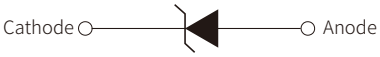
FEATURES

- Plastic package
- Glass passivated chip junction in DO-41 Package
- 400W peak pulse power capability on 10/1000us waveform
- Excellent clamping capability
- Low zener impedance
- Fast response time:typically less than 1.0ps from 0 Volts to V_{BR} Min
- Typical IR less than 1uA above 12V
- Polarity:Color band denoted cathode except bidirectional
- Mounting Position:Any

DO-41

Bi-directional



Uni-directional

Schematic Symbol

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS AND CHARACTERISTICS(T_A=25°C)

Parameter	Symbol	Value	Unit
Peak pulse power dissipation at 10/1000μs waveform	P_{PP}	400	W
Steady state power dissipation at T_L=75°C	P_D	1.5	
Peak Pulse Current of on 10/1000us waveform(Note1)	I_{PPM}	See Table	A
Peak forward surge current, 8.3ms single half sine-wave for unidirectional only	I_{FSM}	40	
Typical thermal resistance, junction to ambient	$R_{\theta JA}$	100	°C/W
Operating junction and storage temperature range	T_J,T_{STG}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (T_A=25°C)

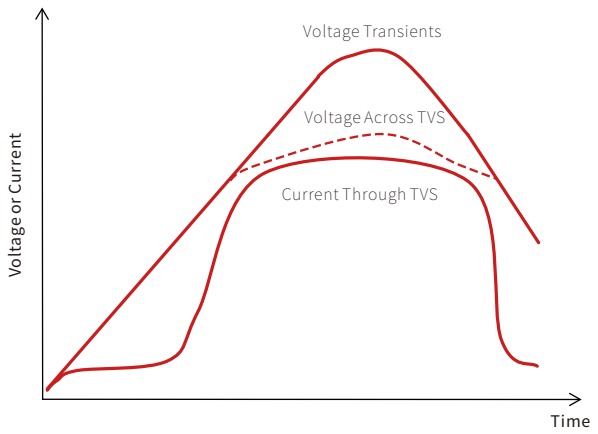
Part Number		Marking Code		V_R	V_{BR}@I_T		I_T	V_C@I_{PP}	I_{PP}①	I_R@V_R
Uni-Polar	Bi-Polar	Uni-Polar	Bi-Polar	V	Min(V)	Max (V)	mA	V	A	Max(μA)
P4KE6.8A	P4KE6.8CA	P4KE6.8A	P4KE6.8CA	5.8	6.45	7.14	10.0	10.5	39.0	1000.0
P4KE7.5A	P4KE7.5CA	P4KE7.5A	P4KE7.5CA	6.4	7.13	7.88	10.0	11.3	36.3	500.0
P4KE8.2A	P4KE8.2CA	P4KE8.2A	P4KE8.2CA	7.02	7.79	8.61	10.0	12.1	33.9	200.0
P4KE9.1A	P4KE9.1CA	P4KE9.1A	P4KE9.1CA	7.78	8.65	9.55	1.0	13.4	30.6	50.0
P4KE10A	P4KE10CA	P4KE10A	P4KE10CA	8.55	9.5	10.5	1.0	14.5	28.3	10.0
P4KE11A	P4KE11CA	P4KE11A	P4KE11CA	9.4	10.5	11.6	1.0	15.6	26.3	5.0
P4KE12A	P4KE12CA	P4KE12A	P4KE12CA	10.2	11.4	12.6	1.0	16.7	24.6	5.0
P4KE13A	P4KE13CA	P4KE13A	P4KE13CA	11.1	12.4	13.7	1.0	18.2	22.5	1.0
P4KE15A	P4KE15CA	P4KE15A	P4KE15CA	12.8	14.3	15.8	1.0	21.2	19.3	1.0
P4KE16A	P4KE16CA	P4KE16A	P4KE16CA	13.6	15.2	16.8	1.0	22.5	18.2	1.0
P4KE18A	P4KE18CA	P4KE18A	P4KE18CA	15.3	17.1	18.9	1.0	25.5	16.1	1.0
P4KE20A	P4KE20CA	P4KE20A	P4KE20CA	17.1	19.0	21.0	1.0	27.7	14.8	1.0
P4KE22A	P4KE22CA	P4KE22A	P4KE22CA	18.8	20.9	23.1	1.0	30.6	13.4	1.0
P4KE24A	P4KE24CA	P4KE24A	P4KE24CA	20.5	22.8	25.2	1.0	33.2	12.3	1.0
P4KE27A	P4KE27CA	P4KE27A	P4KE27CA	23.1	25.7	28.4	1.0	37.5	10.9	1.0
P4KE30A	P4KE30CA	P4KE30A	P4KE30CA	25.6	28.5	31.5	1.0	41.4	9.9	1.0
P4KE33A	P4KE33CA	P4KE33A	P4KE33CA	28.2	31.4	34.7	1.0	45.7	9.0	1.0
P4KE36A	P4KE36CA	P4KE36A	P4KE36CA	30.8	34.2	37.8	1.0	49.9	8.2	1.0
P4KE39A	P4KE39CA	P4KE39A	P4KE39CA	33.3	37.1	41.0	1.0	53.9	7.6	1.0
P4KE43A	P4KE43CA	P4KE43A	P4KE43CA	36.8	40.9	45.2	1.0	59.3	6.9	1.0
P4KE47A	P4KE47CA	P4KE47A	P4KE47CA	40.2	44.7	49.4	1.0	64.8	6.3	1.0
P4KE51A	P4KE51CA	P4KE51A	P4KE51CA	43.6	48.5	53.6	1.0	70.1	5.8	1.0
P4KE56A	P4KE56CA	P4KE56A	P4KE56CA	47.8	53.2	58.8	1.0	77.0	5.3	1.0
P4KE62A	P4KE62CA	P4KE62A	P4KE62CA	53.0	58.9	65.1	1.0	85.0	4.8	1.0

