

SPECIFICATION FOR APPROVAL

RoHS Compliant Parts

Customer : _____

Part Name : **Chip PPTC Thermistor**

GRACE Part Number : **KPTC-F Series**

Customer Part Number : _____

Approved By	Checked By	Issued By
Joe Zhang	Coy Su	Gwen Lai

CUSTOMER APPROVAL			
Approved By	Verified By	Re-checked By	Checked By

DATE: _____

Dongguan Grace Electronic Technology Co., Ltd

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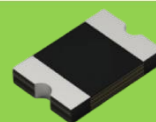
Tel: 0769-22008861 Web: www.gracevn.com Email: grace@gracevn.com

GRACE

Version change history

[illegible]

Chip PTC Thermistor — KPTC - F series

For **Resettable fuse**- **Auto-disconnect**

Features

- Accurate temperature measurement from -40 °C to 85°C
- Surface Mount Device
- Surface Mount packaging for automated assembly
- Short response time
- 100% Pb free, RoHS

Applications

- Automotive market: On-board power supply;air conditioning;Dash cam
- Computer & Lighting :USB interface;Electronic ballasts;LED luminaires
- Battery & Consumer Electronics Market : lithium battery;charger;blow dryer
- Communication Market & Smart Home:Smart speakers;Dimmer switch;Voice control

Part Numbering

KPTC	0603	F	6R0	P	075	W	NNNN	T
①	②	③	④	⑤	⑥	⑦	⑧	⑨

①	Series
	GRACE Chip PTC thermistor

②	Chip size (EIA)
	0201、0402、0603、 0805、1206、1210、 1812

③	Series code
F	Resettable fuse

④	Maximum operating voltage
6R0	6.0V
120	12V
13R2	13.2V

⑤	Material Code
	A、B、C、D

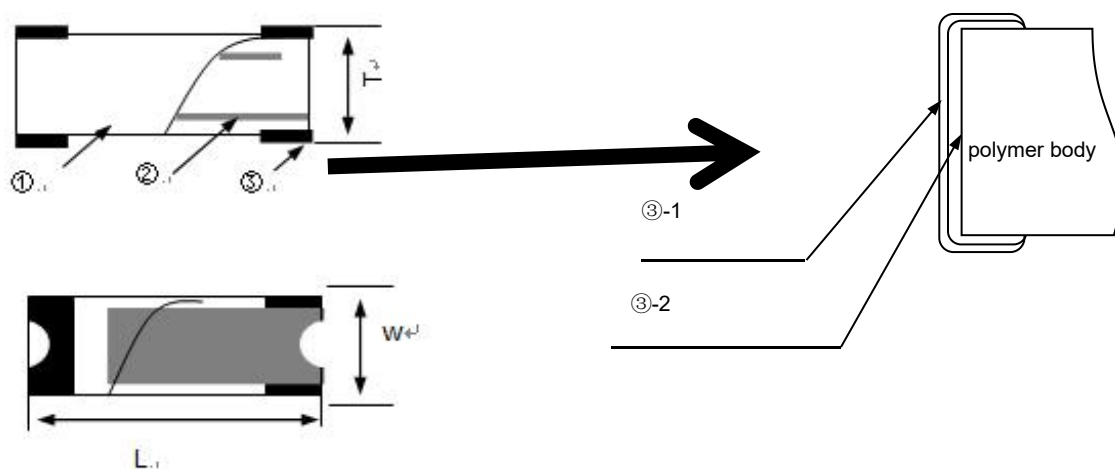
⑥	Maintain current
0011	0.011A
075	0.75A
750	7.5A
1000	10A

⑦	Internal code
	W

⑧	Customer identification code
	NNNN

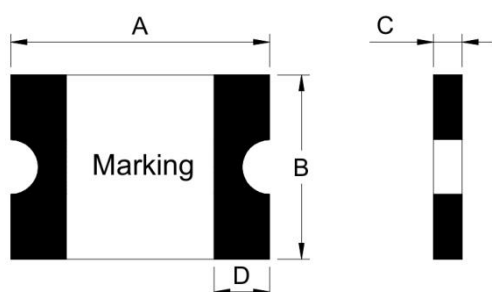
⑨	Packaging style
T	Tape
B	Bulk

Construction



No.	Name	
①	polymer body	
②	Internal electrode	Cu
③-1	Terminal electrode	Cu
③-2	Electro-plating	Sn

