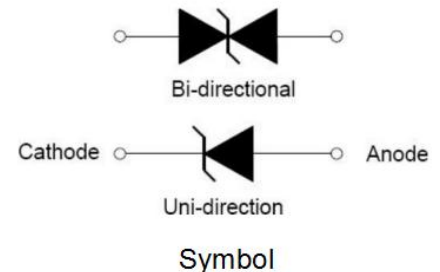


DESCRIPTION:

TVS diodes can be used in a wide range of applications which like consumer electronic products, automotive industries, munitions, telecommunications, aerospace industries, and intelligent control systems.

FEATURES:

- ✧ Glass passivated or planar junction
- ✧ Lower clamping voltage.
- ✧ High temperature soldering: 260°C/10s at terminals.
- ✧ Glass passivated chip junction in DO-27/DO-201 package.
- ✧ Plastic package has Underwriters Laboratory Flammability 94V-0.



ABSOLUTE MAXIMUM RATINGS

<i>Parameter</i>	<i>SYMBOLS</i>	<i>VALUE</i>	<i>UNITS</i>
Peak power dissipation	P _{ppm}	1500	Watts
Peak pulse reverse current	I _{ppm}	See Table 1	Amps
Steady state power dissipation	P _{M(AV)}	6.5	Watts
Peak forward surge current	I _{FSM}	200	Amps
Operating junction and storage temperature range	T _{STG,TJ}	-55 to + 150	°C

ELECTRICAL CHARACTERISTICS (T_A=25°C)

Part Number		V _R	I _R @V _R	V _{BR} @I _T		I _T	V _C @I _{PP}	I _{PP} ®
Uni-Polar	Bi-Polar	V	μA	min(V)	max(V)	mA	max(V)	A
1.5KE6.8A	1.5KE6.8CA	5.8	1000	6.45	7.14	10	10.5	147.1
1.5KE7.5A	1.5KE7.5CA	6.4	500	7.13	7.88	10	11.3	132.8
1.5KE8.2A	1.5KE8.2CA	7.02	200	7.79	8.61	10	12.1	124.0
1.5KE9.1A	1.5KE9.1CA	7.78	50	8.65	9.55	1	13.4	112.0
1.5KE10A	1.5KE10CA	8.55	10	9.50	10.50	1	14.5	103.5
1.5KE11A	1.5KE11CA	9.4	5	10.50	11.60	1	15.6	96.2
1.5KE12A	1.5KE12CA	10.2	5	11.40	12.60	1	16.7	89.8
1.5KE13A	1.5KE13CA	11.1	5	12.40	13.70	1	18.2	82.5
1.5KE15A	1.5KE15CA	12.8	1	14.30	15.80	1	21.2	70.8
1.5KE16A	1.5KE16CA	13.6	1	15.20	16.80	1	22.5	66.7
1.5KE18A	1.5KE18CA	15.3	1	17.10	18.90	1	25.2	59.6
1.5KE20A	1.5KE20CA	17.1	1	19.00	21.00	1	27.7	54.2
1.5KE22A	1.5KE22CA	18.8	1	20.90	23.10	1	30.6	49.1
1.5KE24A	1.5KE24CA	20.5	1	22.80	25.20	1	33.2	45.2
1.5KE27A	1.5KE27CA	23.1	1	25.70	28.40	1	37.5	40.0
1.5KE30A	1.5KE30CA	25.6	1	28.50	31.50	1	41.4	36.3
1.5KE33A	1.5KE33CA	28.2	1	31.40	34.70	1	45.7	32.9
1.5KE36A	1.5KE36CA	30.8	1	34.20	37.80	1	49.9	30.1
1.5KE39A	1.5KE39CA	33.3	1	37.10	41.00	1	53.9	27.9
1.5KE43A	1.5KE43CA	36.8	1	40.90	45.20	1	59.3	25.3
1.5KE47A	1.5KE47CA	40.2	1	44.70	49.40	1	64.8	23.2
1.5KE51A	1.5KE51CA	43.6	1	48.50	53.60	1	70.1	21.4
1.5KE56A	1.5KE56CA	47.8	1	53.20	58.80	1	77.0	19.5
1.5KE62A	1.5KE62CA	53.0	1	58.90	65.10	1	85.0	17.7
1.5KE68A	1.5KE68CA	58.1	1	64.60	71.40	1	92.0	16.4
1.5KE75A	1.5KE75CA	64.1	1	71.30	78.80	1	103.0	14.6
1.5KE82A	1.5KE82CA	70.1	1	77.90	86.10	1	113.0	13.3
1.5KE91A	1.5KE91CA	77.8	1	86.50	95.50	1	125.0	12.0
1.5KE100A	1.5KE100CA	85.5	1	95.00	105.0	1	137.0	11.0
1.5KE110A	1.5KE110CA	94.0	1	105.0	116.0	1	152.0	10.0

