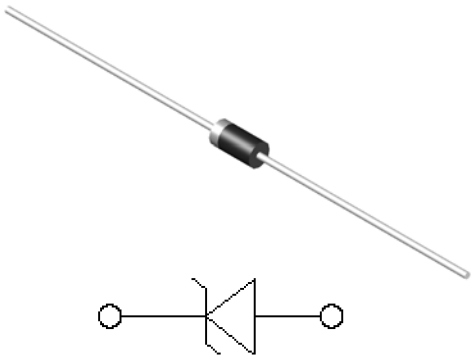
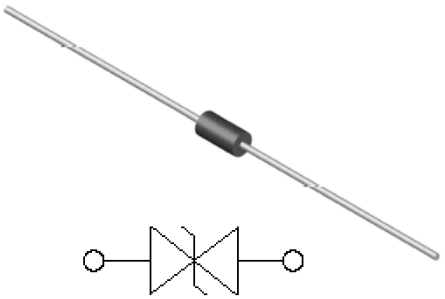
Transient Voltage Suppressor Diodes

Uni-directional



Bi-directional



Features

- Excellent clamping capability
- Low dynamic impedance
- Solder dip 275 °C max. 7 s, per JESD 22-B106

Mechanical Data

- **Package**: DO-204AL(DO-41)
  Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:**Color band denotes cathode end

■Maximum Ratings (Ta=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	Max
Peak power dissipation, with a 10/1000us waveform (1)	P_{PPM}	W	400
Peak pulse current, with a 10/1000us waveform (1)	I_{PPM}	A	See Next Table
Power dissipation, on infinite heat sink at TL=75℃	P_D	W	1.5
Peak forward surge current, 8.3 ms single half sine-wave unidirectional only (2)	I_{FSM}	A	40
Operating junction and storage temperature range	T_J,T_{STG}	℃	-55 to +150

■Electrical Characteristics（Ta=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	VALUE
Maximum instantaneous forward voltage at 25A for unidirectional only (3)	V_{FM}	V	3.5/5.0

■Thermal Characteristics （Ta=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	Conditions	VALUE
Thermal Resistance(Typical)	$R_{\theta J\text{-}A}$	℃/W	Junction to ambient	100
	$R_{\theta J\text{-}L}$	℃/W	Junction to lead	66

Notes:

(1) Non-repetitive current pulse, per Fig. 3 and derated above T_A= 25℃per Fig.2.

(2) Measured on 8.3ms single half sine-wave or equivalent square wave,duty cycle=4 pulses per minute maximum.

(3) VF=3.5V Max for devices of VBR≤220V，and VF=5.0V Max for devices of VBR＞220V.

■Ordering Information (Example)

PREFERED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
P4KE SERIES	D1	Approximate 0.30	5000	5000	50000	Tape
P4KE SERIES	C1	Approximate 0.30	1000	1000	50000	Bulk

