



FEATURES

- AEC-Q200 Qualified
- Shielded construction
- Soft saturation
- Low DCR per cubic mm
- Designed for switching frequencies between 100KHz-2MHz



ELECTRICAL SPECIFICATIONS @ 25°C

PART NUMBER*	INDUCTANCE (uH)	TOLERANCE (%)	IRMS (A)	ISAT (A)	DC RESISTANCE (mΩ)		TYPE
					TYP	MAX	
AMPLA1707Q-R45MT	0.45	20	62	125	0.80	0.96	Lead Frame
AMPLA1707Q-R47MT	0.47	20	62	123	0.95	1.03	Lead Frame
AMPLA1707Q-1R0MT	1.0	20	52	70	1.6	2.0	Lead Frame
AMPLA1707Q-1R3MT	1.3	20	49	67	1.7	2.3	Lead Frame
AMPLA1707Q-1R5MT	1.5	20	47	65	2.0	2.5	Lead Frame
AMPLA1707Q-1R8MT	1.8	20	45	63	2.1	2.5	Lead Frame
AMPLA1707Q-2R2MT	2.2	20	43.5	62	2.4	2.7	Lead Frame
AMPLA1707Q-3R3MT	3.3	20	28	54	3.5	3.9	Lead Frame
AMPLA1707Q-4R7MT	4.7	20	25	50	4.8	5.5	Lead Frame
AMPLA1707Q-5R6MT	5.6	20	21	45	5.8	7.05	Lead Frame
AMPLA1707Q-6R8MT	6.8	20	19	39	8.4	9.2	Lead Frame
AMPLA1707Q-7R4MT	7.4	20	18.5	34	8.8	9.7	Lead Frame
AMPLA1707Q-8R2MT	8.2	20	18	31	9.6	10.8	Lead Frame
AMPLA1707Q-100MT	10	20	16.5	29	11.8	13	Lead Frame
AMPLA1707Q-150MT	15	20	12.5	27	17.8	20.5	Lead Frame
AMPLA1707Q-220MT	22	20	12	23	25.1	26.5	Lead Frame
AMPLA1707Q-330MT	33	20	10.7	20	38	44	Lead Frame
AMPLA1707Q-390MT	39	20	9.2	18	40	48	Lead Frame
AMPLA1707Q-470MT	47	20	8.7	16	48	55	Lead Frame
AMPLA1707Q-560MT	56	20	7.8	15	54	62	Lead Frame
AMPLA1707Q-680MT	68	20	7	13	68	80	Lead Frame
AMPLA1707Q-820MT	82	20	5.7	12	87	100	Lead Frame
AMPLA1707Q-101MT	100	20	5.3	12	102	118	Lead Frame

* Please refer to Part Identification section

Test Conditions

Inductance: 100 kHz, 1 V, 0 Adc

Humidity Range: 85 ± 2% RH

Temperature Rise Current: Current measured at Δ T of 40°C

Saturation Current: Current measured at Δ L of 30%

GENERAL SPECIFICATIONS

Operating Temperature:

-55°C to +125°C with (40°C rise) Irms current.

Maximum Part Temperature: +125°C

Components Storage Temperature:

-55°C to +125°C

Tape and Reel Packaging

Temperature: -55°C to +80°C

MSL: Level 1

MATERIALS

Core: Carbonyl Powder

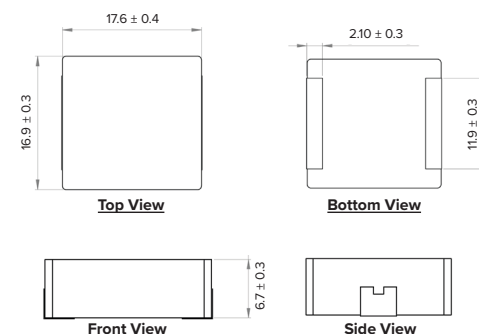
Wire: Copper

Terminal: Tin Plating

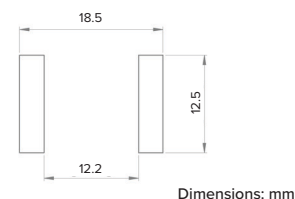
Ink: Black

Paint: Gray

PRODUCT DIMENSIONS



RECOMMENDED LANDING PATTERN



Dimensions: mm

PART BUILDER



1. Tolerance: M = 20%

2. Packaging: B = Bulk

T = Tape and Reel (200pcs/reel)

