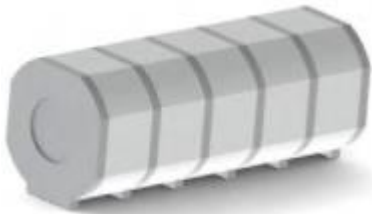


3-ELECTRODE GAS DISCHARGE TUBE (GDT)

DESCRIPTION:



The ALPDC0800-S05-00 is Gas Discharge Tube (GDT) is non-radioactive, Low capacitance ($\leq 1.0\text{pF}$) with high insulation resistance used for Communication industry and Signal Protection.

FEATURES:

- Features non-radioactive
- SMD type
- Low capacitance ($\leq 1.0\text{pF}$)
- High insulation resistance
- Size 8.3X8.3x16.0
- Storage and operating temperature: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
- Material: RoHS compliant

APPLICATIONS:

- Communication industry
- Video surveillance
- Outdoor lighting igniter
- Signal line protection
- Signal line protection
- Civil circuit appliances

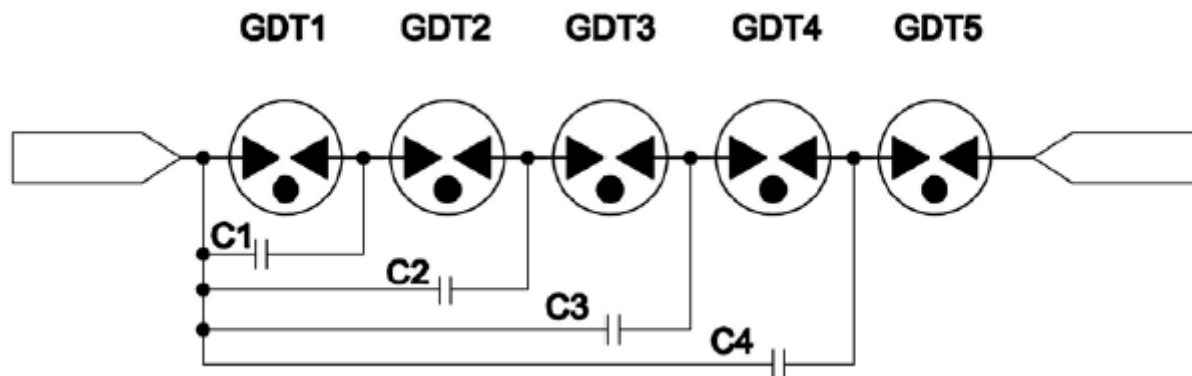
ORDERING PART NUMBER

PART NUMBER	ORDERING PART NUMBER
ALPDC0800-S05-00	ALPDC0800-S05-00-LT

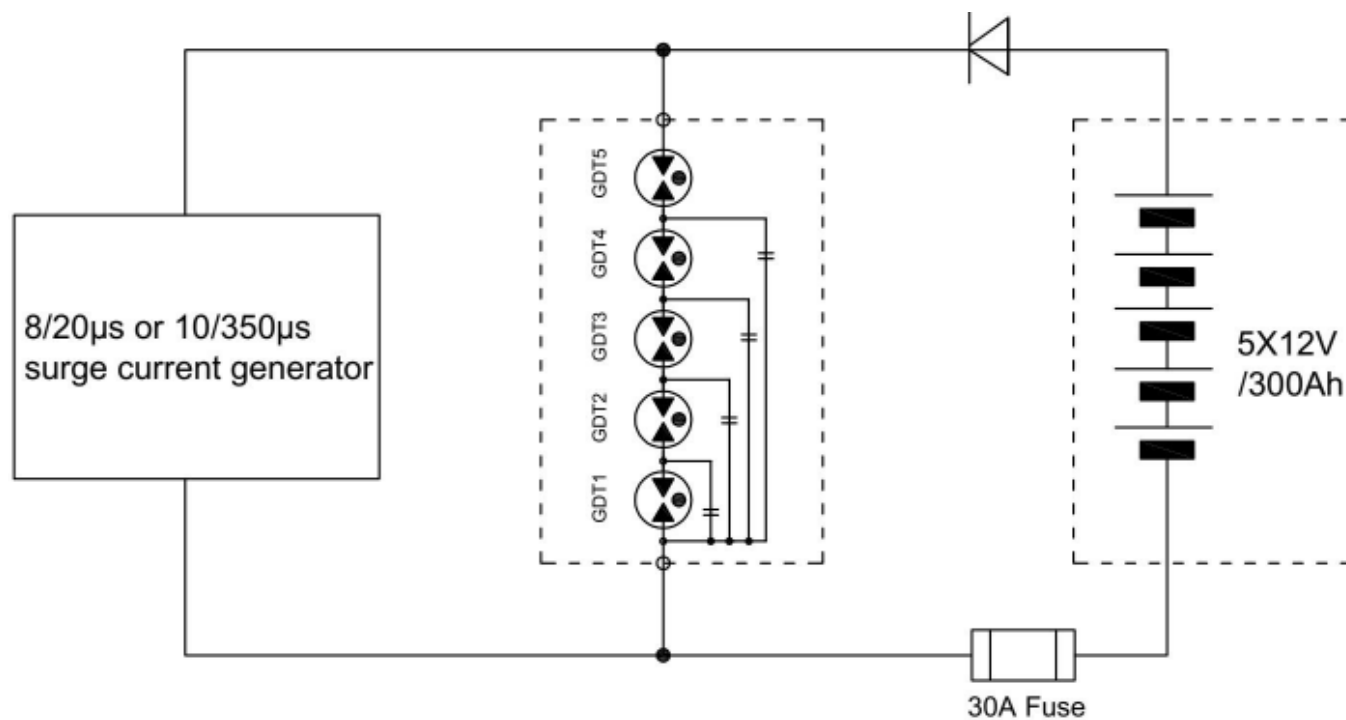
TYPICAL DEVICE CHARACTERISTICS

ELECTRICAL CHARACTERISTICS		
PARAMETER	VALUES	UNIT
DC breakdown voltage ^(Note 1 & 2) 100V/s (Pin1-6)	600-1000	V
