

Transient Voltage Suppressors 3000W DO-214AB AEC-Q101

TPSMDJ series

MERITEK

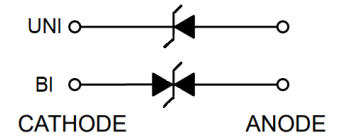
FEATURE

- 3000W Peak Pulse Power (10/1000 μ s Waveform), Repetitive Rate:0.01%
- 10V to 43V Standoff Voltage
- Fast Response Time
- Excellent Clamping Capability
- Glass Passivated Junction
- UL Flammability Classification Rating 94V-0
- AEC-Q101 Qualified



MECHANICAL DATA

- Case: DO-214AB, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Color Band Denotes Cathode End Except Bipolar



MAXIMUM RATINGS

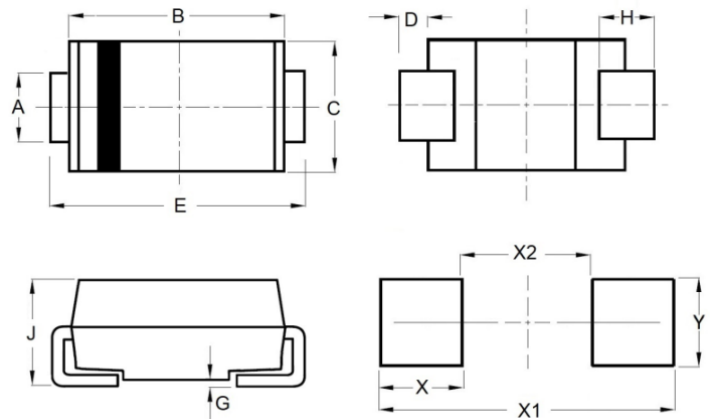
Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation On 10/1000 μ s Waveform	P_{PPM}	3000	W
Peak Pulse Current On 10/1000 μ s Waveform	I_{PPM}	See Table	A
Power Dissipation on infinite Heatsink at $T_L = 50^\circ\text{C}$	P_D	6.5	W
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed On Rated Load	I_{FSM}	300	A
Maximum Instantaneous Forward Voltage at 100A for Unidirectional only	V_F	3.5/5.0	V
Operating Junction And Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

Note:

1. $T_A = 25^\circ\text{C}$ ambient temperature unless otherwise specified.
2. Non-repetitive current pulse, and derated above $T_A = 25^\circ\text{C}$.
3. Measured 8.3ms single half sine-wave, or equivalent square wave, Duty cycle = 4 pulses per minute maximum.
4. $V_F < 3.5\text{V}$ for device of $V_{BR} < 200\text{V}$ and $V_F < 5.0\text{V}$ for devices of $V_{BR} > 201\text{V}$

DIMENSIONS

DO-214AB	Min (mm)	Max (mm)
A	2.90	3.20
B	6.60	7.15
C	5.55	6.04
D	0.15	0.30
E	7.75	7.95
G	--	0.20
H	0.75	1.51
J	1.98	2.53
X	3.03	
X1	9.90	
X2	3.84	
Y	3.82	