Part Number		Marking Code		V_R	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	I_{PP}①	$I_R@V_R$
Uni-Polar	Bi-Polar	Uni-Polar	Bi-Polar	V	Min(V)	Max (V)	mA	V	A	Max(μA)
P4KE68A	P4KE68CA	P4KE68A	P4KE68CA	58.1	64.6	71.4	1.0	92.0	4.5	1.0
P4KE75A	P4KE75CA	P4KE75A	P4KE75CA	64.1	71.3	78.8	1.0	103.0	4.0	1.0
P4KE82A	P4KE82CA	P4KE82A	P4KE82CA	70.1	77.9	86.1	1.0	113.0	3.6	1.0
P4KE91A	P4KE91CA	P4KE91A	P4KE91CA	77.8	86.5	95.5	1.0	125.0	3.3	1.0
P4KE100A	P4KE100CA	P4KE100A	P4KE100CA	85.5	95.0	105.0	1.0	137.0	3.0	1.0
P4KE110A	P4KE110CA	P4KE110A	P4KE110CA	94.0	105.0	116.0	1.0	152.0	2.7	1.0
P4KE120A	P4KE120CA	P4KE120A	P4KE120CA	102.0	114.0	126.0	1.0	165.0	2.5	1.0
P4KE130A	P4KE130CA	P4KE130A	P4KE130CA	111.0	124.0	137.0	1.0	179.0	2.3	1.0
P4KE150A	P4KE150CA	P4KE150A	P4KE150CA	128.0	143.0	158.0	1.0	207.0	2.0	1.0
P4KE160A	P4KE160CA	P4KE160A	P4KE160CA	136.0	152.0	168.0	1.0	219.0	1.9	1.0
P4KE170A	P4KE170CA	P4KE170A	P4KE170CA	145.0	162.0	179.0	1.0	234.0	1.8	1.0
P4KE180A	P4KE180CA	P4KE180A	P4KE180CA	154.0	171.0	189.0	1.0	246.0	1.7	1.0
P4KE200A	P4KE200CA	P4KE200A	P4KE200CA	171.0	190.0	210.0	1.0	274.0	1.5	1.0
P4KE220A	P4KE220CA	P4KE220A	P4KE220CA	185.0	209.0	231.0	1.0	328.0	1.3	1.0
P4KE250A	P4KE250CA	P4KE250A	P4KE250CA	214.0	237.0	263.0	1.0	344.0	1.2	1.0
P4KE300A	P4KE300CA	P4KE300A	P4KE300CA	256.0	285.0	315.0	1.0	414.0	1.0	1.0
P4KE350A	P4KE350CA	P4KE350A	P4KE350CA	300.0	332.0	368.0	1.0	482.0	0.85	1.0
P4KE400A	P4KE400CA	P4KE400A	P4KE400CA	342.0	380.0	420.0	1.0	548.0	0.75	1.0
P4KE440A	P4KE440CA	P4KE440A	P4KE440CA	376.0	418.0	462.0	1.0	602.0	0.68	1.0
P4KE480A	P4KE480CA	P4KE480A	P4KE480CA	408.0	456.0	504.0	1.0	658.0	0.61	1.0
P4KE510A	P4KE510CA	P4KE510A	P4KE510CA	434.0	485.0	535.0	1.0	698.0	0.57	1.0
P4KE530A	P4KE530CA	P4KE530A	P4KE530CA	451.0	503.5	556.5	1.0	725.0	0.55	1.0
P4KE540A	P4KE540CA	P4KE540A	P4KE540CA	459.0	513.0	567.0	1.0	740.0	0.54	1.0
P4KE550A	P4KE550CA	P4KE550A	P4KE550CA	467.0	522.5	577.5	1.0	760.0	0.52	1.0
P4KE600A	P4KE600CA	P4KE600A	P4KE600CA	510.0	570.0	630.0	1.0	828.0	0.48	1.0