Part Number		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	I_{PP}°
Uni-Polar	Bi-Polar	V	μA	min(V)	max(V)	mA	max(V)	A
1.5KE120A	1.5KE120CA	102.0	1	114.0	126.0	1	165.0	9.1
1.5KE130A	1.5KE130CA	111.0	1	124.0	137.0	1	179.0	8.4
1.5KE150A	1.5KE150CA	128.0	1	143.0	158.0	1	207.0	7.3
1.5KE160A	1.5KE160CA	136.0	1	152.0	168.0	1	219.0	6.9
1.5KE170A	1.5KE170CA	145.0	1	162.0	179.0	1	234.0	6.5
1.5KE180A	1.5KE180CA	154.0	1	171.0	189.0	1	246.0	6.1
1.5KE200A	1.5KE200CA	171.0	1	190.0	210.0	1	274.0	5.5
1.5KE220A	1.5KE220CA	185.0	1	209.0	231.0	1	328.0	4.6
1.5KE250A	1.5KE250CA	214.0	1	237.0	263.0	1	344.0	4.4
1.5KE300A	1.5KE300CA	256.0	1	285.0	315.0	1	414.0	3.7
1.5KE350A	1.5KE350CA	300.0	1	332.0	368.0	1	482.0	3.2
1.5KE400A	1.5KE400CA	342.0	1	380.0	420.0	1	548.0	2.8
1.5KE440A	1.5KE440CA	376.0	1	418.0	462.0	1	602.0	2.5
1.5KE480A	1.5KE480CA	408.0	1	456.0	504.0	1	658.0	2.28
1.5KE510A	1.5KE510CA	434.0	1	485.0	535.0	1	698.0	2.15
1.5KE530A	1.5KE530CA	450.0	1	503.5	556.5	1	725.0	2.07
1.5KE540A	1.5KE540CA	459.0	1	513.0	567.0	1	740.0	2.03
1.5KE550A	1.5KE550CA	467.0	1	522.5	577.5	1	760.0	1.97

① Surge waveform: 10/1000 μs

V_R : Stand-off Voltage -- Maximum voltage that can be applied V_{BR} :

