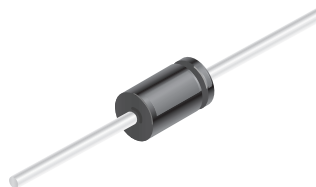


## 1.5KE6.8(C)A - 1.5KE440(C)A

### Features

- Glass passivated junction.
- 1500W Peak Pulse Power capability at 1.0 ms.
- Excellent clamping capability.
- Low incremental surge resistance.
- Fast response time; typically less than 1.0 ps from 0 volts to BV for unidirectional and 5.0 ns for bidirectional.
- Typical  $I_R$  less than 1.0  $\mu$ A above 10V.
- UL certified, UL #E210467.



**DO-201AE**

COLOR BAND DENOTES CATHODE ON UNIDIRECTIONAL DEVICES ONLY. NO COLOR BAND ON BIDIRECTIONAL DEVICES.

### DEVICES FOR BIPOLAR APPLICATIONS

- Bidirectional types use CA suffix.
- Electrical Characteristics apply in both directions.

## 1500 Watt Transient Voltage Suppressors

### Absolute Maximum Ratings\*

$T_A = 25^\circ\text{C}$  unless otherwise noted

Symbol	Parameter	Value	Units
$P_{PPM}$	Peak Pulse Power Dissipation at $T_A = 25^\circ\text{C}$ , $T_P=1\text{ms}$	minimum 1500	W
$I_{PPM}$	Peak Pulse Current	see table	A
$P_D$	Steady State Power Dissipation .375" lead length @ $T_A = 75^\circ\text{C}$	5.0	W
$I_{FSM}$	Non-repetitive Peak Forward Surge Current superimposed on rated load (JEDEC method) (Note 1)	200	A
$T_{stg}$	Storage Temperature Range	-65 to +175	$^\circ\text{C}$
$T_J$	Operating Junction Temperature	-65 to +175	$^\circ\text{C}$

\*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

**Note 1:** Measured on 8.3 ms single half-sine wave; Duty cycle = 4 pulses per minute maximum.

# Transient Voltage Suppressors

(continued)

