INTERNATIONAL SEMICONDUCTOR, INC.

TRANSIENT VOLTAGE SUPPRESSORS

400 Watt TGL41-6.8 thru TGL41-200CA

SURFACE MOUNT

5.5 to 171 VOLTS

400 WATT PEAK POWER **1.0 WATT STEADY STATE**

MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25 °C ambient unless otherwise specified

RATING	SYMBOL	VALUE	UNITS
Peak Power Dissipation at T_A=25°C, T_P=1ms (Note 1)	P_{PK}	400	Watts
Steady State Power Dissipation at T_L=75°C Lead Lengths .375", (9.5 mm) (Note 2)	P_D	1.0	Watts
Clamping Time 0 Volts to V_{BR}	$t_{clamping}$	< 1 x 10^{-12}	Sec
Operating and Storage Temperature Range	T_J,T_{STG}	-40 to +150	°C

FEATURES

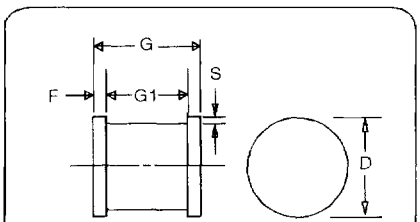
- 400 Watts Peak Power
- Hermetically Sealed MELF Package
- Available in ranges from 5.5 to 171 volts
- Protects sensitive semiconductor circuits

DEVICES FOR BIPOLAR APPLICATIONS

For bidirectional use C or CA suffix for types TGL41-6.8C thru TGL41-170CA
Electrical characteristics apply in both directions

NOTES TO CHARACTERISTICS AND SPECIFICATIONS:

1. Non-repetitive current pulse, per Fig.3 and derated above T_A = 25 °C per Fig. 2
2. Mounted on Copper Leaf area of 0.79 sq in (20 sq mm)
3. 8.3 ms half sine-wave, duty cycle = 4 pulses per minute maximum
4. V_{BR} measured after I_T applied for 300 us. I_T = Square Wave Pulse or equivalent.
5. Surge current Waveform per Fig.3 and derated per Fig. 4.



DIM	MM MIN	MM MAX	INCHES MIN	INCHES MAX
D	2.41	2.67	.095	.105
F	0.41	0.55	.016	.022
G	4.70	5.21	.185	.205
S	0.03		.001	
G1	3.93 REF		.155 REF	

Figure 1

MECHANICAL CHARACTERISTICS

- Hermetically sealed glass with solder contact tabs at each end
- Solderable Leads: 230°C for 10 seconds
- Marking: Cathode Band (Except Bipolar)
- Thermal Resistance: 75 °C/Watt typical junction to case (Tabs)
- Mounting Position: Any
- Weight: 0.04 grams (.0014 oz)

