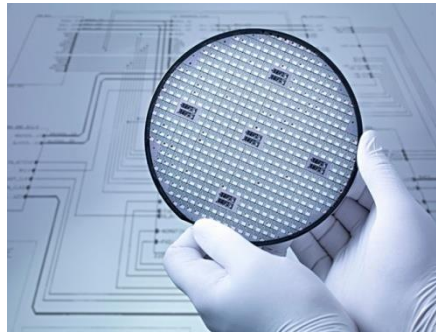


## 51mil TVS 芯片选型



## TVS Diode series



## 051TVS

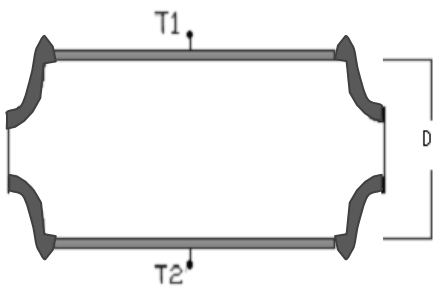
### 描述

TVS 系列产品是一种专门用来保护敏感电子设备免受雷电或者瞬态电压冲击的器件。

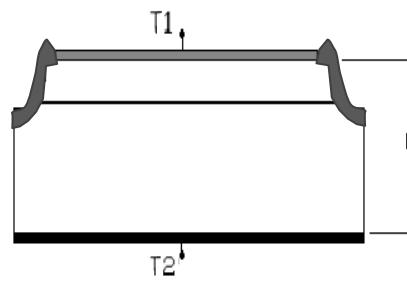
- 低漏电流
- 快速相应速度 (从 0->VBR 响应时间小于 1ps)
- 玻璃钝化结
- 良好的钳位能力
- 承受 200W 峰值脉冲 (10/1000 $\mu$ s)

### 芯片结构图

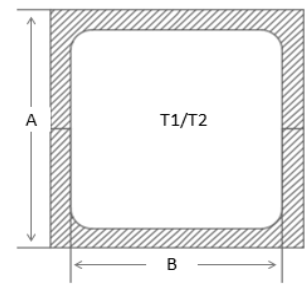
芯片工艺 Wafer tech	台面玻璃钝化工艺	
圆片尺寸 Wafer Size	$\Phi$ 5inch	
芯片厚度 Chip Thickness	D=265 $\pm$ 15 $\mu$ m(可根据客户要求定制)	
金属 (T1/T2) Metal	正面 Front	TiNiAg
	背面 Back	TiNiAg
芯片尺寸 Chip Size	芯片尺寸(A: $\mu$ m) Chip	1295 $\pm$ 50
	电极尺寸(B: $\mu$ m) Pad	1026 $\pm$ 25



(图 1: 双向 TVS 外沟槽结构示意图)



(图 2: 单向 TVS 外沟槽结构示意图)



(图 3: 芯片尺寸示意图)

