

Gas Discharge Tube (GDT) Data Sheet

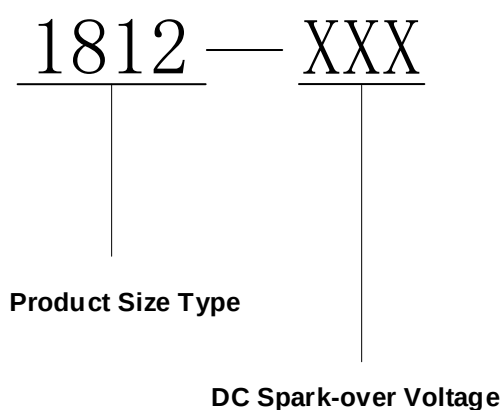
Features

- High insulation resistance
- Low capacitance ($\leq 0.5\text{pF}$)
- 2000A 8/20us maximum surge current capacity in accordance with IEC61000-4-5
- 4KV 10/700 μs maximum surge rating in accordance with ITU-TK.21
- Surface mounted gas arrester
- Micro-Gap Design
- Operating and Storage Temperature : $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$
- Meets MSL Level 1, per J-STD-020

Applications

- Telephone Interface, Line cards
- Data communication equipment
- Line test equipment
- Repeaters, Modems

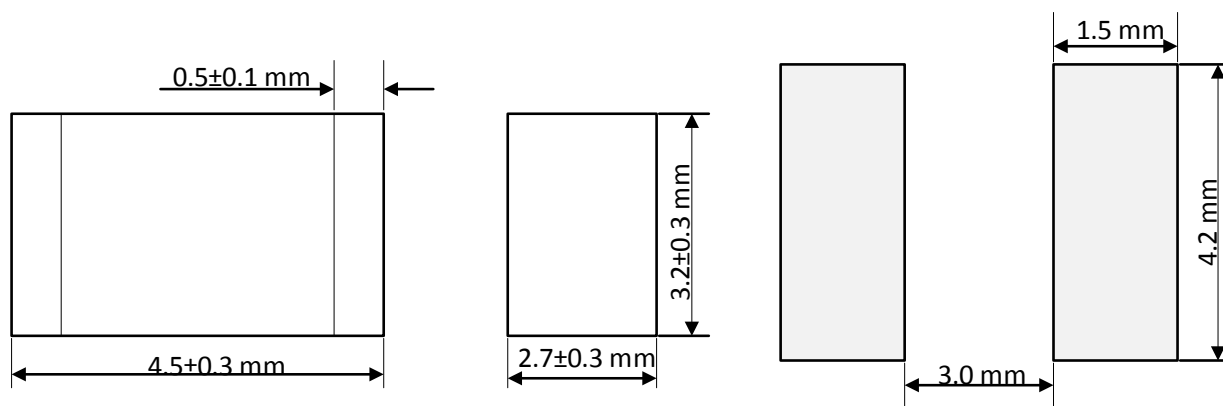
Part Number Code



Electrical Characteristics

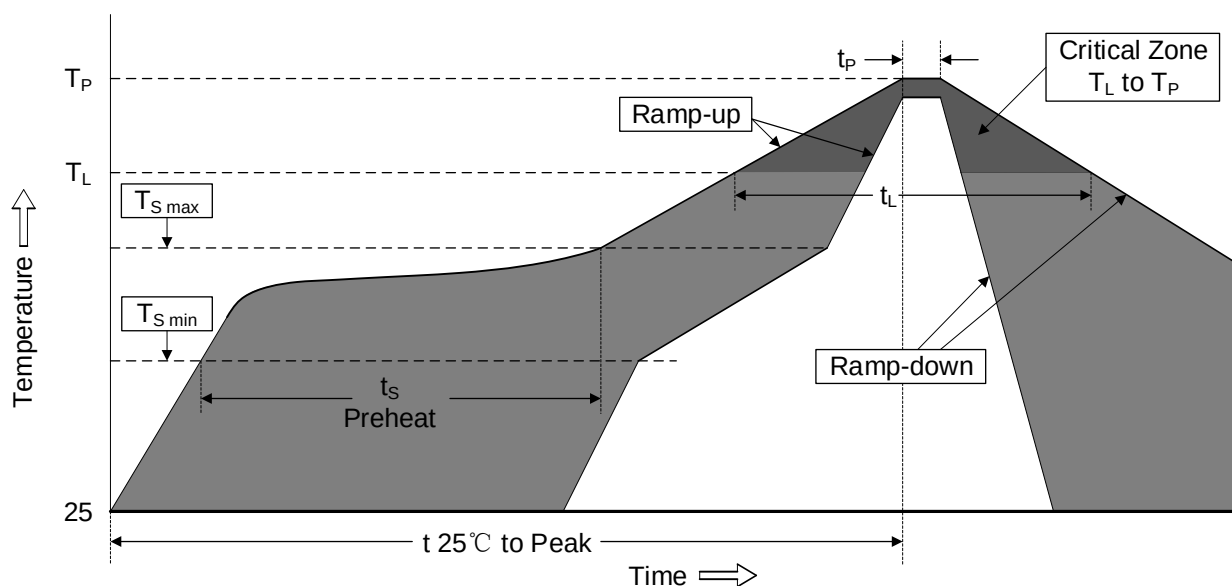
Part Number	DC Spark-over Voltage	Maximum Impulse Spark-over Voltage	Impulse Life Test	Minimum Insulation Resistance		Maximum Capacitance	Nominal Impulse Discharge Current	Impulse Withstanding Voltage Capacity	Device Marking Code
	100V/S	1KV/us	8/20us 100A	Test Voltage	(GΩ)	(1MHz 1V)	8/20us		
	(v)	(v)	(times)	DC(V)		(pF)	(A)		
1812-075	55~95	600	300	25	1	0.5	2000A	10/700us 4KV ±5 times	075
1812-090	63~117	700	300	50	1	0.5	2000A		090
1812-120	84~156	700	300	50	1	0.5	2000A		120
1812-150	105~195	700	300	50	1	0.5	2000A		150
1812-200	140~260	750	300	100	1	0.5	2000A		200
1812-230	161~299	750	300	100	1	0.5	2000A		230
1812-300	210~390	900	300	100	1	0.5	2000A		300
1812-350	245~455	900	300	100	1	0.5	2000A		350
1812-400	280~520	1000	300	100	1	0.5	2000A		400
1812-420	294~546	1000	300	100	1	0.5	2000A		420
1812-470	329~611	1000	300	100	1	0.5	2000A		470
1812-500	350~650	1100	300	100	1	0.5	2000A		500
1812-600	420~780	1200	300	100	1	0.5	2000A		600

Dimensions



Soldering Recommendation