■Electrical Characteristics（T_a=25℃ Unless otherwise specified）

Part Number (Uni)	Part Number (Bi)	Breakdown Voltage V_{BR}@I_T			Maximum Reverse Leakage I_R @ V_{WM} (μA)	Working Peak Reverse Voltage V_{RWM} (V)	Maximum Reverse Surge Current I_{PP} (A)	Maximum Clamping Voltage Vc @ I_{PP} (V)
		Min (V)	Max (V)	I_T (mA)				
P4KE6.8A	P4KE6.8CA	6.45	7.14	10	1000	5.8	38.1	10.5
P4KE7.5A	P4KE7.5CA	7.13	7.88	10	500	6.4	35.4	11.3
P4KE8.2A	P4KE8.2CA	7.79	8.61	10	200	7	33.1	12.1
P4KE9.1A	P4KE9.1CA	8.65	9.55	1	50	7.8	29.9	13.4
P4KE10A	P4KE10CA	9.5	10.5	1	10	8.6	27.6	14.5
P4KE11A	P4KE11CA	10.5	11.6	1	5	9.4	25.6	15.6
P4KE12A	P4KE12CA	11.4	12.6	1	5	10.2	24	16.7
P4KE13A	P4KE13CA	12.4	13.7	1	5	11.1	22	18.2
P4KE15A	P4KE15CA	14.3	15.8	1	1	12.8	18.9	21.2
P4KE16A	P4KE16CA	15.2	16.8	1	1	13.6	17.8	22.5
P4KE18A	P4KE18CA	17.1	18.9	1	1	15.3	15.9	25.2
P4KE20A	P4KE20CA	19	21	1	1	17.1	14.4	27.7
P4KE22A	P4KE22CA	20.9	23.1	1	1	18.8	13.1	30.6
P4KE24A	P4KE24CA	22.8	25.2	1	1	20.5	12	33.2
P4KE27A	P4KE27CA	25.7	28.4	1	1	23.1	10.7	37.5
P4KE30A	P4KE30CA	28.5	31.5	1	1	25.6	9.7	41.4
P4KE33A	P4KE33CA	31.4	34.7	1	1	28.2	8.8	45.7
P4KE36A	P4KE36CA	34.2	37.8	1	1	30.8	8	49.9
P4KE39A	P4KE39CA	37.1	41	1	1	33.3	7.4	53.9
P4KE43A	P4KE43CA	40.9	45.2	1	1	36.8	6.7	59.3
P4KE47A	P4KE47CA	44.7	49.4	1	1	40.2	6.2	64.8
P4KE51A	P4KE51CA	48.5	53.6	1	1	43.6	5.7	70.1
P4KE56A	P4KE56CA	53.2	58.8	1	1	47.8	5.2	77
P4KE62A	P4KE62CA	58.9	65.1	1	1	53	4.7	85
P4KE68A	P4KE68CA	64.6	71.4	1	1	58.1	4.3	92
P4KE75A	P4KE75CA	71.3	78.8	1	1	64.1	3.9	103 .0
P4KE82A	P4KE82CA	77.9	86.1	1	1	70.1	3.5	113
P4KE91A	P4KE91CA	86.5	95.5	1	1	77.8	3.2	125
P4KE100A	P4KE100CA	95	105	1	1	85.5	2.9	137
P4KE110A	P4KE110CA	105	116	1	1	94	2.6	152
P4KE120A	P4KE120CA	114	126	1	1	102	2.4	165
P4KE130A	P4KE130CA	124	137	1	1	111	2.3	179
P4KE150A	P4KE150CA	143	158	1	1	128	1.9	207
P4KE160A	P4KE160CA	152	168	1	1	136	1.8	219

■Electrical Characteristics（T_a=25℃ Unless otherwise specified）

Part Number (Uni)	Part Number (Bi)	Breakdown Voltage V_{BR}@I_T			Maximum Reverse Leakage I_R @ V_{WM} (μA)	Working Peak Reverse Voltage V_{RWM} (V)	Maximum Reverse Surge Current I_{PP} (A)	Maximum Clamping Voltage Vc @ I_{PP} (V)
		Min (V)	Max (V)	I_T (mA)				
P4KE170A	P4KE170CA	162	179	1	1	145	1.7	234
P4KE180A	P4KE180CA	171	189	1	1	154	1.6	246
P4KE200A	P4KE200CA	190	210	1	1	171	1.5	274
P4KE220A	P4KE220CA	209	231	1	1	185	1.2	328
P4KE250A	P4KE250CA	237	263	1	1	214	1.2	344
P4KE300A	P4KE300CA	285	315	1	1	256	1	414
P4KE350A	P4KE350CA	333	368	1	1	300	0.83	482
P4KE400A	P4KE400CA	380	420	1	1	342	0.73	548
P4KE440A	P4KE440CA	418	462	1	1	376	0.66	602
P4KE500A	P4KE500CA	475	525	1	1	427.5	0.58	690
P4KE520A	P4KE520CA	494	546	1	1	444.6	0.56	717.6
P4KE550A	P4KE550CA	523	577	1	1	470.3	0.53	759
P4KE600A	P4KE600CA	570	630	1	1	513	0.48	828

Note:

For bi-directional types having VWM of 10 V and less, the I_R limit is doubled

■ Characteristics (Typical)

