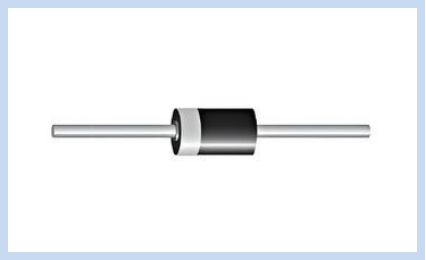
Transient Voltage Suppressors
1500W DO-201 AEC-Q101

1.5KE-A Series

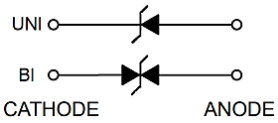
MERITEK

FEATURES



- IEC 61000-4-2 ESD: ±30KV (Air), ±30KV (Contact)
- 1500W Peak Pulse Power Capability (10/1000μs Waveform)
- Wide Operating Voltage Range: 5.8V to 510V
- UL Safety Approved Certification No: E223045
- AEC-Q101 Qualified

APPLICATIONS



- Automotive Electronics: ECUs, Body electronics, Lighting modules, DC power lines
- Industrial Controls: PLCs, Motor drives, Actuators, Factory automation
- Telecom & Networking: Line cards, Power distribution, Communication interfaces

RoHS

c UL us

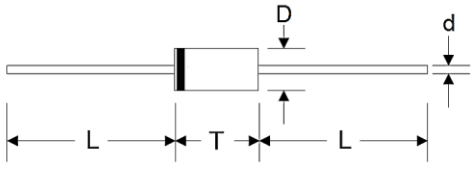
MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Peak Pulse Power Dissipation	on 10/1000μs waveform	P_{PPM}	Minimum 1500	W
Peak Pulse Current		I_{PPM}	See Table	A
Steady State Power Dissipation	at T_L=75°C	$P_{M(AV)}$	6.5	W
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load		I_{FSM}	200	A
Operating Junction and Storage Temperature Range		T_J, T_{STG}	-55 to +150	°C
Typical Thermal Resistance	Junction to Lead	$R_{\theta JL}$	15	°C/W
	Junction to Ambient	$R_{\theta JA}$	75	

Note:
1. T_A = 25°C ambient temperature unless otherwise specified.
2. Non-repetitive current pulse, and derated above T_A = 25°C.
3. 8.3ms single half sine-wave, or equivalent square wave, Duty cycle = 4 pulses per minute maximum.