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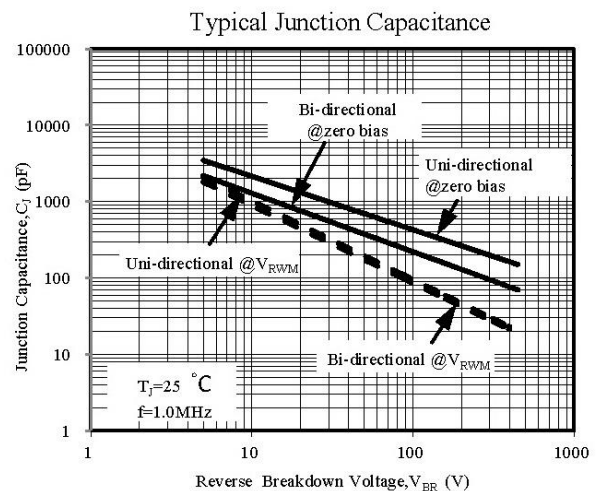
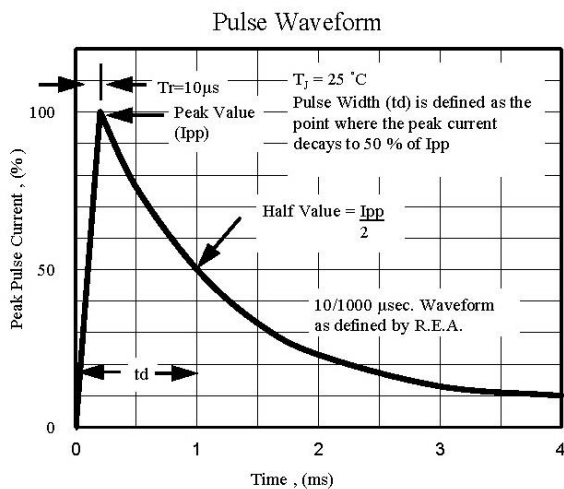
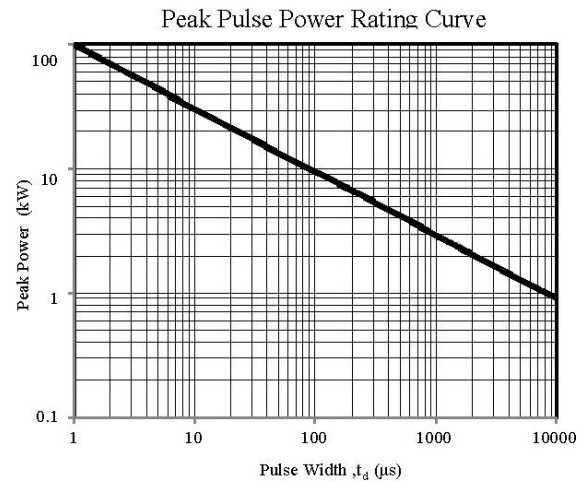
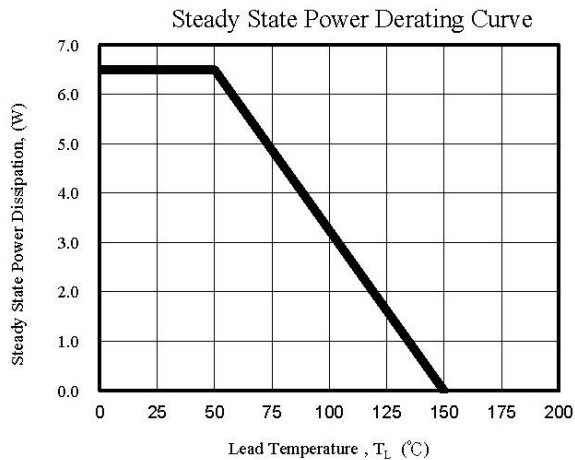
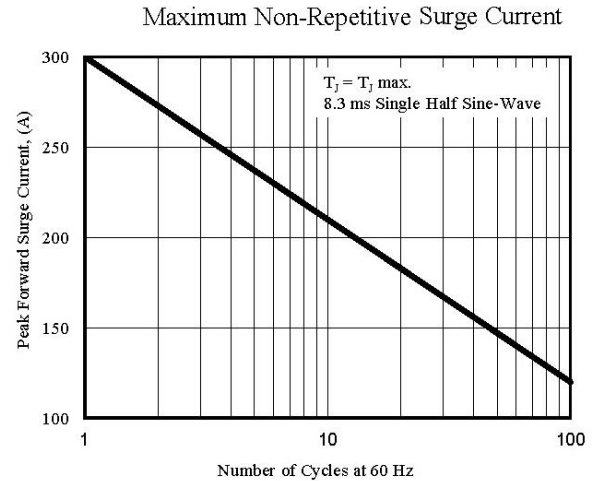
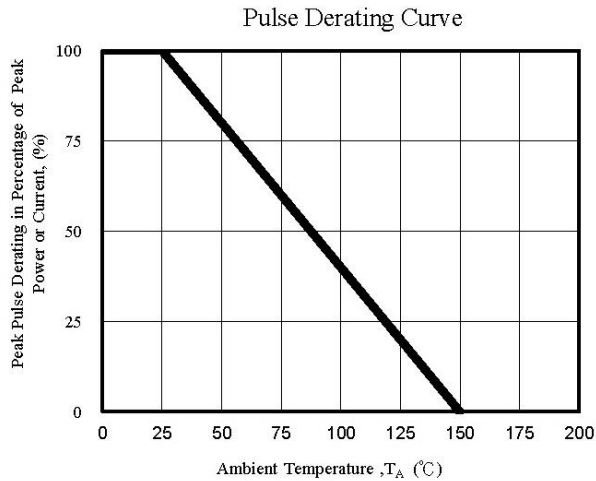
ELECTRICAL CHARACTERISTICS

