

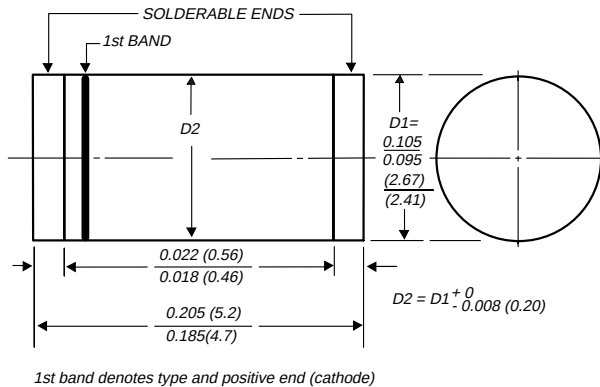
TGL41-6.8 THRU TGL41-200CA

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

Breakdown Voltage - 6.8 to 200 Volts

Peak Pulse Power - 400 Watts

DO-213AB



FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Glass passivated junction
- ◆ Excellent clamping capability
- ◆ Low incremental surge resistance
- ◆ Fast response time typically less than 1.0ps from 0 Volts to $V_{(BR)}$ for unidirectional and 5.0ns for bidirectional types
- ◆ 400W peak pulse capability with a 10/1000 μ s waveform, repetition rate (duty cycle): 0.01%
- ◆ For devices with $V_{(BR)} \geq 10V$, I_D are typically less than 1.0 μ A
- ◆ High temperature soldering guaranteed: 250°C/10 seconds at terminals



MECHANICAL DATA

Case: JEDEC DO-213AB molded plastic body over passivated junction

Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

Polarity: Blue bands denotes positive end (cathode) for unidirectional and a yellow band in the middle for bidirectional types

Mounting Position: Any

Weight: 0.116 gram, 0.0046 ounce

DEVICES FOR BIDIRECTIONAL APPLICATIONS

For bidirectional applications use suffix letters C or CA for types TGL41-10 thru TGL41-200A (e.g. TGL41-10C, TGL41-200CA). Electrical characteristics apply in both directions.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

RATINGS	SYMBOL	VALUE	UNITS
Peak pulse power dissipation with a 10/1000 μ s waveform (NOTE 1, FIG. 1)	PPPM	Minimum 400	Watts
Steady state power dissipation at $T_T = 75^\circ\text{C}$ (NOTE 2)	$P_{M(AV)}$	1.0	Watt
Peak pulse current with a 10/1000 μ s waveform (NOTE 1, FIG. 3)	I_{PPM}	SEE TABLE 1	Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load for unidirectional only (JEDEC Method) (NOTE 3)	I_{FSM}	40.0	Amps
Maximum instantaneous forward voltage at 25A (NOTE 3) for unidirectional only	V_F	3.5	Volts
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	°C

NOTES:

(1) Non-repetitive current pulse, per Fig. 3 and derated above $T_A = 25^\circ\text{C}$ per Fig. 2

(2) Mounted on copper pads to each terminal of 0.31 in² (8.0 mm²) per Fig. 5

(3) Measured at 8.3ms single half sine-wave or equivalent square wave duty cycle=4 pulses per minute maximum

ELECTRICAL CHARACTERISTICS at (TA=25°C unless otherwise noted)