## Electrical Characteristics

T<sub>A</sub> = 25°C unless otherwise noted

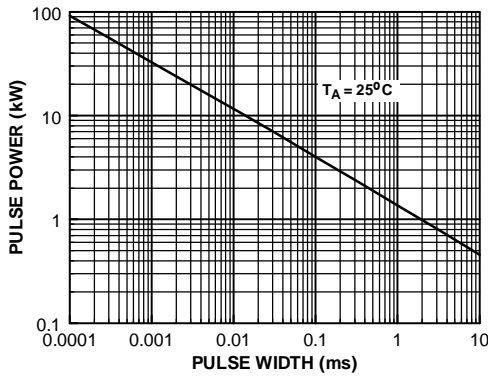
Uni-directional Bi-directional (C) Device	Reverse Stand-off Voltage V <sub>RWM</sub> (V)	Breakdown Voltage V <sub>BR</sub> (V)		Test Current I <sub>T</sub> (mA)	Max Clamping Voltage @ IPPM V <sub>C</sub> (V)	Max Peak Pulse Surge Current I <sub>PPM</sub> (A)	Max Reverse Leakage V <sub>RWM</sub> I <sub>R</sub> (uA)*
		min	max				
1.5KE6.8(C)A	5.80	6.45	7.14	10	10.5	143	1000
1.5KE7.5(C)A	6.40	7.13	7.88	10	11.3	133	500
1.5KE8.2(C)A	7.02	7.79	8.61	10	12.1	124	200
1.5KE9.1(C)A	7.78	8.65	9.55	1	13.4	112	50
1.5KE10(C)A	8.55	9.50	10.5	1	14.5	103	10
1.5KE11(C)A	9.40	10.5	11.6	1	15.6	96.2	5
1.5KE12(C)A	10.2	11.4	12.6	1	16.7	90.0	5
1.5KE13(C)A	11.1	12.4	13.7	1	18.2	82.0	5
1.5KE15(C)A	12.8	14.3	15.8	1	21.2	71.0	5
1.5KE16(C)A	13.6	15.2	16.8	1	22.5	67.0	5
1.5KE18(C)A	15.3	17.1	18.9	1	26.2	59.5	5
1.5KE20(C)A	17.1	19.0	21.0	1	27.7	54.2	5
1.5KE22(C)A	18.8	20.9	23.1	1	30.6	49.0	5
1.5KE24(C)A	20.5	22.8	25.2	1	33.2	45.2	5
1.5KE27(C)A	23.1	25.7	28.4	1	37.5	40.0	5
1.5KE30(C)A	25.6	28.5	31.5	1	41.4	36.2	5
1.5KE33(C)A	28.2	31.4	34.7	1	45.7	33.0	5
1.5KE36(C)A	30.8	34.2	37.8	1	49.9	30.1	5
1.5KE39(C)A	33.3	37.1	41.0	1	53.9	28.0	5
1.5KE43(C)A	36.8	40.9	45.2	1	59.3	25.3	5
1.5KE47(C)A	40.2	44.7	49.4	1	64.8	23.2	5
1.5KE51(C)A	43.6	48.5	53.6	1	70.1	21.4	5
1.5KE56(C)A	47.8	53.2	58.8	1	77.0	19.5	5
1.5KE62(C)A	53.0	58.9	65.1	1	85.0	17.7	5
1.5KE68(C)A	58.1	64.6	71.4	1	92.0	16.3	5
1.5KE75(C)A	64.1	71.3	78.8	1	104.0	14.6	5
1.5KE82(C)A	70.1	77.9	86.1	1	113.0	13.3	5
1.5KE91(C)A	77.8	86.5	95.5	1	125.0	12.0	5
1.5KE100(C)A	85.5	95.0	105.0	1	137.0	11.0	5
1.5KE110(C)A	94.0	106.0	116.0	1	152.0	9.9	5
1.5KE120(C)A	102.0	114.0	126.0	1	165.0	9.1	5
1.5KE130(C)A	111.0	124.0	137.0	1	179.0	8.4	5
1.5KE150(C)A	128.0	143.0	158.0	1	207.0	7.2	5
1.5KE160(C)A	136.0	152.0	168.0	1	219.0	6.8	5
1.5KE170(C)A	145.0	162.0	179.0	1	234.0	6.4	5
1.5KE180(C)A	154.0	171.0	189.0	1	246.0	6.1	5
1.5KE200(C)A	171.0	190.0	210.0	1	274.0	5.5	5
1.5KE220(C)A	185.0	209.0	231.0	1	328.0	4.6	5
1.5KE250(C)A	214.0	237.0	263.0	1	344.0	4.5	5
1.5KE300(C)A	256.0	285.0	315.0	1	414.0	3.8	5
1.5KE350(C)A	300.0	333.0	368.0	1	482.0	3.2	5
1.5KE400(C)A	342.0	380.0	420.0	1	548.0	2.8	5
1.5KE440(C)A	376.0	418.0	462.0	1	602.0	2.6	5

\* For bidirectional parts with V<sub>RWM</sub> < 10V, the I<sub>R</sub> max limit is doubled.