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} (V) Min	V_{BR} (V)Max	I_T (mA)	I_R (uA) @ V_{RWM}	V_C (V) @ I_{PP}	I_{PP} (A) Max
TPSMDJ10A	TPSMDJ10CA	10	11.1	12.3	1	15	17.0	176.47
TPSMDJ11A	TPSMDJ11CA	11	12.2	13.5	1	2	18.2	164.84
TPSMDJ12A	TPSMDJ12CA	12	13.3	14.7	1	2	19.9	150.75
TPSMDJ13A	TPSMDJ13CA	13	14.4	15.9	1	2	21.5	139.53
TPSMDJ14A	TPSMDJ14CA	14	15.6	17.2	1	2	23.2	129.31
TPSMDJ15A	TPSMDJ15CA	15	16.7	18.5	1	2	24.4	122.95
TPSMDJ16A	TPSMDJ16CA	16	17.8	19.7	1	2	26.0	115.38
TPSMDJ17A	TPSMDJ17CA	17	18.9	20.9	1	2	27.6	108.70
TPSMDJ18A	TPSMDJ18CA	18	20.0	22.1	1	2	29.2	102.74
TPSMDJ19A	TPSMDJ19CA	19	21.1	23.3	1	2	30.8	97.47
TPSMDJ20A	TPSMDJ20CA	20	22.2	24.5	1	2	32.4	92.59
TPSMDJ22A	TPSMDJ22CA	22	24.4	26.9	1	2	35.5	84.51
TPSMDJ24A	TPSMDJ24CA	24	26.7	29.5	1	2	38.9	77.12
TPSMDJ26A	TPSMDJ26CA	26	28.9	31.9	1	2	42.1	71.26
TPSMDJ28A	TPSMDJ28CA	28	31.1	34.4	1	2	45.4	66.08
TPSMDJ30A	TPSMDJ30CA	30	33.3	36.8	1	2	48.4	61.98
TPSMDJ33A	TPSMDJ33CA	33	36.7	40.6	1	2	53.3	56.29
TPSMDJ36A	TPSMDJ36CA	36	40.0	44.2	1	2	58.1	51.64
TPSMDJ40A	TPSMDJ40CA	40	44.4	49.1	1	2	64.5	46.51
TPSMDJ43A	TPSMDJ43CA	43	47.8	52.8	1	2	69.4	43.23

Note:

1. $T_A = 25^\circ\text{C}$ ambient temperature unless otherwise specified.
2. The available parts are "A" type only, the parts without A(V_{BR} is $\pm 10\%$)is not availed
3. Add suffix 'C' or 'CA' after part number to specify Bi-directional devices
4. For Bi-Directional device having VR of 10 volts and under, the IR limit is double

CHARACTERISTIC CURVES



*Specifications subject to change without notice.