Dimensions



Size	A		B		C		D
	Min	Max	Min	Max	Min	Max	Min
0201	0.55	0.75	0.40	0.55	0.30	0.48	0.10
0402	0.95	1.25	0.45	0.75	0.35	0.65	0.10
0603	1.45	1.85	0.65	1.05	0.35	0.75	0.20
0805	2.00	2.30	1.20	1.50	0.60	1.00	0.20
1206	3.00	3.50	1.40	1.80	0.50	1.40	0.25
1210	3.00	3.50	2.35	2.80	0.40	1.30	0.25
1812	4.37	4.73	3.07	3.41	0.40	1.45	0.30

unit: mm

Electrical Characteristics

0201 Type

Part Number	Resistance @25°C		Hold Current	Trip Current	Rated Voltage	Max Current	Typical Power	Max time to trip Ttrip	
	R _{min} (Ω)	R _{1max} (Ω)	I _H (A)	I _T (A)	V _{DC} (V)	I _{max} (A)	P _d	Current(A)	Times(Ses)
KPTC0201F130P0011W****T	10.000	290.000	0.011	0.05	13	0.5	0.60	0.08	2.00
KPTC0201F240P0011W****T	10.000	290.000	0.011	0.05	24	0.5	0.60	0.08	2.00
KPTC0201F130P0015W****T	10.000	200.000	0.015	0.05	13	0.5	0.60	0.08	2.00
KPTC0201F240P0015W****T	10.000	200.000	0.015	0.05	24	0.5	0.60	0.08	2.00
KPTC0201F130P0025W****T	6.000	120.000	0.025	0.08	13	0.5	0.60	0.125	2.00
KPTC0201F240P0025W****T	6.000	120.000	0.025	0.08	24	0.5	0.60	0.125	2.00
KPTC0201F130P0035W****T	4.000	80.000	0.035	0.10	13	0.5	0.60	0.175	1.00
KPTC0201F240P0035W****T	4.000	80.000	0.035	0.10	24	0.5	0.60	0.175	1.00
KPTC0201F130P0050W****T	3.000	40.000	0.050	0.15	13	0.5	0.60	0.250	1.00
KPTC0201F240P0050W****T	3.000	40.000	0.050	0.15	24	0.5	0.60	0.250	1.00

0402 Type

Part Number	Resistance @25°C		Hold Current	Trip Current	Rated Voltage	Max Current	Typical Power	Max time to trip Ttrip	
	R _{min} (Ω)	R _{1max} (Ω)	I _H (A)	I _T (A)	V _{DC} (V)	I _{max} (A)	P _d	Current(A)	Times(Ses)
KPTC0402F6R0P001W****T	0.150	2.000	0.10	0.30	6	40	0.50	0.5	1.00
KPTC0402F6R0P002W****T	0.100	1.250	0.20	0.50	6	50	0.50	1.0	1.00
KPTC0402F6R0P035W****T	0.050	0.700	0.35	0.70	6	50	0.50	8	1.00
KPTC0402F9R0P035W****T	0.050	0.700	0.35	0.70	9	50	0.50	8	1.00
KPTC0402F6R0P005W****T	0.040	0.400	0.50	1.00	6	50	0.50	8	1.00
KPTC0402F9R0P005W****T	0.040	0.400	0.50	1.00	9	50	0.50	8	1.00
KPTC0402F6R0P075W****T	0.030	0.350	0.75	1.50	6	50	0.70	8	0.10
KPTC0402F6R0P100W****T	0.025	0.280	1.00	2.00	6	50	0.90	8	0.10