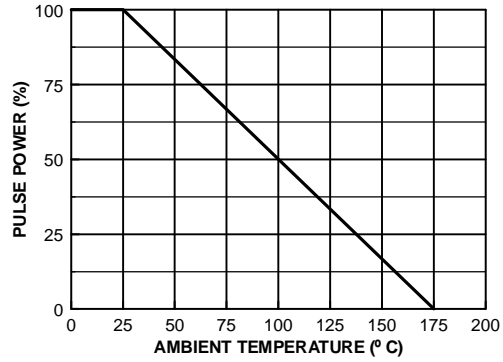
1.5KE6.8(C)A - 1.5KE440(C)A

Typical Characteristics

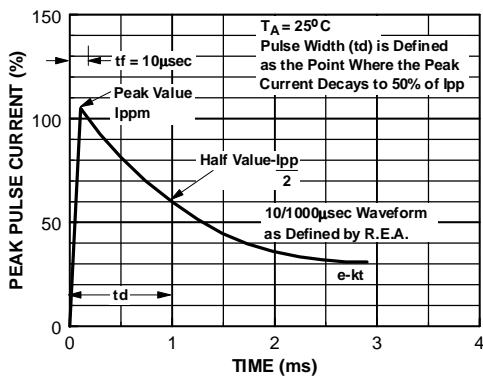
Peak Pulse Power Rating Curve



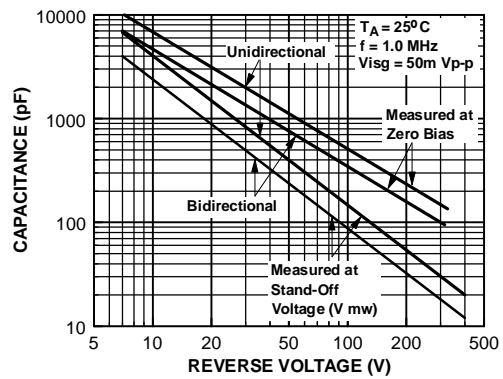
Pulse Derating Curve



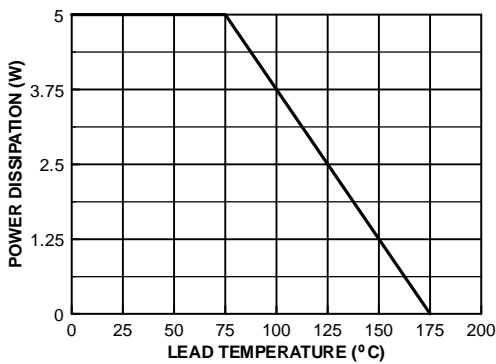
Pulse Waveform



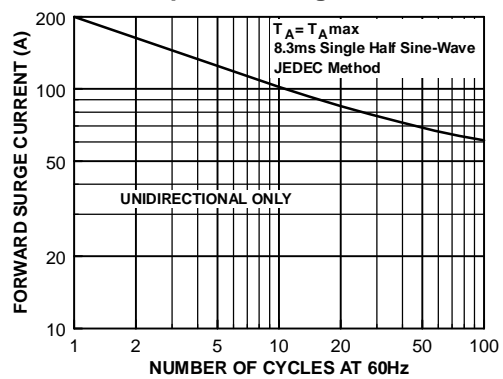
Junction Capacitance



Steady State Power Derating Curve



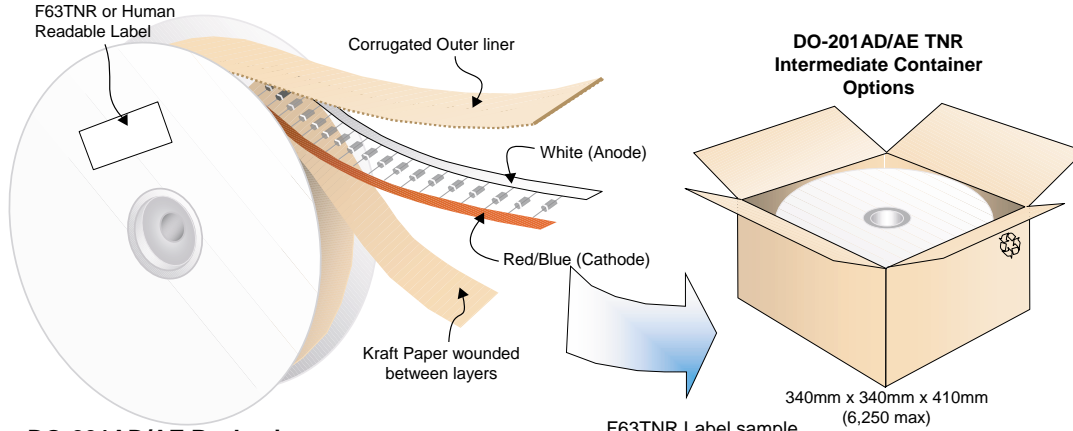
Non-Repetitive Surge Current



# DO-201AD/AE Tape and Reel Data



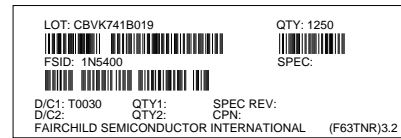
## DO-201AD/AE Packaging Configuration: Figure 1.0



## DO-201AD/AE Packaging Information Table : Figure 2.0

DO-201AD/AE Packaging Information	
Packaging Option	Under package code P3
Packaging type	TNR
Qty per Reel/Tube/Bag	1250
Reel Size (inch diameter)	13
Inside Tape Spacing (mm)	52
Int Box Dimension (mm)	340x340x410
Max qty per Box	6,250
Weight per unit (gm)	1.20 AD/1.10 AE
Weight per Reel (kg)	1.50 AD/1.20 AE
Note/Comments	