DIMENSIONS

Item	Min	Max
D	4.80	5.30
T	7.20	9.50
L	25.40	-
d	0.96	1.07



Unit: mm

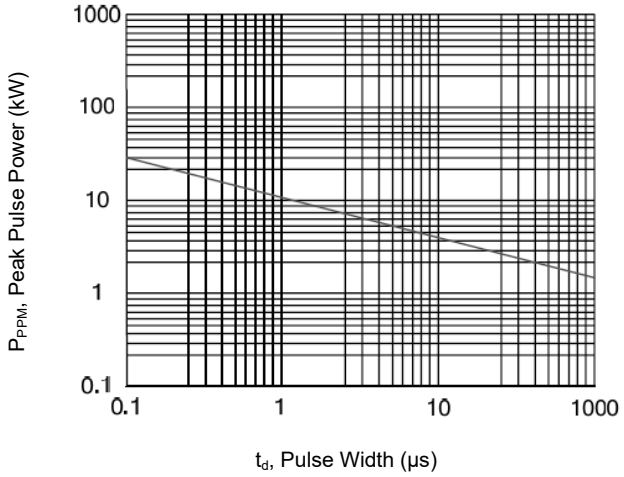
ELECTRICAL CHARACTERISTICS

Part Number		Working Reverse Voltage	Reverse Breakdown Voltage		Test Current	Max Reverse Leakage Current	Max Clamping Voltage	Reverse Surge Current
Uni-Polar	Bi-Polar	V_{RWM} (V)	V_{BR} Min(V)	V_{BR} Max(V)	IT (mA)	I_R (μA) @V_{RWM}	V_C (V) @I_{PP}	I_{PP}(A) Max
1.5KE6.8A-A	1.5KE6.8CA-A	5.80	6.45	7.14	10	1000	10.5	144.8
1.5KE7.5A-A	1.5KE7.5CA-A	6.40	7.13	7.88	10	500	11.3	134.5
1.5KE8.2A-A	1.5KE8.2CA-A	7.02	7.79	8.61	10	200	12.1	125.6
1.5KE9.1A-A	1.5KE9.1CA-A	7.78	8.65	9.55	1	50	13.4	113.4
1.5KE10A-A	1.5KE10CA-A	8.55	9.50	10.5	1	10	14.5	104.8
1.5KE11A-A	1.5KE11CA-A	9.40	10.5	11.6	1	5	15.6	97.4
1.5KE12A-A	1.5KE12CA-A	10.20	11.4	12.6	1	5	16.7	91.0
1.5KE13A-A	1.5KE13CA-A	11.10	12.4	13.7	1	1	18.2	83.5
1.5KE15A-A	1.5KE15CA-A	12.80	14.3	15.8	1	1	21.2	71.7
1.5KE16A-A	1.5KE16CA-A	13.60	15.2	16.8	1	1	22.5	67.6
1.5KE18A-A	1.5KE18CA-A	15.30	17.1	18.9	1	1	25.2	60.3
1.5KE20A-A	1.5KE20CA-A	17.10	19.0	21.0	1	1	27.7	54.9
1.5KE22A-A	1.5KE22CA-A	18.80	20.9	23.1	1	1	30.6	49.7
1.5KE24A-A	1.5KE24CA-A	20.50	22.8	25.2	1	1	33.2	45.8
1.5KE27A-A	1.5KE27CA-A	23.10	25.7	28.4	1	1	37.5	40.5
1.5KE30A-A	1.5KE30CA-A	25.60	28.5	31.5	1	1	41.4	36.7
1.5KE33A-A	1.5KE33CA-A	28.20	31.4	34.7	1	1	45.7	33.3
1.5KE36A-A	1.5KE36CA-A	30.80	34.2	37.8	1	1	49.9	30.5
1.5KE39A-A	1.5KE39CA-A	33.30	37.1	41.0	1	1	53.9	28.2
1.5KE43A-A	1.5KE43CA-A	36.80	40.9	45.2	1	1	59.3	25.6
1.5KE47A-A	1.5KE47CA-A	40.20	44.7	49.4	1	1	64.8	23.5
1.5KE51A-A	1.5KE51CA-A	43.60	48.5	53.6	1	1	70.1	21.7
1.5KE56A-A	1.5KE56CA-A	47.80	53.2	58.8	1	1	77.0	19.7
1.5KE62A-A	1.5KE62CA-A	53.00	58.9	65.1	1	1	85.0	17.9
1.5KE68A-A	1.5KE68CA-A	58.10	64.6	71.4	1	1	92.0	16.5
1.5KE75A-A	1.5KE75CA-A	64.10	71.3	78.8	1	1	103.0	14.8
1.5KE82A-A	1.5KE82CA-A	70.10	77.9	86.1	1	1	113.0	13.5
1.5KE91A-A	1.5KE91CA-A	77.80	86.5	95.5	1	1	125.0	12.2
1.5KE100A-A	1.5KE100CA-A	85.50	95	105	1	1	137.0	11.1
1.5KE110A-A	1.5KE110CA-A	94.00	105	116	1	1	152.0	10.0
1.5KE120A-A	1.5KE120CA-A	102.00	114	126	1	1	165.0	9.2
1.5KE130A-A	1.5KE130CA-A	111.00	124	137	1	1	179.0	8.5
1.5KE150A-A	1.5KE150CA-A	128.00	143	158	1	1	207.0	7.3
1.5KE160A-A	1.5KE160CA-A	136.00	152	168	1	1	219.0	6.9
1.5KE170A-A	1.5KE170CA-A	145.00	162	179	1	1	234.0	6.5
1.5KE180A-A	1.5KE180CA-A	154.00	171	189	1	1	246.0	6.2
1.5KE200A-A	1.5KE200CA-A	171.00	190	210	1	1	274.0	5.5
1.5KE220A-A	1.5KE220CA-A	185.00	209	231	1	1	328.0	4.6
1.5KE250A-A	1.5KE250CA-A	214.00	237	263	1	1	344.0	4.4
1.5KE300A-A	1.5KE300CA-A	256.00	285	315	1	1	414.0	3.7
1.5KE350A-A	1.5KE350CA-A	300.00	332	368	1	1	482.0	3.2
1.5KE400A-A	1.5KE400CA-A	342.00	380	420	1	1	548.0	2.8
1.5KE440A-A	1.5KE440CA-A	376.00	418	462	1	1	602.0	2.5
1.5KE480A-A	1.5KE480CA-A	408.00	456	504	1	1	658.0	2.3
1.5KE510A-A	1.5KE510CA-A	434.00	485	535	1	1	698.0	2.1
1.5KE530A-A	1.5KE530CA-A	450.00	503.5	556.5	1	1	725.0	2.1
1.5KE540A-A	1.5KE540CA-A	459.00	513.0	567.0	1	1	740.0	2.0
1.5KE550A-A	1.5KE550CA-A	467.00	522.5	577.5	1	1	760.0	2.0
1.5KE600A-A	1.5KE600CA-A	510.00	570.0	630.0	1	1	828.0	1.8

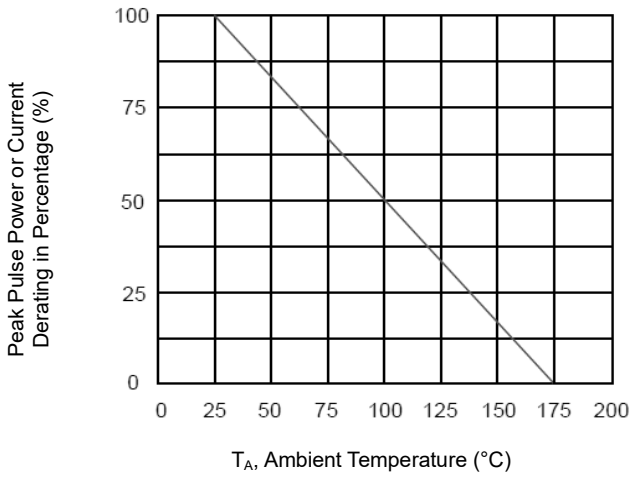
Note: T_A = 25°C ambient temperature unless otherwise specified.