*Refer to Electrical Specification table

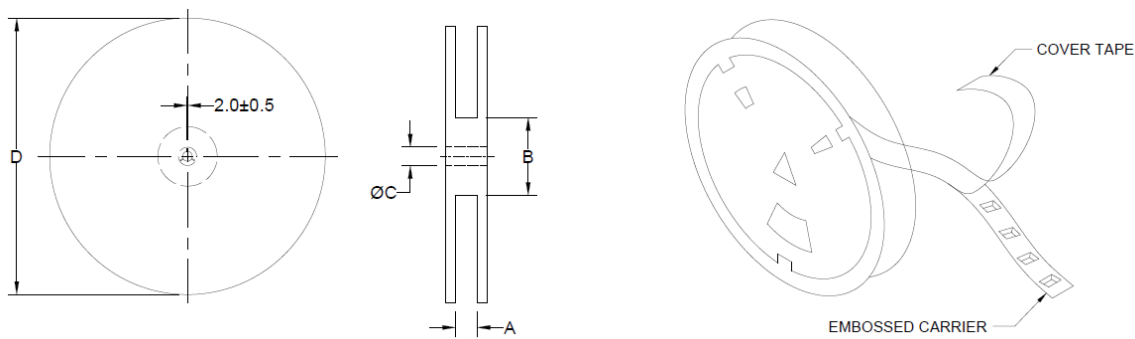
The graph illustrates a heat treatment cycle with the following components:

- Y-axis:** Temperature
- X-axis:** Time
- Temperature Markers:** T_p (Peak), T_L (Lower Limit), T_{SMAX} (Soak Max), and T_{SMIN} (Soak Min).
- Regions:**
 - 1 (Preheat):** Shaded light blue area from 25°C to T_{SMIN} .
 - 2 (Ramp Down):** Shaded light blue area during the cooling phase.
 - 3 (Critical Zone):** Shaded dark blue area at the peak temperature T_p .
- Process Labels:**
 - Preheat:** Indicated by a horizontal arrow at the bottom.
 - Ramp Up:** Indicated by an arrow pointing to the heating slope.
 - Ramp Down:** Indicated by an arrow pointing to the cooling slope.
 - Critical Zone:** Indicated by an arrow pointing to the peak region.
- Time Markers:**
 - $t_{25^\circ\text{C to Peak}}$:** Total time from 25°C to the peak temperature.
 - $T_L \text{ to } T_p$:** Time interval at the peak temperature.

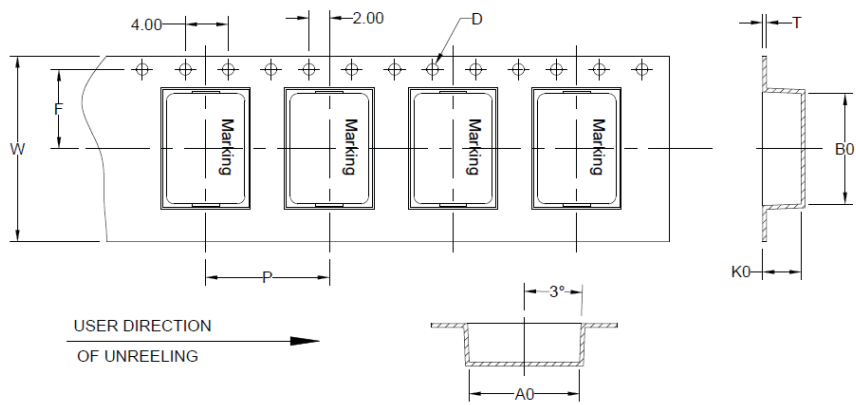
ZONE	DESCRIPTION	TEMPERATURE	TIMES
1	Preheat	$T_{smin} \sim T_{smax}$ 150°C ~ 200°C	60 ~ 180 sec.
2	Reflow	T_L 217°C	60 ~ 150 sec.
3	Peak Heat	T_P 260°C	10 sec. MAX

PACKAGING

Tape and Reel: 200
Units per Carton: 800
T&R per Carton: 4
Weight per Carton: 12.8 kg
Weight per Unit: 11.5 g
Carton Dimensions: 410 x 325 x 415 mm



TYPE	A	B	C	D
13" x 32 mm	32.4 +2/-0	100.0 ± 2.0	13.0 +0.5/-0.2	330.0



B ₀	A ₀	K ₀	P	P ₀	P ₂	W	F	T	D
18.5 ± 0.1	17.5 ± 0.1	7.5 ± 0.1	24.0 ± 0.1	4.0 ± 0.1	2.0 ± 0.05	32.0 ± 0.3	14.2 ± 0.1	0.5 ± 0.05	1.5 ± 0.1

Dimensions: mm

This product is commercial off-the-shelf (COTS) and not specifically designed for automotive, military, aviation, aerospace, implantable, life-dependent medical or safety applications. This product is not recommended for use in any application requiring high reliability in which component failure could result in loss of life and/or property damage without prior written approval from Abracon. Specifications are subject to change without notice. Contact Abracon for more information.