DC breakdown voltage ^(Note 1 & 2) 100V/s (Pin1-2, Pin2-3, Pin3-4, Pin4-5, Pin5-6)	120-200	V
Impulse spark-over voltage ^(Note 3) at 1.2/50μs,6KV/3KA (Pin1-6)	≤2800	V
Impulse spark-over voltage ^(Note 3) at 1.2/50μs,6KV/3KA (Pin1-2, Pin2-3, Pin3-4, Pin4-5, Pin5-6)	≤750	V
Insulation resistance at DC 100V (Pin1-6)	≥1	GΩ
Capacitance at 1MHz ^(Note 2) V _{dc} =0.5V (Pin1-6)	≤1	pF
Service life		
10 operations [5× (+) & 5× (-)] 8/20 μs	20	KA
10 operations [5× (+) & 5× (-)] 10/350 μs	4	KA
300 operations (+/- alternating polarity) 10/1000 μs	100	A
Arc Voltage At 1A	~60	V
Maximum DC Working voltage	60	V
Weight	~6.2	g
Storage and operations temperature	-40 ~ +90	°C
Marking, Blue	No Marking	
NOTES: 1) Terms in accordance with ITU-T K.12 and GB/T 9043-2008 2) At delivery AQL 0.65 level II , DIN ISO 2859 3) With 100PF capacitor trigger ,DC spark-over voltage (Pin1-6) 600v-1500v after load , Impulse spark-over voltage1.2/50μs,6KV/3KA (Pin1-2, Pin2-3, Pin3-4, Pin4-5, Pin5-6) ≤900v,(Pin1-6) ≤3300v.		

