

TGL41- 6.8 ~ TGL41-200CA SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

V_{BR} : 6.8 to 200 V

P_{PPM} : 400 W

FEATURES :

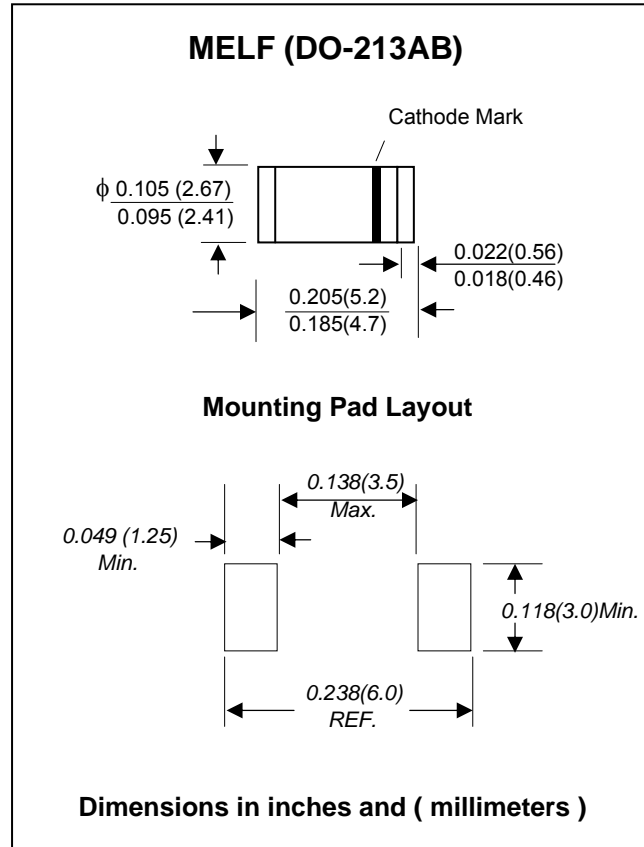
- * Ideal for automated placement
- * Excellent clamping capability
- * Fast response time
- * Low incremental surge resistance
- * **Pb / RoHS Free**

MECHANICAL DATA :

- * Plastic Case MELF/ DO-213AB
- * Epoxy meets UL 94V-0 flammability rating
- * Polarity : Color band denotes cathode end except Bipolar.
- * Mounting position : Any
- * Weight : 0.12 gram (Approximate)

DEVICES FOR BIPOLAR APPLICATIONS

For Bi-directional use C or CA Suffix
Electrical characteristics apply in both directions



MAXIMUM RATINGS

Rating at 25 °C ambient temperature unless otherwise specified.

Rating	Symbol	Value	Units
Peak Pulse Power Dissipation(10/100 μ s waveform) ⁽¹⁾	P_{PPM}	400	W
Steady State Power Dissipation ⁽²⁾ $T_a = 75$ °C	$P_{M(AV)}$	1.0	W
Peak Forward Surge Current, 8.3 ms single half sine-wave unidirectional ⁽²⁾	I_{FSM}	40	A
Maximum Instantaneous Forward Voltage ⁽³⁾ at $I_F = 25$ A	V_F	3.5	V
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 $T_A = 25$ °C per Fig. 2. Rating is 200 W above 91 V
- (2) Measured at 8.3 ms single half sine-wave or equivalent square wave duty cycle = 4 pulses per minute maximum
- (3) Unidirectional diodes only

ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

Type No.	Breakdown Voltage @ I_T		Stand-off Voltage	Maximum Reverse Current @ V_{WM}	Maximum Peak Pulse Surge Current	Maximum Clamping Voltage @ I_{PPM}	Maximum Temperature Coefficient of V_{BR}	
	(Note 1)							
	V_{BR} (V)	I_T	V_{WM}	I_R	I_{PPM}	V_C	(% / °C)	
	Min.	Max.	(mA)	(V)	(μ A)	(A)	(V)	
TGL41-6.8	6.12	7.48	10	5.50	1000	37.0	10.8	0.060
TGL41-6.8A	6.45	7.14	10	5.80	1000	38.1	10.5	0.060
TGL41-7.5	6.75	8.25	10	6.05	500	34.2	11.7	0.064
TGL41-7.5A	7.13	7.88	10	6.40	500	35.4	11.3	0.064
TGL41-8.2	7.38	9.02	10	6.63	200	32.0	12.5	0.068
TGL41-8.2A	7.79	8.61	10	7.02	200	33.1	12.1	0.068
TGL41-9.1	8.19	10.0	1.0	7.37	50	29.0	13.8	0.071
TGL41-9.1A	8.65	9.55	1.0	7.78	50	29.9	13.4	0.071
TGL41-10	9.0	11.0	1.0	8.10	10	26.7	15.0	0.076
TGL41-10A	9.5	10.5	1.0	8.55	10	27.6	14.0	0.076
TGL41-11	9.9	12.1	1.0	8.92	5	24.7	16.2	0.078
TGL41-11A	10.5	11.6	1.0	9.40	5	25.6	15.6	0.078
TGL41-12	10.8	13.2	1.0	9.72	5	23.1	17.3	0.081
TGL41-12A	11.4	12.6	1.0	10.2	5	24.0	16.7	0.081
TGL41-13	11.7	14.3	1.0	10.5	5	21.1	19.0	0.084
TGL41-13A	12.4	13.7	1.0	11.1	5	22.0	18.2	0.084
TGL41-15	13.5	16.5	1.0	12.1	5	18.2	22.0	0.087
TGL41-15A	14.3	15.8	1.0	12.8	5	18.9	21.2	0.087
TGL41-16	14.4	17.6	1.0	12.9	5	17.0	23.5	0.089
TGL41-16A	15.2	16.8	1.0	13.6	5	17.8	22.5	0.089
TGL41-18	16.2	19.8	1.0	14.5	5	15.1	26.5	0.091
TGL41-18A	17.1	18.9	1.0	15.3	5	15.9	25.2	0.091
TGL41-20	18.0	22.0	1.0	16.2	5	13.7	29.1	0.093
TGL41-20A	19.0	21.0	1.0	17.1	5	14.4	27.7	0.093
TGL41-22	19.8	24.2	1.0	17.8	5	12.5	31.9	0.095
TGL41-22A	20.9	23.1	1.0	18.8	5	13.1	30.6	0.095
TGL41-24	21.6	26.4	1.0	19.4	5	11.5	34.7	0.097
TGL41-24A	22.8	25.2	1.0	20.5	5	12.0	33.2	0.097
TGL41-27	24.3	29.7	1.0	21.8	5	10.2	39.1	0.099
TGL41-27A	25.7	28.4	1.0	23.1	5	10.7	37.5	0.099
TGL41-30	27.0	30.0	1.0	24.3	5	9.2	43.5	0.100
TGL41-30A	28.5	31.5	1.0	25.6	5	9.7	41.4	0.100
TGL41-33	29.7	36.3	1.0	26.8	5	8.4	47.7	0.101
TGL41-33A	31.4	34.7	1.0	28.2	5	8.8	45.7	0.101
TGL41-36	32.4	39.6	1.0	29.1	5	7.7	52.0	0.102
TGL41-36A	34.2	37.8	1.0	30.8	5	8.0	49.9	0.102
TGL41-39	35.1	42.9	1.0	31.6	5	7.1	56.4	0.103
TGL41-39A	37.1	41.0	1.0	33.3	5	7.4	53.9	0.103
TGL41-43	38.7	47.3	1.0	34.8	5	6.5	61.9	0.104
TGL41-43A	40.9	45.2	1.0	36.8	5	6.7	59.3	0.104

ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

Type No.	Breakdown Voltage @ I_T		Stand-off Voltage	Maximum Reverse Current @ V_{WM}	Maximum Peak Pulse Surge Current	Maximum Clamping Voltage @ I_{PPM}	Maximum Temperature Coefficient of V_{BR}	
	(Note 1)							
	V_{BR} (V)	I_T	V_{WM}	I_R	I_{PPM}	V_C		
	Min.	Max.	(mA)	(V)	(μ A)	(A)	(V)	(% / °C)
TGL41-47	42.3	51.7	1.0	38.1	5	5.9	67.8	0.104
TGL41-47A	44.7	49.4	1.0	40.2	5	6.2	64.8	0.104
TGL41-51	45.9	56.1	1.0	41.3	5	5.4	73.5	0.105
TGL41-51A	48.5	53.6	1.0	43.6	5	5.7	70.1	0.105
TGL41-56	50.4	61.6	1.0	45.4	5	5.0	80.5	0.106
TGL41-564A	53.2	58.8	1.0	47.8	5	5.2	77.0	0.106
TGL41-62	55.8	68.8	1.0	50.2	5	4.5	89.0	0.107
TGL41-62A	58.9	65.1	1.0	53.0	5	4.7	85.0	0.107
TGL41-68	61.2	74.8	1.0	55.1	5	4.1	98.0	0.107
TGL41-68A	64.6	71.4	1.0	58.1	5	4.3	92.0	0.107
TGL41-75	67.5	82.5	1.0	60.7	5	3.7	108	0.108
TGL41-75A	71.3	78.8	1.0	64.1	5	3.9	103	0.108
TGL41-82	73.8	90.2	1.0	66.4	5	3.4	118	0.108
TGL41-82A	77.9	86.1	1.0	70.1	5	3.5	113	0.108
TGL41-91	81.9	100	1.0	73.7	5	3.1	131	0.109
TGL41-91A	86.5	95.5	1.0	77.8	5	3.2	125	0.109
TGL41-100	90	110	1.0	81.0	5	1.39	144	0.109
TGL41-100A	95	105	1.0	85.5	5	1.46	137	0.109
TGL41-110	99	121	1.0	89.2	5	1.27	158	0.110
TGL41-110A	105	116	1.0	94.0	5	1.32	152	0.110
TGL41-120	108	132	1.0	97.2	5	1.16	173	0.110
TGL41-120A	114	126	1.0	102	5	1.21	165	0.110
TGL41-130	117	143	1.0	105	5	1.07	187	0.110
TGL41-130A	124	137	1.0	111	5	1.12	179	0.110
TGL41-150	135	165	1.0	121	5	0.93	215	0.111
TGL41-150A	143	158	1.0	128	5	0.97	207	0.111
TGL41-160	144	176	1.0	130	5	0.87	230	0.111
TGL41-160A	152	168	1.0	136	5	0.91	219	0.111
TGL41-170	153	187	1.0	138	5	0.82	244	0.111
TGL41-170A	162	179	1.0	145	5	0.85	234	0.111
TGL41-180	162	198	1.0	146	5	0.78	258	0.111
TGL41-180A	171	189	1.0	154	5	0.81	246	0.111
TGL41-200	180	220	1.0	162	5	0.70	287	0.111
TGL41-200A	190	210	1.0	171	5	0.73	274	0.111