CHARACTERISTIC CURVES

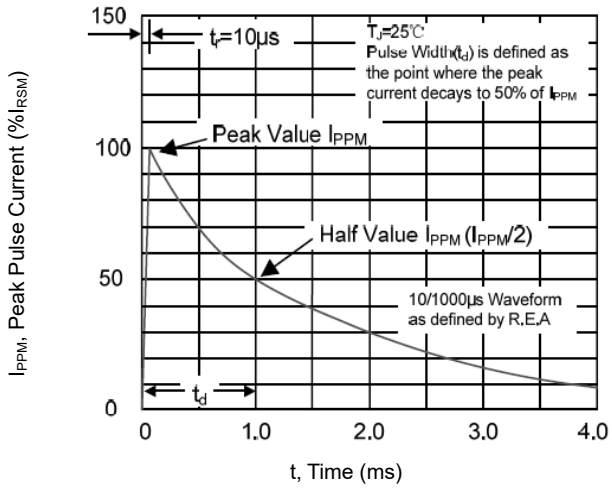
Peak Pulse Power Rating Curve



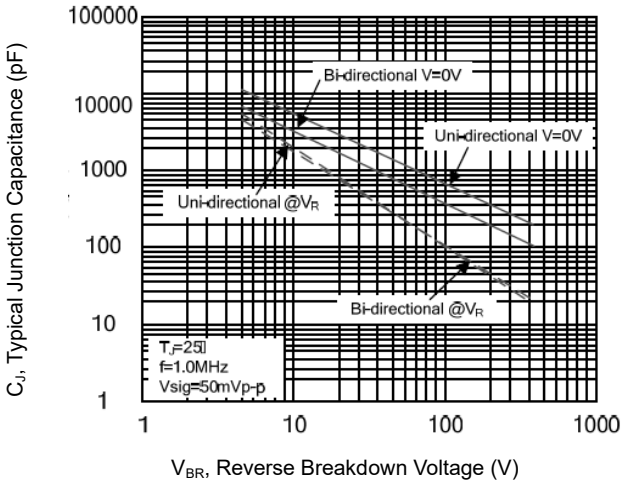
Pulse Derating Curve



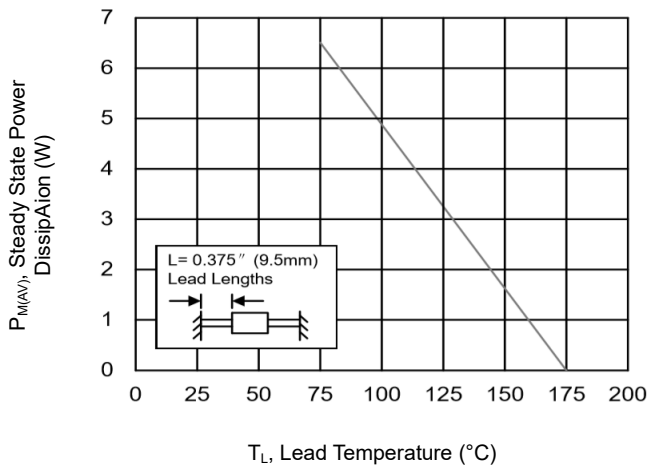
Pulse Waveform



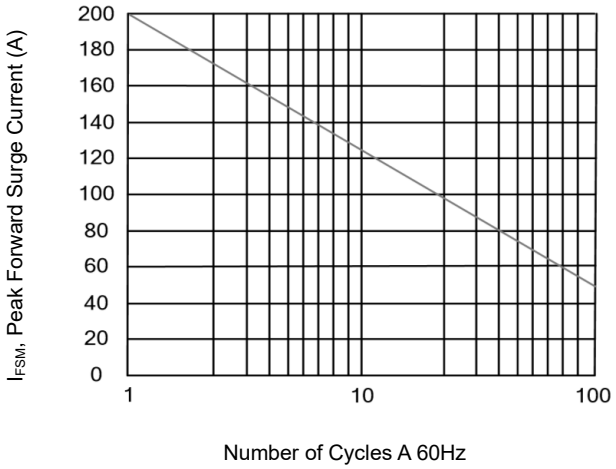
Typical Junction Capacitance



Steady State Power Dissipation DerAing Curve



Maximum Non-Repetitive Forward Surge Current Uni-Directional Only



*Specifications subject to change without notice.