FIG1:Peak Pulse Power Rating Curve

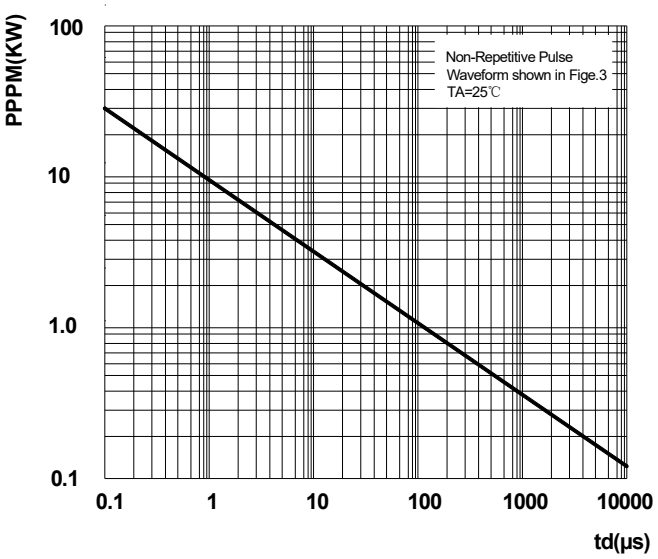


FIG2: Pulse Power or Current vs. Initial Junction Temperature

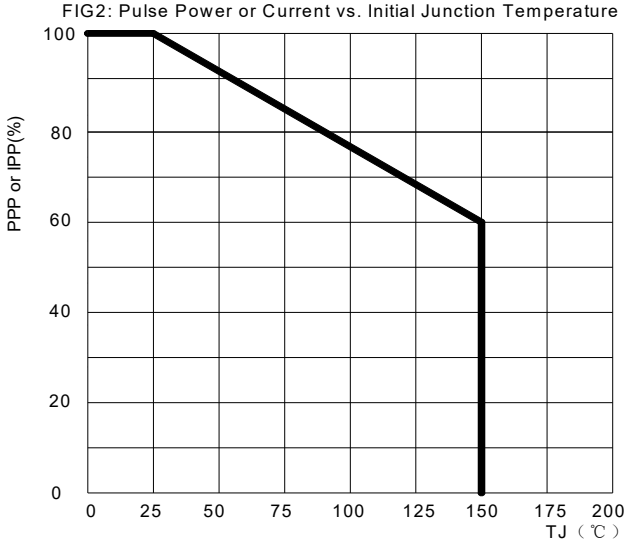


FIG3: Pulse Waveform

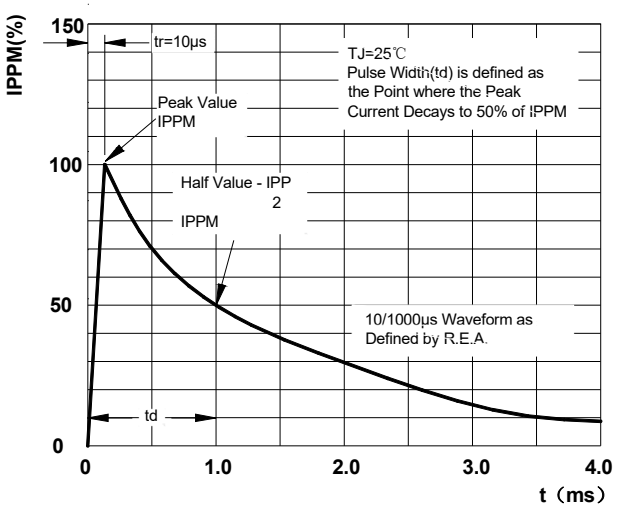


FIG4: Power Derating Curve

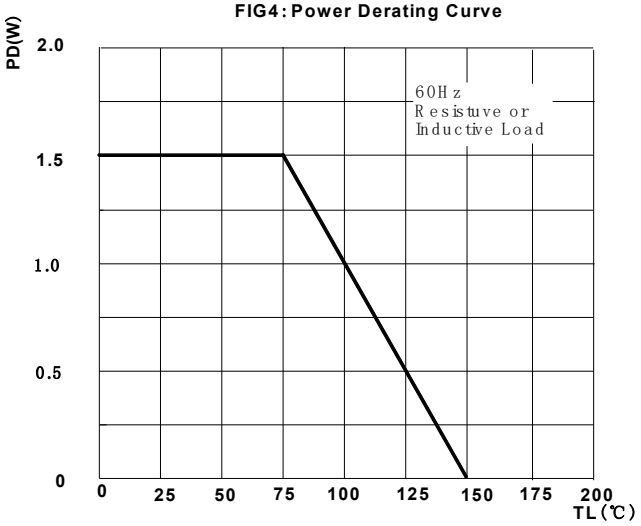


FIG 5： Maxium Non-Repetive Surge Curremt