Note :

(1) Pulse test: $t_p \leq 50$ ms

(2) Surge current waveform per Fig. 1 and derate per Fig. 5

RATING AND CHARACTERISTIC CURVES (TGL41- 6.8 ~ TGL41-200CA)

FIG.1 - PULSE DERATING CURVE

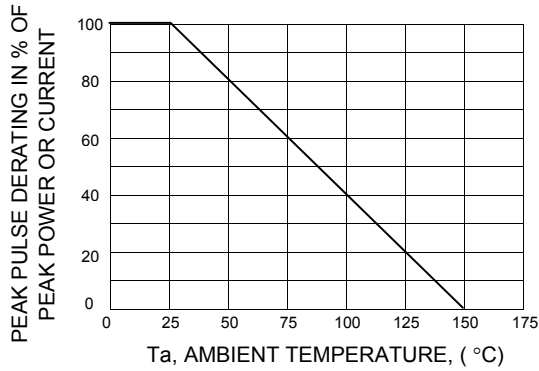


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

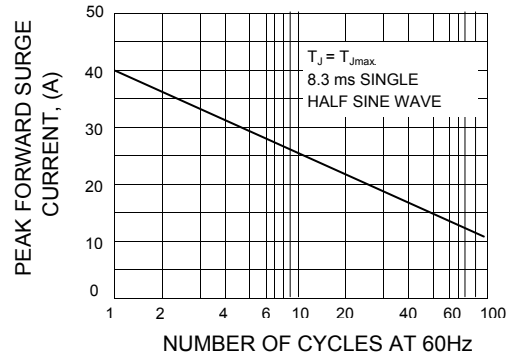


FIG.3 - STEADY STATE POWER DERATING

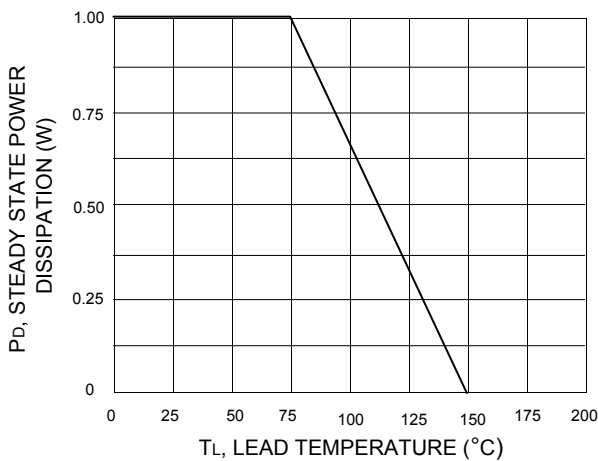


FIG.4 - PULSE RATING CURVE

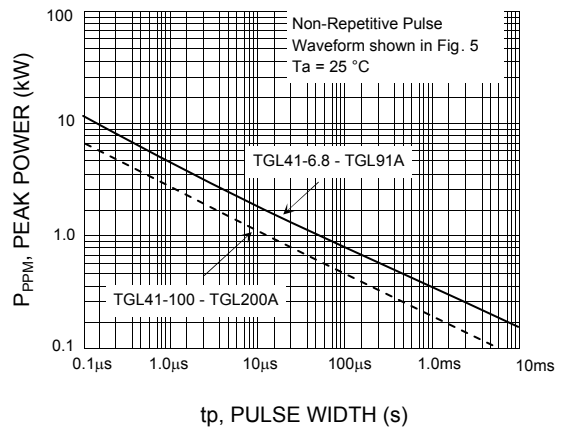


FIG.5 - PULSE WAVEFORM

