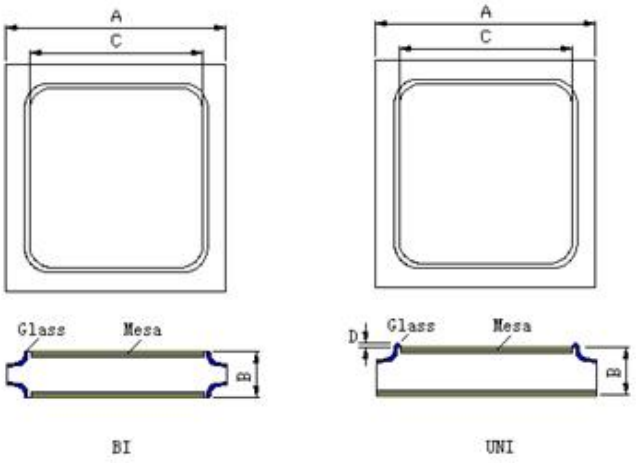
GOOD-ARK SEMICONDUCTOR

Peak Pulse Power 200W

Glass Passivated TVS

Features

- Glass passivated chip
- Low inductance
- Excellent clamping capability
- Very fast response time
- 200 W peak pulse power capability with a 10/1000 μs waveform
- Compatible with soldering



Devices for Bidirectional Applications

- For bi-directional devices, use suffix C or CA Electrical characteristics apply in both directions.

Process Details

Chip Type	PDPW (pcs/4"wafer)	Size（mil）				Surface Metalization
		A (+1/-2)	B（±2）	C（±2）	D（±1）	
GDTF2TVS	4,469	50	13	31	1.5	Ni(0.6~1um)/ Au(0.05um)

Maximum Ratings & Thermal Characteristics

(TA = 25 °C unless otherwise noted)

Parameter	Symbol	VALUE	UNIT
Peak pulse power dissipation with a 10/1000μs waveform (see fig. 1)	P_{PPM}	200	W
Peak pulse current with a waveform (see fig. 3 , single pulse)	I_{PPM}	See Next Table	A

1. Non-repetitive current pulse, per Fig.3 and derated above T_A=25℃ per Fig. 2

GDTF2TVS5.0A thru GDTF2TVS190A

Type	Breakdown Voltage at I_T (1) $V_{(BR)}$ (V)		Test Current	Stand-off Voltage	Maximum Reverse Leakage at V_{WM}	Maximum Peak Pulse Surge Current (2)	Maximum Clamping Voltage at I_{PPM}
	Min	Max	I_T (mA)	V_{WM} (V)	I_D (μA)	I_{PPM} (A)	V_C (V)
GDTF2TVS5.0A	6.4	7.07	10	5	800	21.7	9.2
GDTF2TVS6.0A	6.67	7.37	10	6	800	19.4	10.3
GDTF2TVS6.5A	7.22	7.98	10	6.5	500	17.9	11.2
GDTF2TVS7.0A	7.78	8.6	10	7	200	16.7	12
GDTF2TVS7.5A	8.33	9.21	1	7.5	100	15.5	12.9
GDTF2TVS8.0A	8.89	9.83	1	8	50	14.7	13.6
GDTF2TVS8.5A	9.44	10.4	1	8.5	10	13.9	14.4
GDTF2TVS9.0A	10	11.1	1	9	5	13	15.4
GDTF2TVS10A	11.1	12.3	1	10	5	11.8	17
GDTF2TVS11A	12.2	13.5	1	11	5	11	18.2
GDTF2TVS12A	13.3	14.7	1	12	5	10.1	19.9
GDTF2TVS13A	14.4	15.9	1	13	5	9.3	21.5
GDTF2TVS14A	15.6	17.2	1	14	5	8.62	23.2
GDTF2TVS15A	16.7	18.5	1	15	5	8.2	24.4
GDTF2TVS16A	17.8	19.7	1	16	5	7.69	26
GDTF2TVS17A	18.9	20.9	1	17	5	7.25	27.6
GDTF2TVS18A	20	22.1	1	18	5	6.85	29.2
GDTF2TVS19A	21.1	23.3	1	19	5	6.54	30.6
GDTF2TVS20A	22.2	24.5	1	20	5	6.17	32.4
GDTF2TVS22A	24.4	26.9	1	22	5	5.63	35.5
GDTF2TVS24A	26.7	29.5	1	24	5	5.14	38.9
GDTF2TVS26A	28.9	31.9	1	26	5	4.75	42.1
GDTF2TVS28A	31.1	34.4	1	28	5	4.41	45.4
GDTF2TVS30A	33.3	36.8	1	30	5	4.13	48.4
GDTF2TVS33A	36.7	40.6	1	33	5	3.75	53.3
GDTF2TVS36A	40	44.2	1	36	5	3.44	58.1
GDTF2TVS40A	44.4	49.1	1	40	5	3.1	64.5
GDTF2TVS43A	47.8	52.8	1	43	5	2.88	69.4
GDTF2TVS45A	50	55.3	1	45	5	2.75	72.7
GDTF2TVS48A	53.3	58.9	1	48	5	2.58	77.4
GDTF2TVS51A	56.7	62.7	1	51	5	2.43	82.4
GDTF2TVS54A	60	66.3	1	54	5	2.3	87.1
GDTF2TVS58A	64.4	71.2	1	58	5	2.14	93.6
GDTF2TVS60A	66.7	73.7	1	60	5	2.07	96.8
GDTF2TVS64A	71.1	78.6	1	64	5	1.94	103
GDTF2TVS70A	77.8	86	1	70	5	1.77	113
GDTF2TVS75A	83.3	92.1	1	75	5	1.65	121
GDTF2TVS78A	86.7	95.8	1	78	5	1.59	126
GDTF2TVS80A	88.8	97.6	1	80	5	1.55	129
GDTF2TVS85A	94.4	104	1	85	5	1.46	137
GDTF2TVS90A	100	111	1	90	5	1.37	146
GDTF2TVS100A	111	123	1	100	5	1.23	162