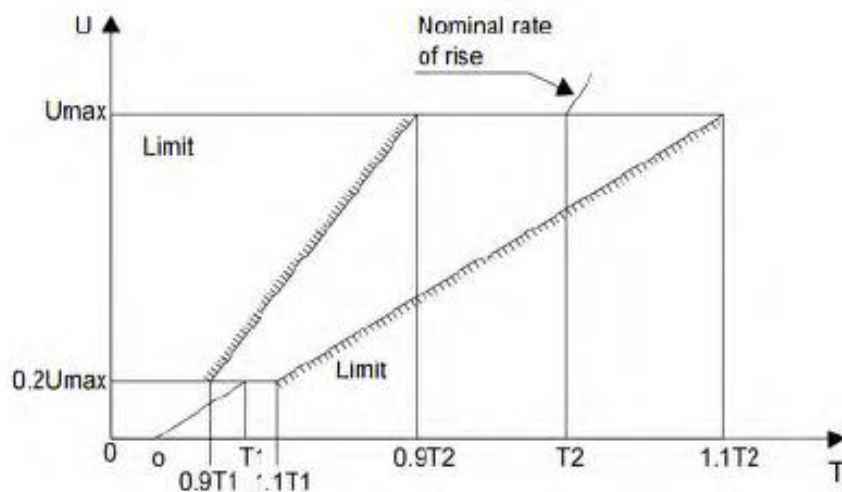
CIRCUIT DIAGRAM (C1 to C4 = each capacitor 100 pF to 470 pF)