Reflow Soldering



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat -Temperature Min ($T_{S\min}$) -Temperature Max ($T_{S\max}$) -Time (min to max) (t_s)	150°C 200°C 60-180 seconds
$T_{S\max}$ to T_L -Ramp-up Rate	3°C/second max.
Time maintained above: -Temperature (T_L) -Time (t_L)	217°C 60-150 seconds
Peak Temperature (T_P)	260°C
Time within 5°C of actual Peak Temperature (t_p)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

Electrical Ratings

Items	Test Condition/Description	Requirement
DC spark-over voltage	The voltage is measured with voltage ramp $dv/dt=100V/s$.	To meet the Specified value
Maximum Impulse Spark-over Voltage	The maximum impulse spark-over voltage is measured with voltage ramp $dv/dt=1000V/\mu s$.	
Insulation Resistance	The resistance of gas tube shall be measured between two electrodes.	
Capacitance	The capacitance of gas tube shall be measured between two electrodes. Test frequency: 1MHz	
Impulse Discharge Current	Maximum 8/20μs surge current that can be applied between two electrodes, 5 positive and 5 negative surges, with 3 minutes interval time, without causing the DC spark-over voltage to change more than 25% from its initial value.	
Impulse Withstanding Current	The maximum 10/700μs surge that can be applied to the Gas Tube, 5 positive and 5 negative surges, with 1 minute interval time, without causing the DC spark-over voltage to change more than 25% from its initial value.	

Packaging

Tape	Symbol	Dimension (mm)
	W	12.00±0.20
	P0	4.00±0.10
	P1	8.00±0.20
	P2	2.00±0.10
	D0	Φ1.55±0.10
	D1	Φ1.0±0.10
	E	1.75±0.10
	F	5.50±0.10
	A0	3.80±0.1
	B0	4.9±0.1
	K0	3.2±0.1
	T	0.4±0.1
Reel	D5	Φ330.0±2.0
	D6	Φ13.5±0.5
	H	2.5±1.0
	W2	16.0±2.0
	Quantity: 2500PCS	

