1500W, 6.45V - 462V Transient Voltage Suppressor

FEATURES

- Glass passivated chip junction
- 1500W peak pulse power capability at 1.0ms
- Excellent clamping capability
- Low incremental surge resistance
- Fast response time
- Typical I_R less than 1μA above 10V
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

- Protect sensitive circuit from damage by high voltage transients
- Lighting, ESD transient voltage protection of IC, system
- Inductive switching load protection of IC, system
- Electrical Fast Transient Immunity protection of IC, system

MECHANICAL DATA

- Case: DO-201
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Pure tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Polarity: As marked
- Weight: 0.090g (approximately)

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
V_{RWM}	5.8 - 376	V
V_{BR} (uni - directional)	6.45 - 462	V
V_{BR} (bi - directional)	6.45 - 462	V
P_{PK}	1500	W
$T_{J\ MAX}$	175	°C
Package	DO-201	

Pb-Free RoHS COMPLIANT HALOGEN FREE

DO-201

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)			
PARAMETER	**SYMBOL**	**VALUE**	**UNIT**
Peak pulse power dissipation, Tp = 1ms[(1)]	P_{PPM}	1500	W
Power dissipation .375 inch lead length at T_A = 75°C	P_D	5	W
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load for Uni-directional only	I_{FSM}	200	A
Junction temperature	T_J	- 55 to +175	°C
Storage temperature	T_{STG}	- 55 to +175	°C

Devices for Bipolar Applications

1. For bidirectional use CA suffix for types 1V5KE6V8A to 1V5KE440A
2. Electrical characteristics apply in both directions

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)

JEDEC type number	Uni-directional Bi-directional (C) Device	Breakdown voltage V_{BR}@I_T (V)		Test current I_T (mA)	Reverse stand-Off voltage V_{RWM} (V)	Reverse leakage current at V_{RWM} I_R (uA)(1)	Peak pulse current I_{PPM} (A)	Clamping voltage at I_{PPM} V_C (V)
		Min	Max					
1N6267A	1V5KE6V8(C)A	6.45	7.14	10	5.80	1000	143	10.5
1N6268A	1V5KE7V5(C)A	7.13	7.88	10	6.40	500	133	11.3
1N6269A	1V5KE8V2(C)A	7.79	8.61	10	7.02	200	124	12.1
1N6270A	1V5KE9V1(C)A	8.65	9.55	1	7.78	50	112	13.4
1N6271A	1V5KE10(C)A	9.5	10.5	1	8.55	10	103	14.5
1N6272A	1V5KE11(C)A	10.5	11.6	1	9.40	5	96.2	15.6
1N6273A	1V5KE12(C)A	11.4	12.6	1	10.2	5	90.0	16.7
1N6274A	1V5KE13(C)A	12.4	13.7	1	11.1	5	82.0	18.2
1N6275A	1V5KE15(C)A	14.3	15.8	1	12.8	5	71.0	21.2
1N6276A	1V5KE16(C)A	15.2	16.8	1	13.6	5	67.0	22.5
1N6277A	1V5KE18(C)A	17.1	18.9	1	15.3	5	59.5	26.2
1N6278A	1V5KE20(C)A	19.0	21.0	1	17.1	5	54.2	27.7
1N6279A	1V5KE22(C)A	20.9	23.1	1	18.8	5	49.0	30.6
1N6280A	1V5KE24(C)A	22.8	25.2	1	20.5	5	45.2	33.2
1N6281A	1V5KE27(C)A	25.7	28.4	1	23.1	5	40.0	37.5
1N6282A	1V5KE30(C)A	28.5	31.5	1	25.6	5	36.2	41.4
1N6283A	1V5KE33(C)A	31.4	34.7	1	28.2	5	33.0	45.7
1N6284A	1V5KE36(C)A	34.2	37.8	1	30.8	5	30.1	49.9
1N6285A	1V5KE39(C)A	37.1	41	1	33.3	5	28.0	53.9
1N6286A	1V5KE43(C)A	40.9	45.2	1	36.8	5	25.3	59.3
1N6287A	1V5KE47(C)A	44.7	49.4	1	40.2	5	23.2	64.8
1N6288A	1V5KE51(C)A	48.5	53.6	1	43.6	5	21.4	70.1
1N6289A	1V5KE56(C)A	53.2	58.8	1	47.8	5	19.5	77.0
1N6290A	1V5KE62(C)A	58.9	65.1	1	53.0	5	17.7	85.0
1N6291A	1V5KE68(C)A	64.6	71.4	1	58.1	5	16.3	92.0
1N6292A	1V5KE75(C)A	71.3	78.8	1	64.1	5	14.6	104
1N6293A	1V5KE82(C)A	77.9	86.1	1	70.1	5	13.3	113
1N6294A	1V5KE91(C)A	86.5	95.5	1	77.8	5	12.0	125
1N6295A	1V5KE100(C)A	95	105	1	85.5	5	11.0	137
1N6296A	1V5KE110(C)A	106	116	1	94.0	5	9.9	152
1N6297A	1V5KE120(C)A	114	126	1	102	5	9.1	165
1N6298A	1V5KE130(C)A	124	137	1	111	5	8.4	179
1N6299A	1V5KE150(C)A	143	158	1	128	5	7.2	207
1N6300A	1V5KE160(C)A	152	168	1	136	5	6.8	219
1N6301A	1V5KE170(C)A	162	179	1	145	5	6.4	234
1N6302A	1V5KE180(C)A	171	189	1	154	5	6.1	246
1N6303A	1V5KE200(C)A	190	210	1	171	5	5.5	274
	1V5KE220(C)A	209	231	1	185	5	4.6	328
	1V5KE250(C)A	237	263	1	214	5	4.5	344
	1V5KE300(C)A	285	315	1	256	5	3.8	414
	1V5KE350(C)A	333	368	1	300	5	3.2	482
	1V5KE400(C)A	380	420	1	342	5	2.8	548
	1V5KE440(C)A	418	462	1	376	5	2.6	602