Test circuit
10/350 μ s or 8/20 μ s circuit



DC BREAKDOWN VOLTAGE



8/20 μ s, Test wave

10/700 μ s, Test wave

10/1000 μ s, Test wave

$T_1 = 1.25T = 8\mu\text{s} \pm 20\%$

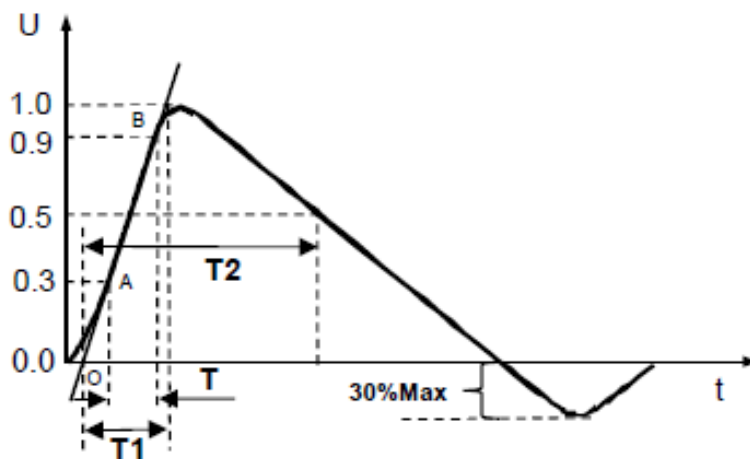
$T_1 = 1.67T = 10\mu\text{s} \pm 20\%$

$T_1 = 1.67T = 10\mu\text{s} \pm 20\%$

$T_2 = 20\mu\text{s} \pm 20\%$

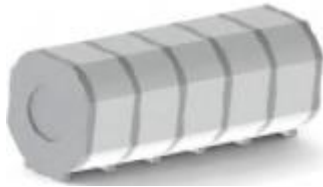
$T_2 = 700\mu\text{s} \pm 20\%$

$T_2 = 1000\mu\text{s} \pm 20\%$

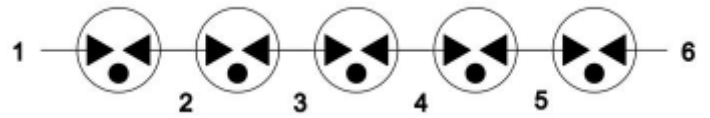


PINNING INFORMATION

SIMPLIFIED OUTLINE

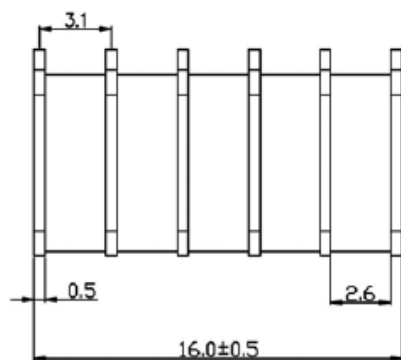


SYMBOL

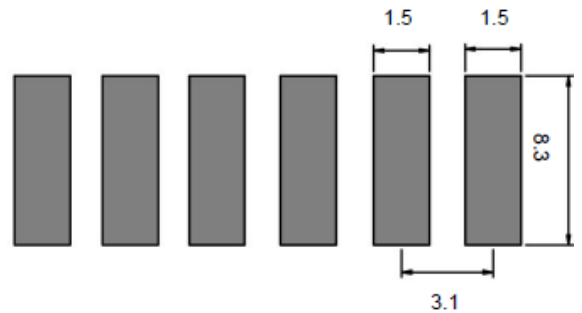
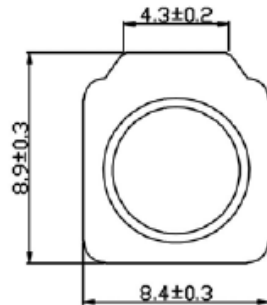


PACKAGE INFORMATION

DIMENSION: Millimetre (mm)

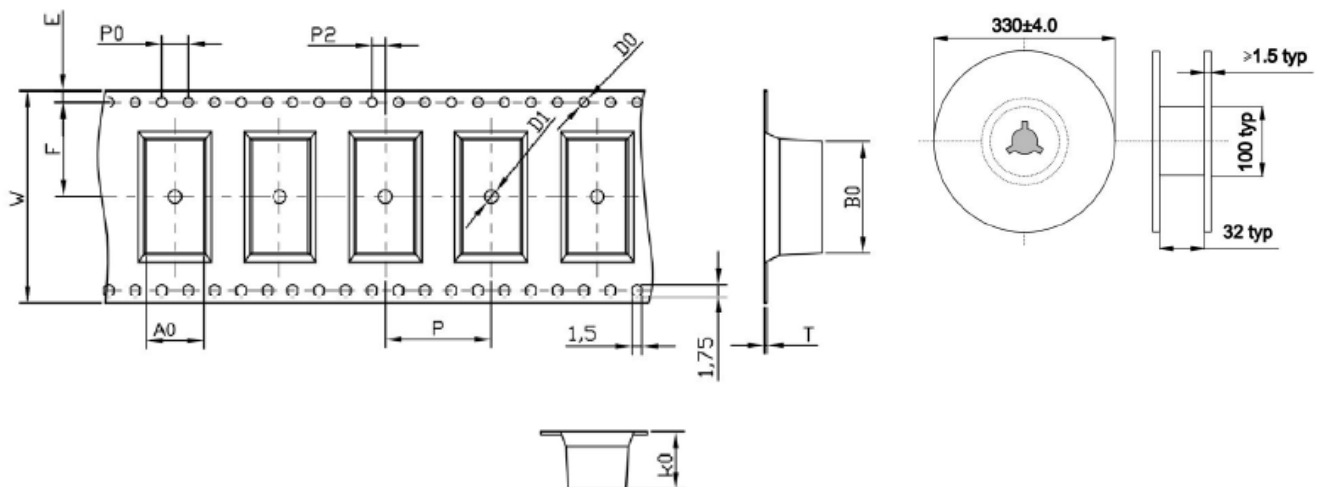


Tin-plated



Recommended Pad Size

PACKAGE - REEL



DATA	W	A0	B0	K0	E	F	P	P0	P2	D0/1	T
	32.00	8.80	16.90	9.40	1.75	14.2	16.00	4.00	2.00	1.50	0.50
	±0.30	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.05

