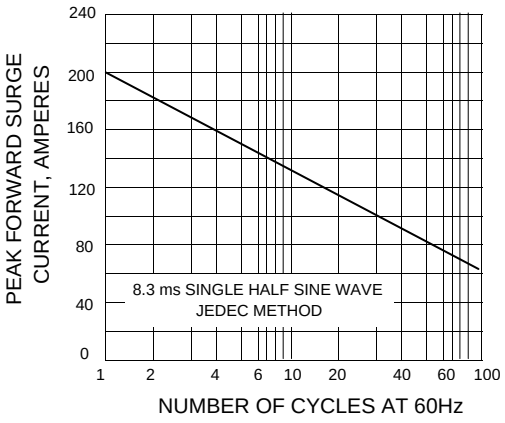


FIG.3 - STEADY STATE POWER DERATING

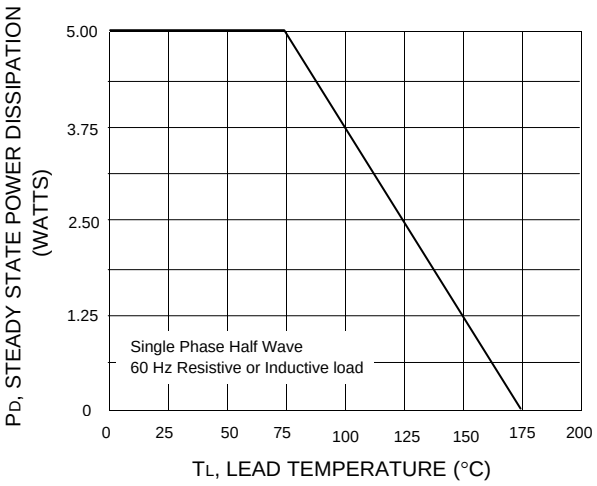


FIG.4 - PULSE RATING CURVE

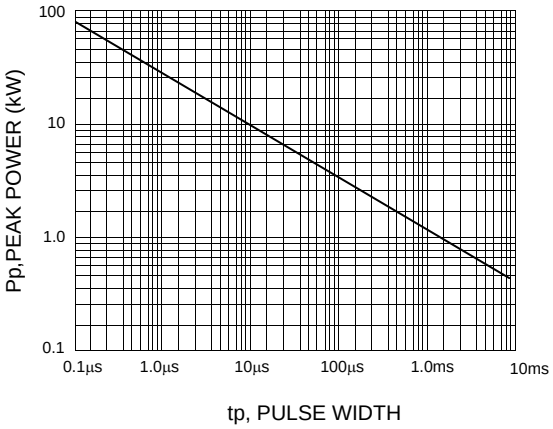


FIG.5 - PULSE WAVEFORM