0603 Type

Part Number	Resistance @25°C		Hold Current	Trip Current	Rated Voltage	Max Current	Typical Power	Max time to trip Ttrip	
	R _{min} (Ω)	R _{1max} (Ω)	I _H (A)	I _T (A)	V _{DC} (V)	I _{max} (A)	P _d	Current(A)	Times(Ses)
KPTC0603F600P001W****T	15.000	120.000	0.01	0.03	60	40	0.50	0.2	1.00
KPTC0603F300P001L****T	15.000	100.000	0.01	0.04	30	20	0.5	0.2	1.00
KPTC0603F600P001L****T	15.000	100.000	0.01	0.04	60	20	0.5	0.2	1.00
KPTC0603F600P002W****T	12.000	70.000	0.02	0.06	60	40	0.50	0.2	1.00
KPTC0603F300P002L****T	8.000	70.000	0.02	0.08	30	20	0.5	0.2	1.00
KPTC0603F600P002L****T	8.000	70.000	0.02	0.08	60	20	0.5	0.2	1.00
KPTC0603F300P003W****T	6.000	50.000	0.03	0.09	30	40	0.50	0.2	1.00
KPTC0603F300P003L****T	6.000	50.000	0.03	0.10	30	20	0.5	0.2	1.00

KPTC0603F480P003L****T	6.000	50.000	0.03	0.10	48	20	0.5	0.2	1.00
KPTC0603F240P004W****T	3.500	40.000	0.04	0.12	24	20	0.50	0.2	1.00
KPTC0603F240P004L****T	6.000	40.000	0.04	0.12	24	40	0.5	0.2	1.00
KPTC0603F150P005W****T	3.500	35.000	0.05	0.15	15	40	0.50	0.5	0.10
KPTC0603F150P005L****T	2.000	25.000	0.05	0.20	15	40	0.5	0.5	1.00
KPTC0603F240P005L****T	2.000	25.000	0.05	0.20	24	40	0.5	0.5	1.00
KPTC0603F150P008W****T	3.500	40.000	0.08	0.24	15	40	0.50	0.5	0.10
KPTC0603F150P010W****T	0.900	6.000	0.10	0.30	15	40	0.50	0.5	1.00
KPTC0603F150P010L****T	0.900	6.000	0.10	0.30	15	40	0.5	0.5	1.00
KPTC0603F240P010L****T	0.900	10.000	0.10	0.30	24	40	0.5	0.5	1.00
KPTC0603F9R0P020W****T	0.550	3.500	0.20	0.50	9	40	0.50	1.00	0.60
KPTC0603F9R0P020L****T	0.550	3.500	0.20	0.50	9	40	0.5	1.0	0.60
KPTC0603F9R0P025L****T	0.500	3.000	0.25	0.55	9	40	0.5	8.0	0.08
KPTC0603F6R0P035W****T	0.200	1.400	0.35	0.75	6	40	0.50	8.00	0.10
KPTC0603F9R0P035W****T	0.200	1.400	0.35	0.75	9	40	0.50	8.00	0.10
KPTC0603F6R0P035L****T	0.200	1.400	0.35	0.75	6	40	0.5	8.0	0.10
KPTC0603F6R0P005W****T	0.040	0.42	0.50	1.00	6.00	50.00	0.50	8.00	0.10
KPTC0603F6R0P050W****T	0.100	0.800	0.50	1.00	6	40	0.50	8.00	0.10
KPTC0603F6R0P050L****T	0.100	0.800	0.50	1.00	6	40	0.5	8.0	0.10
KPTC0603F6R0P075W****T	0.038	0.25	0.75	1.50	6.00	50.00	0.50	8.00	2.00
KPTC0603F6R0P075L****T	0.060	0.450	0.75	1.40	6	40	0.5	8.0	0.10
KPTC0603F6R0P100W****T	0.020	0.10	1.00	2.00	6.00	50.00	0.50	8.00	2.00
KPTC0603F6R0P100W****T	0.035	0.400	1.00	2.00	6	40	0.50	5.00	1.00
KPTC0603F6R0P110W****T	0.030	0.12	1.10	2.20	6.00	50.00	0.50	8.00	0.30
KPTC0603F6R0P150W****T	0.015	0.09	1.50	3.00	6.00	50.00	0.50	8.00	2.00
KPTC0603F6R0P175W****T	0.009	0.07	1.75	3.50	6.00	50.00	0.50	8.00	5.00
KPTC0603F6R0P200W****T	0.008	0.07	2.00	4.00	6.00	50.00	0.70	8.00	5.00
KPTC0603F6R0P260W****T	0.007	0.06	2.60	5.20	6.00	50.00	1.10	8.00	5.00
KPTC0603F6R0P300W****T	0.006	0.06	3.00	6.00	6.00	50.00	1.10	8.00	5.00