Device Type	Breakdown Voltage V _(BR) (Volts) (NOTE 1)		Test Current at I _r (mA)	Stand-off Voltage V _{WM} (NOTE 4) (Volts)	Maximum Reverse Leakage at V _{WM} I _b (μA) (NOTE 4)	Maximum Peak Pulse Current I _{PPM} (NOTE 2) (Amps)	Maximum Clamping Voltage at I _{PPM} V _c (Volts)	Maximum Temperature Coefficient of V _(BR) (% / °C)
	MIN	MAX						
*TGL41-6.8	6.12	7.48	10.0	5.50	1000	37.0	10.8	0.060
*TGL41-6.8A	6.45	7.14	10.0	5.80	1000	38.1	10.5	0.060
*TGL41-7.5	6.75	8.25	10.0	6.05	500	34.2	11.7	0.064
*TGL41-7.5A	7.13	7.88	10.0	6.40	500	35.4	11.3	0.064
*TGL41-8.2	7.38	9.02	10.0	6.63	200	32.0	12.5	0.068
*TGL41-8.2A	7.79	8.61	10.0	7.02	200	33.1	12.1	0.068
*TGL41-9.1	8.19	10.0	1.0	7.37	50.0	29.0	13.8	0.071
*TGL41-9.1A	8.65	9.55	1.0	7.78	50.0	29.9	13.4	0.071
TGL41 -10	9.00	11.0	1.0	8.10	10.0	26.7	15.0	0.076
TGL41 -10A	9.50	10.5	1.0	8.55	10.0	27.6	14.5	0.076
TGL41 -11	9.90	12.1	1.0	8.92	5.0	24.7	16.2	0.078
TGL41 -11A	10.5	11.6	1.0	9.40	5.0	25.6	15.6	0.078
TGL41-12	10.8	13.2	1.0	9.72	5.0	23.1	17.3	0.081
TGL41-12A	11.4	12.6	1.0	10.2	5.0	24.0	16.7	0.081
TGL41-13	11.7	14.3	1.0	10.5	5.0	21.1	19.0	0.084
TGL41-13A	12.4	13.7	1.0	11.1	5.0	22.0	18.2	0.084
TGL41-15	13.5	16.5	1.0	12.1	5.0	18.2	22.0	0.087
TGL41-15A	14.3	15.8	1.0	12.8	5.0	18.9	21.2	0.087
TGL41-16	14.4	17.6	1.0	12.9	5.0	17.0	23.5	0.089
TGL41-16A	15.2	16.8	1.0	13.6	5.0	17.8	22.5	0.089
TGL41-18	16.2	19.8	1.0	14.5	5.0	15.1	26.5	0.091
TGL41-18A	17.1	18.9	1.0	15.3	5.0	15.9	25.2	0.091
TGL41-20	18.0	22.0	1.0	16.2	5.0	13.7	29.1	0.093
TGL41-20A	19.0	21.0	1.0	17.1	5.0	14.4	27.7	0.093
TGL41-22	19.8	24.2	1.0	17.8	5.0	12.5	31.9	0.095
TGL41-22A	20.9	23.1	1.0	18.8	5.0	13.1	30.6	0.095
TGL41-24	21.6	26.4	1.0	19.4	5.0	11.5	34.7	0.097
TGL41-24A	22.8	25.2	1.0	20.5	5.0	12.0	33.2	0.097
TGL41-27	24.3	29.7	1.0	21.8	5.0	10.2	39.1	0.099
TGL41-27A	25.7	28.4	1.0	23.1	5.0	10.7	37.5	0.099
TGL41-30	27.0	33.0	1.0	24.3	5.0	9.2	43.5	0.100
TGL41-30A	28.5	31.5	1.0	25.6	5.0	9.7	41.4	0.100
TGL41-33	29.7	36.3	1.0	26.8	5.0	8.4	47.7	0.101
TGL41-33A	31.4	34.7	1.0	28.2	5.0	8.8	45.7	0.101
TGL41-36	32.4	39.6	1.0	29.1	5.0	7.7	52.0	0.102
TGL41-36A	34.2	37.8	1.0	30.8	5.0	8.0	49.9	0.102
TGL41-39	35.1	42.9	1.0	31.6	5.0	7.1	56.4	0.103
TGL41-39A	37.1	41.0	1.0	33.3	5.0	7.4	53.9	0.103
TGL41-43	38.7	47.3	1.0	34.8	5.0	6.5	61.9	0.104
TGL41-43A	40.9	45.2	1.0	36.8	5.0	6.7	59.3	0.104
TGL41-47	42.3	51.7	1.0	38.1	5.0	5.9	67.8	0.104

*Available in unidirectional only