Breakdown Voltage

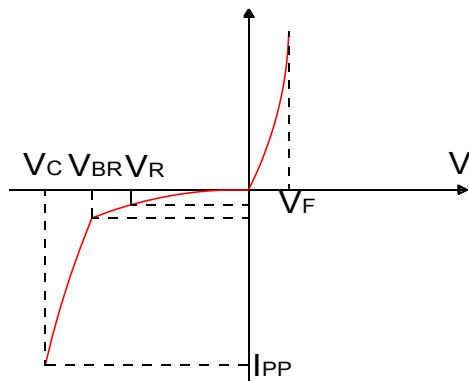
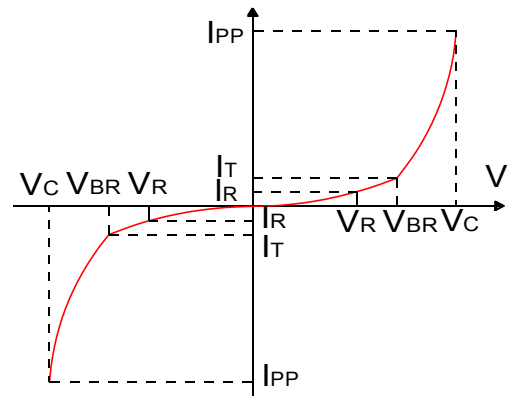
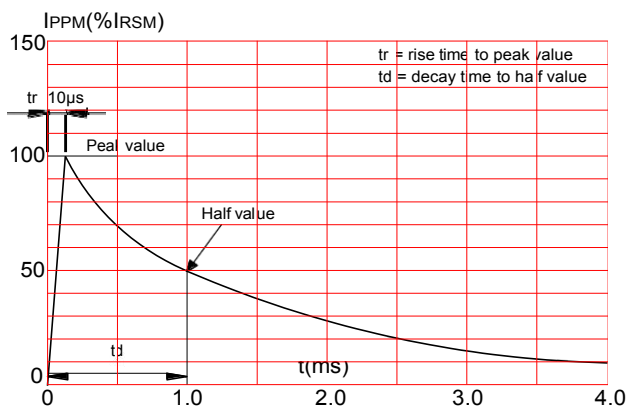
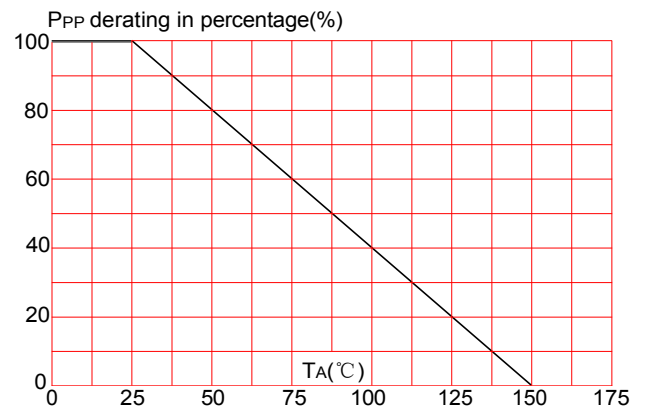
V_C : Clamping Voltage -- Peak voltage measured across the suppressor at a specified I_{PP}

I_R : Reverse Leakage Current

☆ : Commonly used models

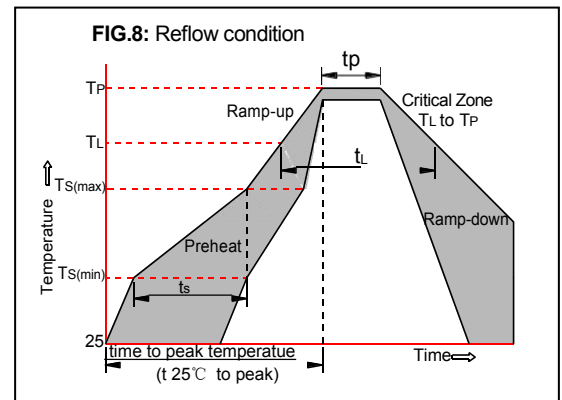
ORDERING INFORMATION

1.5KE	xx	C	A
1.5KE 1500W Series	V_R voltage	C:Bi-directional	A: 5% VBR Voltage

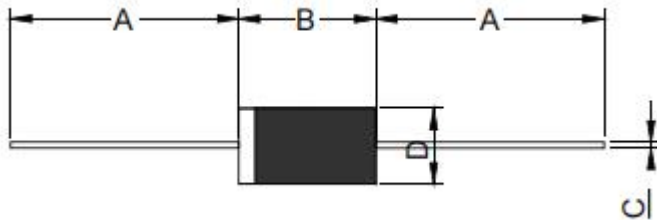
RATINGS AND V - I CHARACTERISTICS CURVES ($T_A=25^\circ\text{C}$, unless otherwise noted)
FIG.1:V- I curve characteristics (Uni-directional)

FIG.2:V- I curve characteristics (Bi-directional)

FIG.3: Pulse waveform

FIG.4: Pulse derating curve


SOLDERING PARAMETERS

Reflow Condition		Pb-Free assembly (see FIG.8)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (t_s)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_p)		8 min. Max
Do not exceed		+260°C



PACKAGE MECHANICAL DATA



Ref.	Dimensions			
	Inches		Millimeters	
	Min.	Max.	Min.	Max.
A	1.000	-	25.40	-
B	0.339	0.362	8.60	9.20
C	0.045	0.057	1.15	1.45
D	0.193	0.221	4.90	5.60

Part Number	Case Type	Quantity	Packing Option
1.5KEXXCA/A	DO-27/DO-201	1000	Box