0805 Type

Part Number	Resistance @25℃		Hold Current	Trip Current	Rated Voltage	Max Current	Typical Power	Max time to trip Ttrip	
	Rmin(Ω)	R1max(Ω)	IH (A)	IT(A)	VDC(V)	Imax(A)	Pd	Current(A)	Times(Ses)
KPTC0805F300P002L****T	12.000	70.000	0.02	0.06	30	40	0.5	0.2	0.50
KPTC0805F600P002L****T	12.000	70.000	0.02	0.06	60	40	0.5	0.2	0.50
KPTC0805F300P003L****T	6.000	50.000	0.03	0.10	30	40	0.5	0.2	1.00
KPTC0805F600P003L****T	6.000	50.000	0.03	0.10	60	40	0.5	0.2	1.00
KPTC0805F300P005W****T	3.600	50.000	0.05	0.15	30	100	0.50	0.25	1.50
KPTC0805F600P005W****T	3.600	50.000	0.05	0.15	60	40	0.50	0.25	1.50
KPTC0805F150P005L****T	2.000	15.000	0.05	0.20	15	100	0.5	0.5	1.50
KPTC0805F240P005L****T	2.000	15.000	0.05	0.20	24	100	0.5	0.5	1.50

KPTC0805F330P005L****T	2.000	15.000	0.05	0.20	33	100	0.5	0.5	1.50
KPTC0805F600P005L****T	2.000	15.000	0.05	0.20	60	100	0.5	0.5	1.50
KPTC0805F150P010W****T	1.000	7.500	0.10	0.30	15	100	0.50	0.50	1.50
KPTC0805F240P010W****T	1.000	7.500	0.10	0.30	24	100	0.50	0.50	1.50
KPTC0805F150P010L****T	1.000	6.000	0.10	0.30	15	100	0.5	0.5	1.50
KPTC0805F240P010L****T	1.000	6.000	0.10	0.30	24	100	0.5	0.5	1.50
KPTC0805F330P010L****T	1.000	6.000	0.10	0.30	33	100	0.5	0.5	1.50
KPTC0805F600P010L****T	1.000	6.000	0.10	0.30	60	100	0.5	0.5	1.50
KPTC0805F9R0P020W****T	0.650	3.500	0.20	0.50	9	100	0.50	8.00	0.02
KPTC0805F120P020W****T	0.650	3.500	0.20	0.50	12	100	0.50	8.00	0.02
KPTC0805F240P020W****T	0.30	4.50	0.20	1.00	24	40	1.20	8.00	0.20
KPTC0805F300P020W****T	0.30	4.00	0.20	1.00	30	40	1.60	8.00	0.20
KPTC0805F9R0P020L****T	0.650	3.500	0.20	0.50	9	100	0.5	8.0	0.02
KPTC0805F13R2P020L****T	0.650	3.500	0.20	0.50	13.2	100	0.5	8.0	0.02
KPTC0805F160P020L****T	0.650	3.500	0.20	0.50	16	100	0.5	8.0	0.02
KPTC0805F9R0P025L****T	0.600	3.000	0.25	0.55	9	100	0.5	8.0	0.02
KPTC0805F13R2P025L****T	0.600	3.000	0.25	0.55	13.2	100	0.5	8.0	0.02
KPTC0805F160P025L****T	0.600	3.000	0.25	0.55	16	100	0.5	8.0	0.02
KPTC0805F6R0P035W****T	0.250	1.200	0.30	0.75	6	100	0.50	8.00	0.10
KPTC0805F6R0P035W****T	0.250	1.200	0.35	0.75	6	100	0.50	8.00	0.10
KPTC0805F9R0P035W****T	0.250	1.200	0.35	0.75	9	100	0.50	8.00	0.10
KPTC0805F120P035W****T	0.250	1.200	0.35	0.75	12	100	0.50	8.00	0.10
KPTC0805F6R0P035L****T	0.250	1.200	0.35	0.75	6	100	0.5	8.0	0.10
KPTC0805F120P035L****T	0.250	1.200	0.35	0.75	12	100	0.5	8.0	0.10