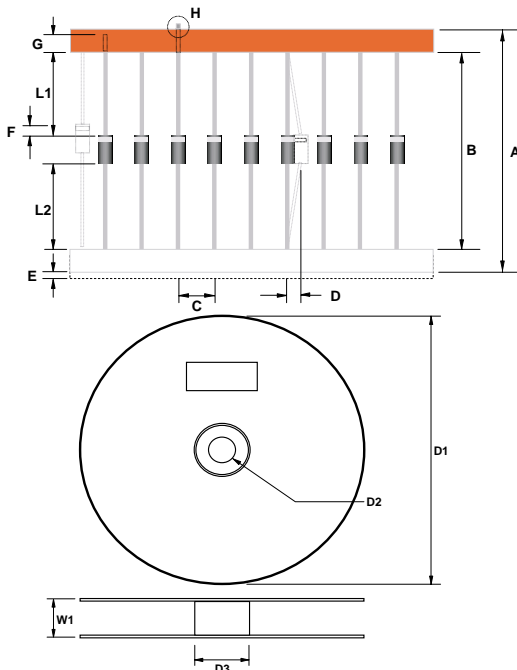
### F63TNR Label sample



### Human Readable Label sample



## DO-201AD/AE Taping Dimension: Figure 5.0



### TAPING DIMENSIONS

	INCH	MM	MILS	NOTES
A	2.520	64.00	2519	Overall width
	+0.066/	+1.69/	+66.5/	
	-0.027	-0.69	-27.0	
	1.496	38.00	1496	
	+0.059/	+1.5	+59	
	-0.039	-1.0	-39	
B	2.047±0.027	52 ±0.69	2047±27	Inside Tape Spacing
C	0.200 ±0.0157	10.08 ±0.40	394 ±15.7	Component Pitch
D	0.047(max)	1.2(max)	47(max)	Component Misalignment
E	0.022(max)	0.55(max)	22(max)	Tape Mismatch
F	0.027(max)	±0.69	±27	Units in line w/ one another
G	0.126(min)	3.2(min)	126(min)	Lead amount between tapes
H	0	0	0	Lead amount beyond tapes
L1-L2	±0.027	±0.69	±27	Delta between two leads

### REEL DIMENSIONS

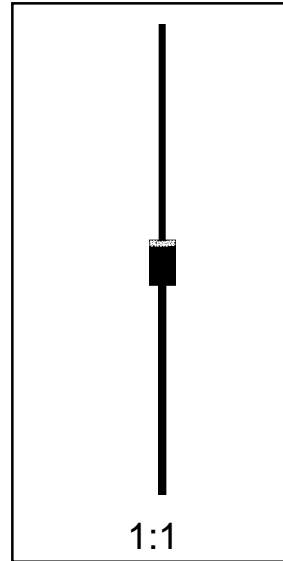
ITEM DESCRIPTION	SYMBOL	MINIMUM	MAXIMUM
Reel Diameter	D1	13.875	14.125
Arbor Hole Diameter (Standard)	D2	1.245	1.255
Core Diameter	D3	3.190	3.310
Flange to Flange Outer Width	W1		3.400

Note: All Dimensions are in inches

# DO-201AD Package Dimensions



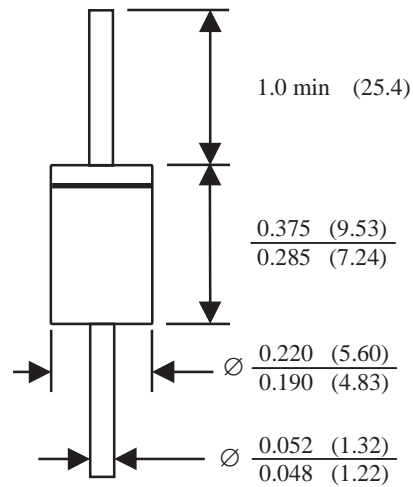
## DO-201AD (FS PKG Code P3)



Scale 1:1 on letter size paper

Dimensions shown below are in:  
inches [millimeters]

Part Weight per unit (gram): 1.1



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DOME™	ISOPLANAR™	Quiet Series™	
E <sup>2</sup> CMOS™	MICROWIRE™	SILENT SWITCHER®	
EnSigna™	OPTOLOGIC™	SMART START™	
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