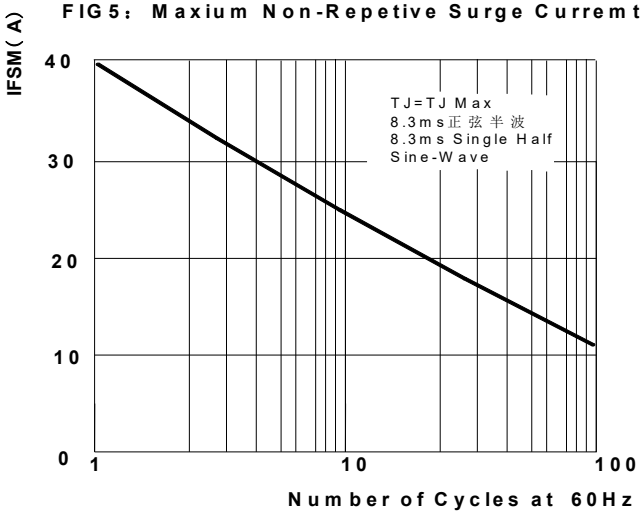
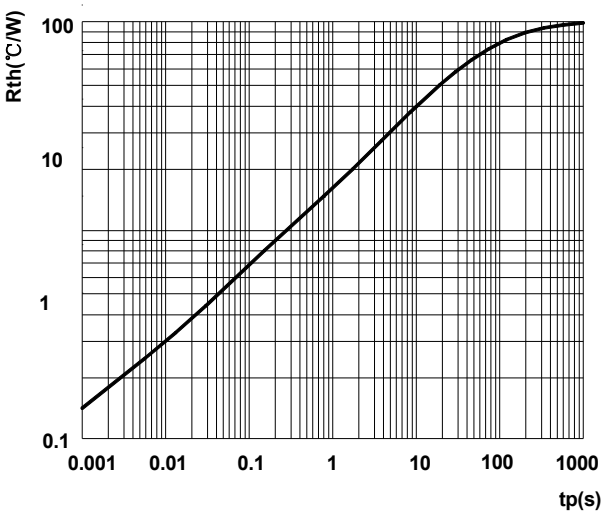
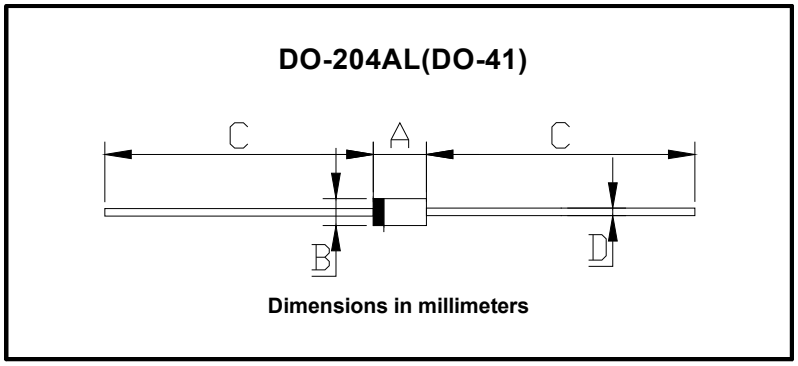


FIG6:Typical Transient Thermal Impedance



■ Outline Dimensions



DO-204AL(DO-41)		
Dim	Min	Max
A	4.22	5.21
B	2.03	2.72
C	25.4	/
D	0.69	0.86

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