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	Min	Max	I_T (mA)	V_{WM} (V)	I_D (μA)	I_{PPM} (A)	V_C (V)
GDTF2TVS110A	122	135	1	110	5	1.13	177
GDTF2TVS120A	133	147	1	120	5	1.04	193
GDTF2TVS130A	144	159	1	130	5	0.96	209
GDTF2TVS140A	155	171	1	140	5	0.89	224
GDTF2TVS150A	167	185	1	150	5	0.82	243
GDTF2TVS160A	178	197	1	160	5	0.77	259
GDTF2TVS170A	189	209	1	170	5	0.73	275
GDTF2TVS180A	201	222	1	180	5	0.69	292
GDTF2TVS190A	211	232	1	190	5	0.62	324

Notes: (1) $V_{(BR)}$ measured after I_T applied for 300us square wave pulse or equivalent

(2) Surge current waveform Per Fig. 3 and derate Per Fig. 2

(3) For bi-directional types having V_{WM} of 10 Volts and less, the I_D limit is doubled

(4) Ratings at 25°C ambient temperature unless otherwise specified.

Characteristic Curves (T_A=25 ℃ unless otherwise noted)

GDT F2TVS5.0A thru GDTF2TVS190A

Fig. 1 – Peak Pulse Power Rating Curve

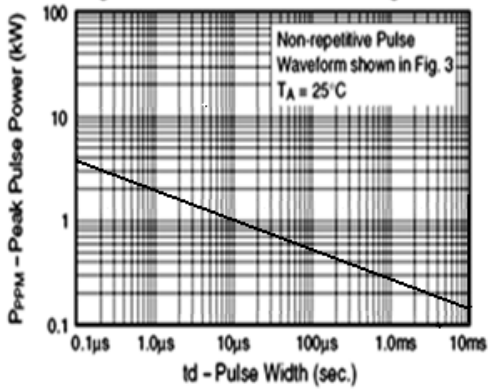

Fig. 2 – Pulse Derating Curve

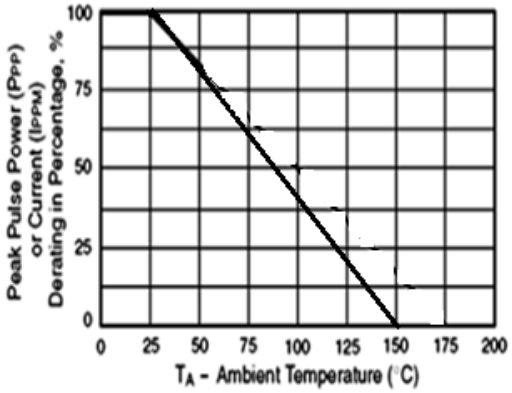

Fig. 3 – Pulse Waveform

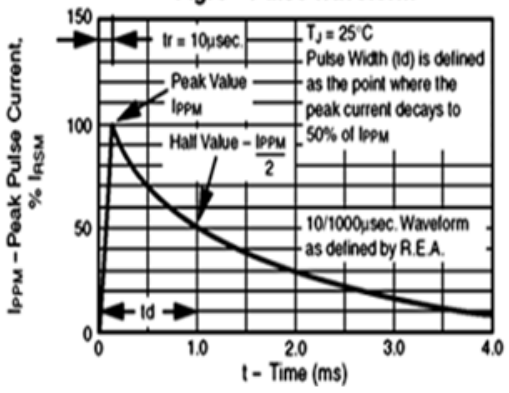

Fig. 4 – Typ. Junction Capacitance Uni-Directional