Notes:

1. For bipolar types having V_{WM} of 10 volts and under, the I_D limit is doubled.

ORDERING INFORMATION		
ORDERING CODE(1)	**PACKAGE**	**PACKING**
1V5KEx	DO-201	1,250 / Tape & Reel
1V5KEx A0G	DO-201	500 / Ammo box

Notes:

1. "x" defines voltage from 6.8V(1V5KE6V8(C)A) to 440V(1V5KE440(C)A)

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Peak Pulse Power Rating Curve

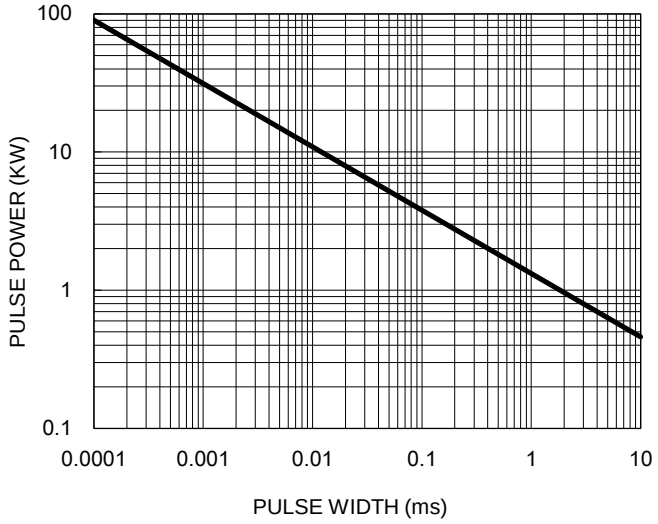


Fig.2 Pulse Derating Curve

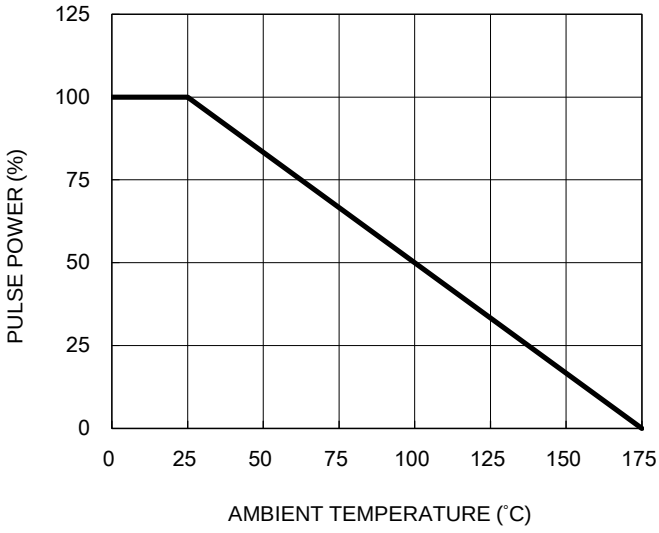


Fig.3 Pulse Waveform

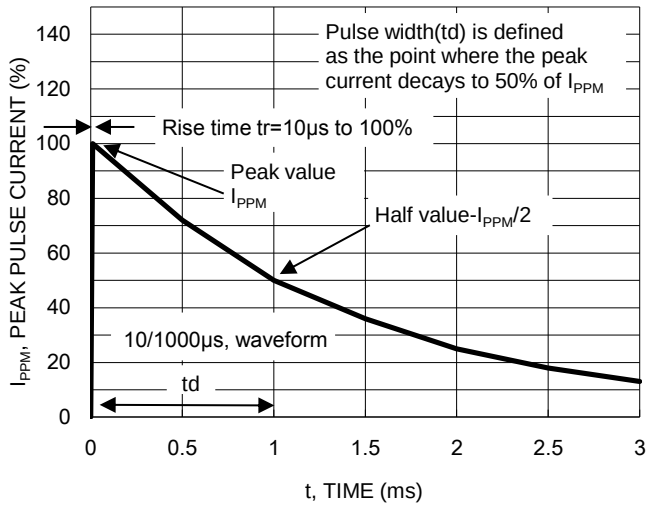
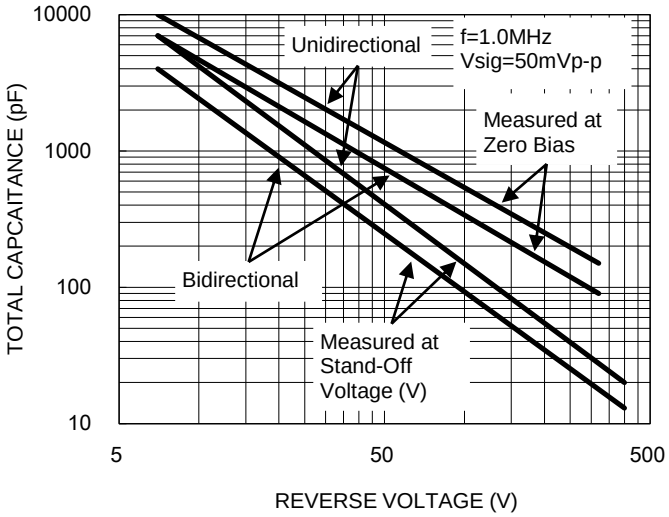