KPTC0805F13R2P035L****T	0.250	1.200	0.35	0.75	13.2	100	0.5	8.0	0.10
KPTC0805F160P035L****T	0.250	1.200	0.35	0.75	16	100	0.5	8.0	0.10
KPTC0805F6R0P050W****T	0.150	0.900	0.50	1.00	6	100	0.50	8.00	0.10
KPTC0805F9R0P050W****T	0.150	0.900	0.50	1.00	9	100	0.50	8.00	0.10
KPTC0805F6R0P050L****T	0.150	0.850	0.50	1.00	6	100	0.5	8.0	0.10
KPTC0805F120P050L****T	0.150	0.850	0.50	1.00	12	100	0.5	8.0	0.10
KPTC0805F13R2P050L****T	0.150	0.850	0.50	1.00	13.2	100	0.5	8.0	0.10
KPTC0805F160P050L****T	0.150	0.850	0.50	1.00	16	100	0.5	8.0	0.10
KPTC0805F6R0P075W****T	0.020	0.160	0.75	1.50	6.00	50.00	1.20	8.00	1.00
KPTC0805F6R0P075W****T	0.090	0.350	0.75	1.50	6	100	0.60	8.00	0.20
KPTC0805F8R0P075W****T	0.090	0.350	0.75	1.50	8	100	0.60	8.00	0.20
KPTC0805F6R0P075L****T	0.090	0.385	0.75	1.50	6	40	0.6	8.0	0.20
KPTC0805F6R0P100W****T	0.018	0.110	1.00	2.00	6.00	50.00	1.20	8.00	1.00
KPTC0805F120P100W****T	0.018	0.110	1.00	2.00	12.00	50.00	1.20	8.00	1.00
KPTC0805F6R0P100W****T	0.060	0.250	1.00	2.00	6	100	0.60	8.00	0.30
KPTC0805F6R0P100L****T	0.060	0.230	1.00	1.95	6	100	0.6	8.0	0.30
KPTC0805F6R0P110W****T	0.010	0.120	1.10	3.30	6.00	50.00	0.60	8.00	5.00
KPTC0805F6R0P110W****T	0.060	0.210	1.10	2.20	6	100	0.60	8.00	0.30
KPTC0805F6R0P100L****T	0.060	0.210	1.10	2.20	6	100	0.6	8.0	0.30

KPTC0805F6R0P125W****T	0.010	0.120	1.25	2.50	6.00	50.00	0.70	8.00	5.00
KPTC0805F6R0P125L****T	0.030	0.140	1.25	2.50	6	100	1.5	8.0	0.60
KPTC0805F6R0P150W****T	0.011	0.065	1.50	3.00	6.00	50.00	1.20	8.00	1.00
KPTC0805F6R0P150W****T	0.040	0.160	1.50	3.00	6	100	0.60	8.00	0.50
KPTC0805F6R0P175W****T	0.010	0.060	1.75	3.50	6.00	50.00	1.20	8.75	2.00
KPTC0805F6R0P200W****T	0.006	0.055	2.00	4.00	6.00	50.00	1.20	10.00	2.00
KPTC0805F6R0P260W****T	0.003	0.035	2.60	5.20	6.00	50.00	1.20	13.00	2.00
KPTC0805F8R0P260W****T	0.006	0.035	2.60	5.20	8.00	50.00	1.20	8.00	5.00
KPTC0805F120P260W****T	0.006	0.035	2.60	5.20	12.00	50.00	1.20	8.00	5.00
KPTC0805F6R0P300W****T	0.003	0.035	3.00	6.00	6.00	50.00	1.20	15.00	2.00
KPTC0805F120P300W****T	0.003	0.035	3.00	6.00	12.00	50.00	1.20	15.00	2.00
KPTC0805F6R0P350W****T	0.003	0.030	3.50	7.00	6.00	50.00	1.20	17.50	2.00
KPTC0805F120P350W****T	0.003	0.030	3.50	7.00	12.00	50.00	1.20	17.50	2.00
KPTC0805F6R0P380W****T	0.002	0.028	3.80	8.00	6.00	50.00	1.20	20.00	2.00
KPTC0805F6R0P400W****T	0.002	0.026	4.00	9.00	6.00	50.00	1.20	20.00	2.00