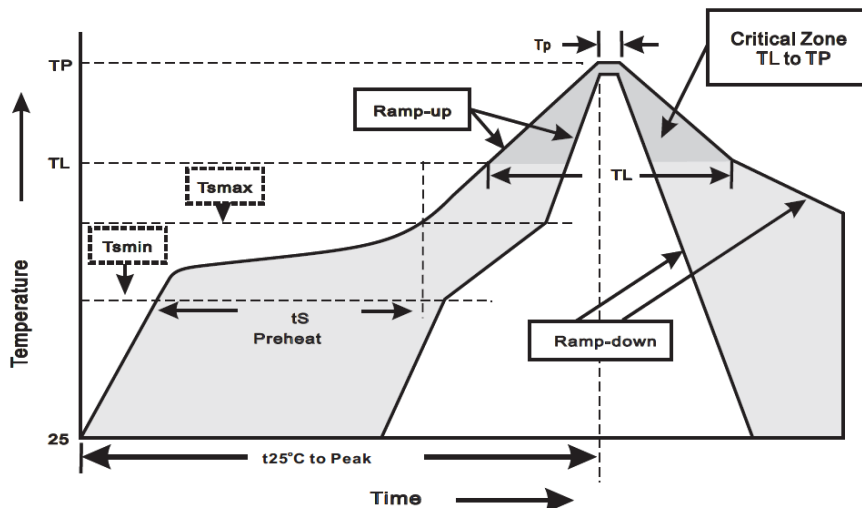
Quantity: 250pcs/reel

Colour: Dark Blue

SOLDERING PARAMETERS

SUGGESTED THERMAL PROFILES FOR SOLDERING PROCESSES

1. Storage environment: Temperature=5 °C~40 °C Humidity=55% ±25%
2. Reflow soldering of surface-mount devices



3. Reflow soldering

PROFILE FEATURE	SOLDERING CONDITION Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	<3 °C/sec
Preheat	
- Temperature Min (T_{smin})	150 °C
- Temperature Max (T_{smax})	200 °C
- Time (min to max) (t_s)	60 ~ 180 sec
T_{smax} to T_L	
- Ramp-upRate	<3 °C/sec
Time maintained above:	
- Temperature (T_L)	217 °C
- Time(t_L)	60 ~ 150 sec
Peak Temperature (T_P)	255 °C-0/+5 °C
Time within 5 °C of actual Peak Temperature(t_P)	20 ~ 40 sec
Ramp-down Rate	<6 °C/sec
Time 25 °C to Peak Temperature	<8 minutes



beyond boundaries...

ALPDC0800-S05-00
(GDT)

CUSTOMER NOTE:

DISCLAIMER

The product information and the selection guide facilitates the selection of the ALPINESEMI™'s Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review the Data sheet(s) so as to confirm that the Device(s) meets functionality parameters for your application. The information furnished on the Data Sheet and the ALPINESEMI™'s Web Site is believed to be accurate and reliable at the time of preparation of this document. ALPINESEMI™ however, does not assume any inaccuracies that may arise when the components are mounted and removed. Furthermore, ALPINESEMI™ does not assume liability whatsoever, arising out of the application or the use of any of ALPINESEMI™'s product(s). Neither, does it convey any license under its patent rights nor the rights of others. These products are not guaranteed for use in life saving/support appliances or systems. ALPINESEMI™'s customers using these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and ALPINESEMI™ will not be responsible in any way(s) for any damage(s) resulting from such use.

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Component Disposal Instructions

1. ALPINESEMI™ Semiconductor Devices are RoHS compliant and hence customers are requested to dispose as per the prevailing Environmental Legislation put forth in their specific country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).



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