Fig.4 Total Capacitance



CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.5 Steady State Power Derating Curve

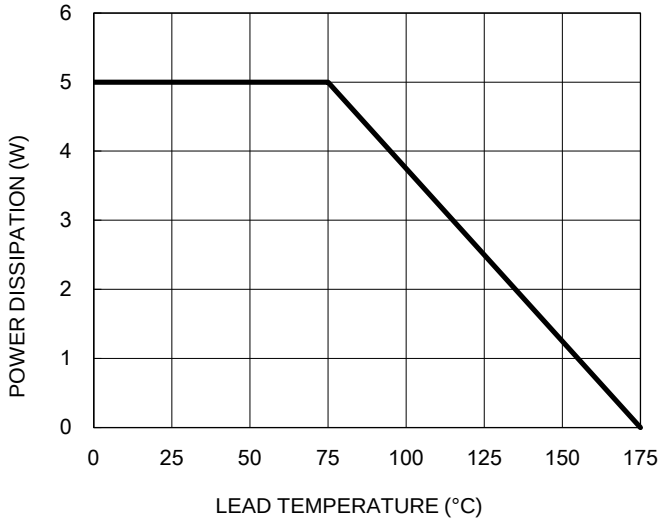
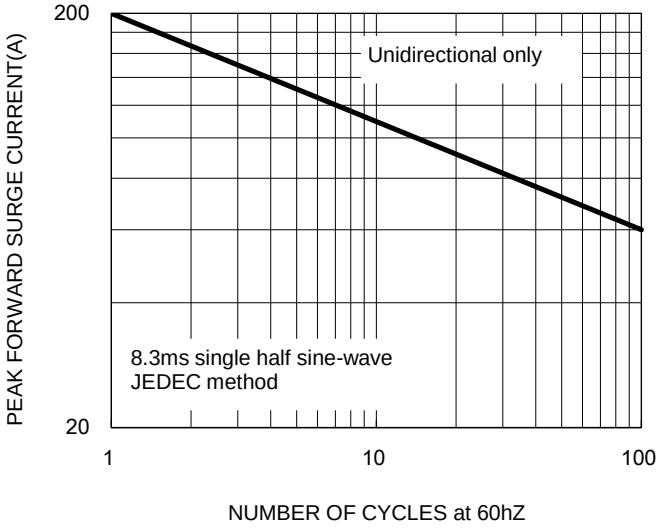
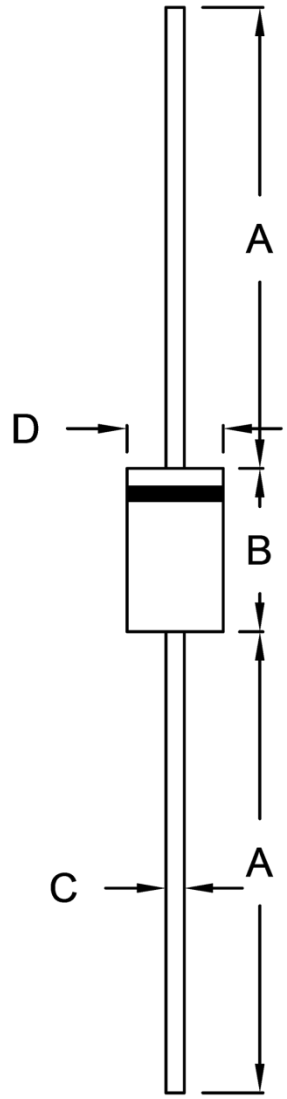


Fig.6 Non-Repetitive Surge Current



PACKAGE OUTLINE DIMENSIONS

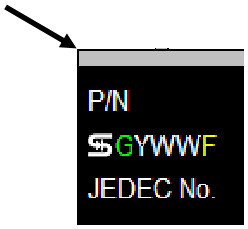
DO-201



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	25.40	-	1.000	-
B	8.50	9.50	0.335	0.374
C	0.96	1.06	0.038	0.042
D	5.00	5.60	0.197	0.220

MARKING DIAGRAM

Cathode band for uni-directional products only



P/N = Device Code
G = Green Compound
YWW = Date Code
F = Factory Code

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