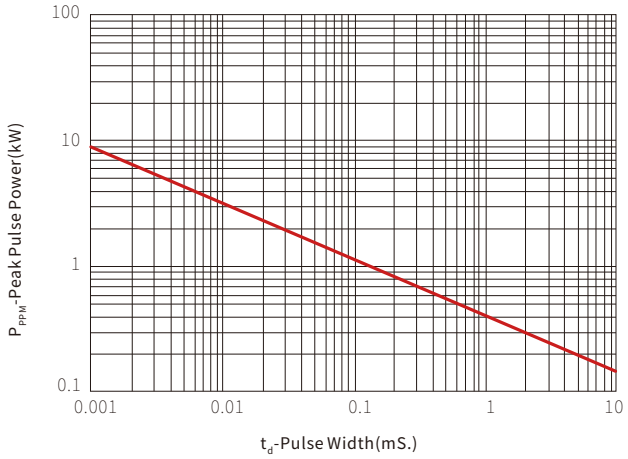
Note:
①.Surge waveform:10/1000μs
V_R: Stand-off voltage -- Maximum voltage that can be applied
V_{BR}: Breakdown voltage
V_C: Clamping voltage -- Peak voltage measured across the suppressor at a specified I_{PP}
I_R: Reverse leakage current

CHARACTERISTIC CURVES

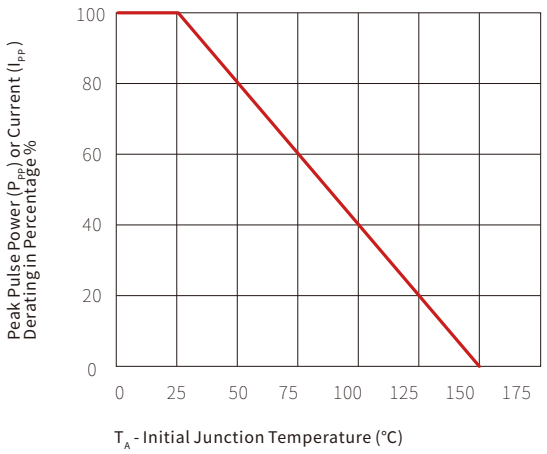
TVS Transients Clamping Waveform



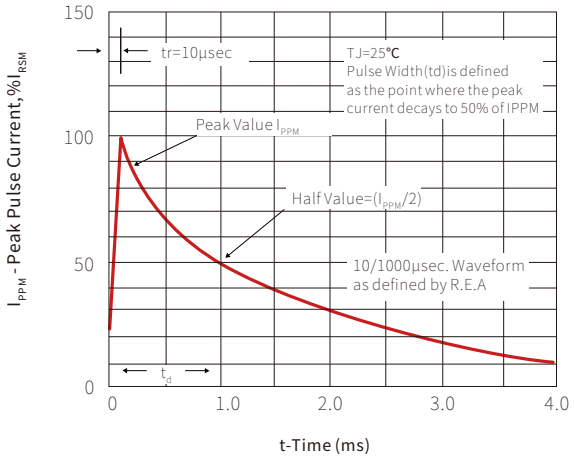
Peak Pulse Power Rating Curve



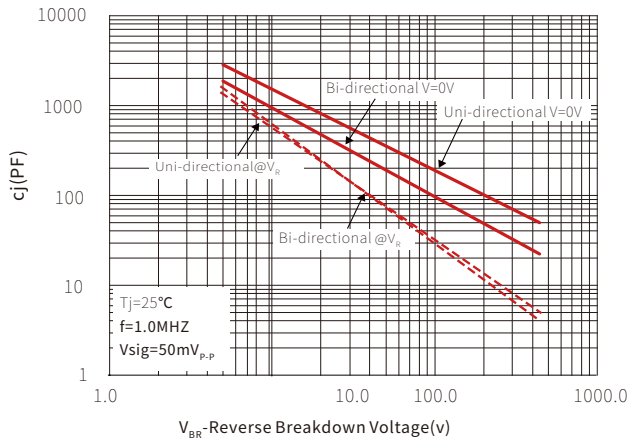
Pulse Derating Curve



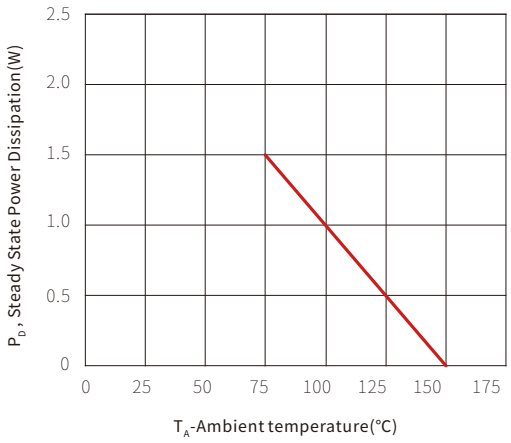
Pulse Waveform



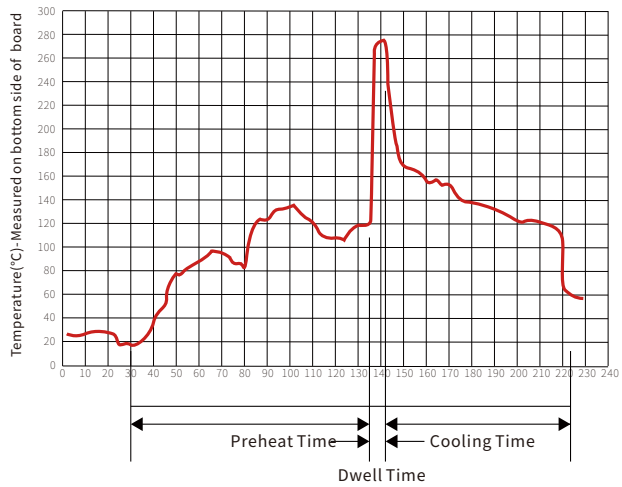
Typical Junction Capacittance



Steady State Power Dissipaton Deraiting Curve

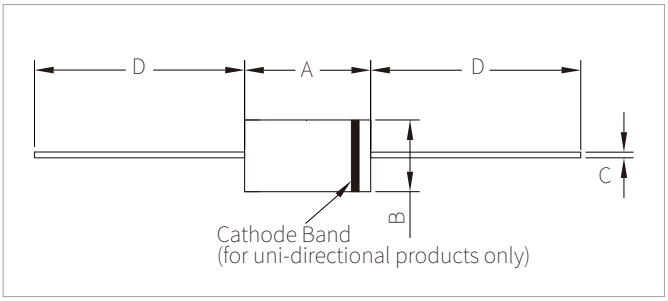


WAVE SOLDERING



Wave Parameter		Lead–free assembly
Pre Heat	Temperature Min	100°C
	Temperature Max	150°C
	Time(min to max)	60 – 180 secs
Solder pot Temperature		280°C Max
Solder Dwell Time		2-5 seconds

DO-41 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.10	5.20	0.160	0.205
B	2.00	2.70	0.080	0.107
C	0.71	0.86	0.028	0.034
D	25.40	-	1.000	-

ORDERING INFORMATION

Part Number	Component Package	Per Carton	Description
P4KExxA/CA	DO-41	5000pcs	Box

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No.3387 Shendu Road
Pujiang I&E Park
Minhang Shanghai China
201000

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Technical Support
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Email: fae01@semiware.com

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