Figure 2: CAPACITANCE at Stand-Off Voltage

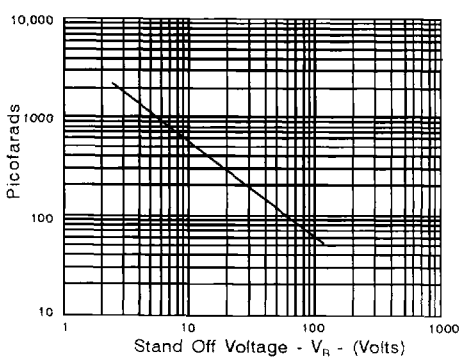


FIGURE 3 - PULSE WAVEFORM

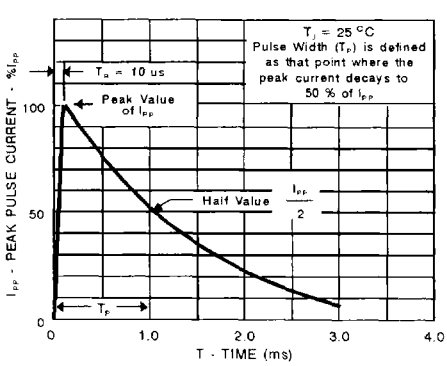
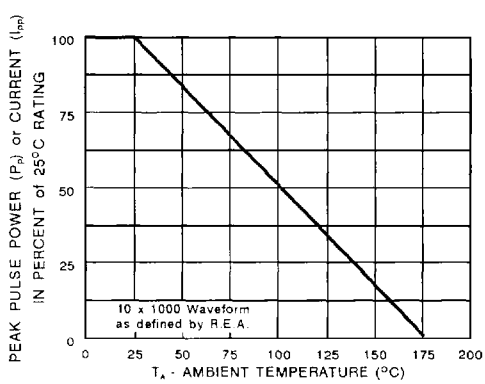


FIGURE 4 - PULSE DERATING CURVE



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TGL41 Series ELECTRICAL CHARACTERISTICS at 25°C