**芯片电参数-TVS(VR)**

单向	双向	$V_{RWM}$	$V_{BR} @ I_T$		$I_T$	$V_C @ I_{pp}$	$I_{pp}$	$I_R @ V_{RWM}$
		(V)	(V)min	(V)max	(V) max	(V) max	(A) min	( $\mu$ A) max
TP0051-N5V0A2	TP0051-N5V0C1	5	6.4	7	10	9.2	21.7	400
TP0051-N6V0A2	TP0051-N6V0C1	6	6.67	7.37	10	10.3	19.4	400
TP0051-N6V5A2	TP0051-N6V5C1	6.5	7.22	7.98	10	11.2	17.9	100
TP0051-N7V0A2	TP0051-N7V0C1	7	7.8	8.6	10	12	16.7	50
TP0051-N7V5A2	TP0051-N7V5C1	7.5	8.33	9.21	1	12.9	15.5	50
TP0051-N8V0A2	TP0051-N8V0C1	8	8.89	9.83	1	13.6	14.7	50
TP0051-N8V5A2	TP0051-N8V5C1	8.5	9.44	10.4	1	14.4	13.9	20
TP0051-N9V0A1	TP0051-N9V0C1	9	10	11.1	1	15.4	13.0	10
TP0051-N010A1	TP0051-N010C1	10	11.1	12.3	1	17	11.8	5
TP0051-N011A1	TP0051-N011C1	11	12.2	13.5	1	18.2	11.1	1
TP0051-N012A1	TP0051-N012C1	12	13.3	14.7	1	19.9	10.1	1
TP0051-N013A1	TP0051-N013C1	13	14.4	15.9	1	21.5	9.3	1
TP0051-N014A1	TP0051-N014C1	14	15.6	17.2	1	23.2	8.6	1
TP0051-N015A1	TP0051-N015C1	15	16.7	18.5	1	24.4	8.2	1
TP0051-N016A1	TP0051-N016C1	16	17.8	19.7	1	26	7.7	1
TP0051-N017A1	TP0051-N017C1	17	18.9	20.9	1	27.6	7.2	1
TP0051-N018A1	TP0051-N018C1	18	20	22.1	1	29.2	6.8	1
TP0051-N020A1	TN0051-N020C3	20	22.2	24.5	1	32.4	6.2	1
TP0051-N022A1	TN0051-N022C3	22	24.4	26.9	1	35.5	5.6	1
TP0051-N024A1	TN0051-N024C3	24	26.7	29.5	1	38.9	5.1	1
TP0051-N026A1	TN0051-N026C3	26	28.9	31.9	1	42.1	4.8	1
TP0051-N028A1	TN0051-N028C3	28	31.1	34.4	1	45.4	4.4	1
TP0051-N030A1	TN0051-N030C3	30	33.3	36.8	1	48.4	4.1	1
TP0051-N033A1	TN0051-N033C3	33	36.7	40.6	1	53.3	3.8	1
TP0051-N036A1	TN0051-N036C3	36	40	44.2	1	58.1	3.4	1
TP0051-N040A1	TN0051-N040C3	40	44.4	49.1	1	64.5	3.1	1
TP0051-N043A1	TN0051-N043C3	43	47.8	52.8	1	69.4	2.8	1
TP0051-N045A1	TN0051-N045C3	45	50	55.3	1	72.7	2.7	1
TP0051-N048A1	TN0051-N048C3	48	53.3	58.9	1	77.4	2.6	1
TP0051-N051A1	TN0051-N051C3	51	56.7	62.7	1	82.4	2.4	1
TP0051-N054A1	TN0051-N054C3	54	60	66.3	1	87.1	2.3	1
TP0051-N058A1	TN0051-N058C3	58	64.4	71.2	1	93.6	2.1	1
TP0051-N060A1	TN0051-N060C3	60	66.7	73.7	1	96.8	2.0	1
TP0051-N064A1	TN0051-N064C3	64	71.1	80.6	1	103	1.9	1
TN0051-N070A1	TN0051-N070C3	70	77.8	86	1	113	1.8	1
TN0051-N075A1	TN0051-N075C3	75	83.3	92.1	1	121	1.7	1
TN0051-N080A1	TN0051-N080C3	80	86.7	95.8	1	126	1.6	1
TN0051-N085A1	TN0051-N085C3	85	94.4	104	1	137	1.5	1



单向	双向	V <sub>RWM</sub>	V <sub>BR</sub> @ I <sub>T</sub>		I <sub>T</sub>	V <sub>C</sub> @ I <sub>pp</sub>	I <sub>pp</sub>	I <sub>R</sub> @ V <sub>RWM</sub>
		(V)	(V)min	(V)max	(mA)	(V) max	(A) min	(μA) max
TN0051-N090A1	TN0051-N090C3	90	100.0	111.0	1	146	1.4	1
TN0051-N100A4	TN0051-N100C3	100	111.0	123.0	1	162	1.2	1
TN0051-N110A4	TN0051-N110C3	110	122	135	1	177	1.1	1
TN0051-N120A4	TN0051-N120C3	120	133	147	1	193	1.0	1
TN0051-N130A4	TN0051-N130C3	130	144	159	1	209	0.9	1
TN0051-N150A4	TN0051-N150C3	150	167	185	1	243	0.8	1
TN0051-N160A4	TN0051-N160C3	160	180	197	1	259	0.8	1
TN0051-N170A4	TN0051-N170C3	170	189	209	1	275	0.7	1
TN0051-N180A4	TN0051-N180C3	180	201	222	1	292	0.7	1
TN0051-N200A4	TN0051-N200C3	200	224	247	1	324	0.6	1