ISI PART NUMBER	REVERSE STAND-OFF VOLTAGE (Note 4) V_R Volts	BREAKDOWN VOLTAGE Min V_{BR} Volts	BREAKDOWN VOLTAGE Max V_{BR} Volts	BREAKDOWN VOLTAGE @ I_T mA	MAXIMUM CLAMPING VOLTAGE @ IPP (1 msec) VC Volts	MAXIMUM PEAK PULSE CURRENT (Fig. 3) I_{PP} Amps	MAXIMUM REVERSE LEAKAGE @ V_R I_R uA	MAXIMUM TEMPERATURE COEFFICIENT of V_{BR} %/°C
TGL41-6.8	5.50	6.12	7.48	10.0	10.8	37.1	1000	.057
TGL41-6.8A	5.80	6.45	7.14	10.0	10.5	38.1	1000	.057
TGL41-7.5	6.06	6.75	8.25	10.0	11.7	34.1	500	.061
TGL41A-7.5A	6.40	7.13	7.88	10.0	11.3	35.2	500	.061
TGL41A-8.2	6.63	7.38	9.02	10.0	12.5	40.7	200	.065
TGL41-8.2A	7.02	7.79	8.61	10.0	12.1	33.1	200	.065
TGL41-9.1	7.37	8.19	10.00	1.0	13.8	29.1	50	.068
TGL41-9.1A	7.78	8.65	9.55	1.0	13.4	29.9	50	.068
TGL41-10	8.10	9.00	11.0	1.0	15.0	26.7	10	.073
TGL41-10A	8.55	9.50	10.50	1.0	14.5	27.5	10	.073
TGL41-11	8.92	9.90	12.1	1.0	16.2	24.8	5	.075
TGL41-11A	9.40	10.5	11.60	1.0	15.6	25.6	5	.075
TGL41-12	9.72	10.8	13.2	1.0	17.3	23.2	5	.078
TGL41-12A	10.2	11.4	12.6	1.0	16.7	24.0	5	.078
TGL41-13	10.5	11.7	14.3	1.0	19.0	21.1	5	.081
TGL41-13A	11.1	12.4	13.7	1.0	18.2	21.9	5	.081
TGL41-15	12.1	13.5	16.5	1.0	22.0	18.1	5	.081
TGL41-15A	12.8	14.3	15.8	1.0	21.2	18.9	5	.081
TGL41-16	12.9	14.4	17.6	1.0	23.5	17.1	5	.086
TGL41-16A	13.6	15.2	16.8	1.0	22.5	17.9	5	.086
TGL41-18	14.5	16.2	19.8	1.0	26.5	15.1	5	.088
TGL41-18A	15.3	17.1	18.9	1.0	25.2	15.9	5	.088
TGL41-20	16.2	18.0	22.0	1.0	29.1	13.7	5	.090
TGL41-20A	17.1	19.0	21.0	1.0	27.7	14.4	5	.090
TGL41-22	17.8	19.8	24.2	1.0	31.9	12.5	5	.092
TGL41-22A	18.8	20.9	23.1	1.0	30.6	13.1	5	.092
TGL41-24	19.4	21.6	26.4	1.0	34.7	11.5	5	.094
TGL41-24A	20.5	22.8	25.2	1.0	33.2	12.0	5	.094
TGL41-27	21.8	24.3	29.7	1.0	39.1	10.3	5	.096
TGL41-27A	23.1	25.7	28.4	1.0	37.5	10.7	5	.096
TGL41-30	24.3	27.0	33.0	1.0	43.5	9.2	5	.097
TGL41-30A	25.6	28.5	31.5	1.0	41.4	9.6	5	.097
TGL41-33	26.8	29.7	36.3	1.0	47.7	8.4	5	.098
TGL41-33A	28.2	31.4	34.7	1.0	45.7	8.8	5	.098
TGL41-36	29.1	32.4	39.6	1.0	52.0	7.7	5	.099
TGL41-36A	30.8	34.2	37.8	1.0	49.9	8.0	5	.099
TGL41-39	31.6	35.1	42.9	1.0	56.4	7.1	5	.100
TGL41-39A	33.3	37.1	41.0	1.0	53.9	7.5	5	.100
TGL41-43	34.8	38.7	47.3	1.0	61.9	6.4	5	.101
TGL41-43A	36.8	40.9	45.2	1.0	59.3	6.8	5	.101
TGL41-47	38.1	42.3	51.7	1.0	67.8	5.9	5	.101
TGL41-47A	40.2	44.7	49.4	1.0	64.8	6.2	5	.101
TGL41-51	41.3	45.9	56.1	1.0	73.5	5.4	5	.102
TGL41-51A	43.6	48.5	53.6	1.0	70.1	6.4	5	.102
TGL41-56	45.4	50.4	61.6	1.0	80.5	5.0	5	.103
TGL41-56A	47.8	53.2	58.8	1.0	77.0	5.2	5	.103
TGL41-62	50.2	55.8	68.2	1.0	89.0	4.5	5	.104
TGL41-62A	53.0	58.0	65.1	1.0	85.0	4.7	5	.104
TGL41-68	55.1	61.2	74.8	1.0	98.0	4.1	5	.104
TGL41-68A	58.1	64.6	71.4	1.0	92.0	4.3	5	.104
TGL41-75	60.7	67.5	82.5	1.0	108	4.5	5	.105
TGL41-75A	64.1	71.3	78.8	1.0	103	4.7	5	.105
TGL41-82	66.4	73.8	90.2	1.0	118	4.1	5	.105
TGL41-82A	70.1	77.9	86.1	1.0	113	4.3	5	.105
TGL41-91	73.7	81.9	100.0	1.0	131	3.7	5	.106
TGL41-91A	77.8	86.5	95.5	1.0	125	3.9	5	.106
TGL41-100	81.0	90.0	110	1.0	144	2.8	5	.106
TGL41-100A	85.8	95.0	105	1.0	137	2.9	5	.106
TGL41-110	89.2	99.0	121	1.0	158	2.5	5	.107
TGL41-110A	94.0	105.0	116	1.0	152	2.6	5	.107
TGL41-120	97.2	108.0	132	1.0	173	2.3	5	.107
TGL41-120A	102.0	114.0	126	1.0	165	2.4	5	.107
TGL41-130	105.0	117.0	143	1.0	187	2.1	5	.107
TGL41-130A	111.0	124.0	137	1.0	179	2.2	5	.107
TGL41-150	121.0	135.0	165	1.0	215	1.9	5	.108
TGL41-150A	128.0	143.0	158	1.0	207	1.9	5	.108
TGL41-160	130.0	144.0	176	1.0	230	1.7	5	.108
TGL41-160A	136.0	152.0	168	1.0	219	1.8	5	.108
TGL41-170	138.0	153.0	187	1.0	244	1.6	5	.108
TGL41-170A	145.0	162.0	179	1.0	234	1.7	5	.108
TGL41-180	146.0	162.0	198	1.0	258	1.5	5	.108
TGL41-180A	154.0	171.0	189	1.0	246	1.6	5	.108
TGL41-200	162.0	180.0	220	1.0	287	1.4	5	.108
TGL41-200A	171.0	190.0	210	1.0	274	1.5	5	.108