1206 Type

Part Number	Resistance @25℃		Hold Current	Trip Current	Rated Voltage	Max Current	Typical Power	Max time to trip Ttrip	
	Rmin(Ω)	R1max(Ω)	IH (A)	IT(A)	VDC(V)	I _{max} (A)	Pd	Current(A)	Times(Ses)
KPTC1206F600P003L****T	8.000	80.000	0.03	0.10	60	100	0.4	0.20	1.20
KPTC1206F300P005W****T	2.500	40.000	0.05	0.15	30	10	0.40	0.25	1.50
KPTC1206F480P005W****T	2.500	40.000	0.05	0.15	48	10	0.40	0.25	1.50
KPTC1206F600P005W****T	2.500	40.000	0.05	0.15	60	10	0.40	0.25	1.50
KPTC1206F600P005L****T	3.600	50.000	0.05	0.15	60	100	0.4	0.25	1.50
KPTC1206F300P010W****T	1.400	15.000	0.10	0.25	30	10	0.40	0.50	1.20
KPTC1206F450P010W****T	1.400	15.000	0.10	0.25	45	10	0.40	0.50	1.20
KPTC1206F600P010W****T	1.400	15.000	0.10	0.25	60	10	0.40	0.50	1.20
KPTC1206F600P010L****T	1.600	15.000	0.10	0.25	60	100	0.4	0.50	1.00
KPTC1206F300P012W****T	1.350	8.500	0.12	0.29	30	10	0.40	8.00	0.10
KPTC1206F480P012W****T	1.350	8.500	0.12	0.29	48	10	0.40	1.00	0.20
KPTC1206F600P012W****T	1.350	8.500	0.12	0.29	60	10	0.40	1.00	0.20
KPTC1206F600P012L****T	1.600	15.000	0.12	0.29	60	100	0.4	0.50	1.00
KPTC1206F300P016W****T	0.800	5.500	0.16	0.40	30	10	0.60	1.00	0.30
KPTC1206F480P016W****T	0.800	5.500	0.16	0.40	48	10	0.60	1.00	0.30
KPTC1206F300P016W****T	0.30	5.0	0.16	0.80	30	20	1.00	8.00	0.10
KPTC1206F240P020W****T	0.600	2.600	0.20	0.46	24	10	0.60	8.00	0.10
KPTC1206F300P020W****T	0.600	3.300	0.20	0.46	30	60	0.60	1.00	0.60
KPTC1206F300P020W****T	0.30	3.50	0.20	1.00	30	10	1.00	8.00	0.10
KPTC1206F240P020L****T	0.350	2.700	0.20	0.46	24	100	0.6	8.00	0.08
KPTC1206F300P020L****T	0.350	2.700	0.20	0.46	30	100	0.6	8.00	0.08
KPTC1206F160P025W****T	0.400	1.800	0.25	0.55	16	10	0.60	1.25	0.10

KPTC1206F240P025W****T	0.400	2.400	0.25	0.55	24	10	0.60	1.25	0.60
KPTC1206F300P025W****T	0.400	2.400	0.25	0.55	30	10	0.60	1.25	0.60
KPTC1206F160P025L****T	0.350	2.500	0.25	0.50	16	100	0.6	8.00	0.08
KPTC1206F240P025L****T	0.350	2.500	0.25	0.50	24	100	0.6	8.00	0.08
KPTC1206F300P025L****T	0.350	2.500	0.25	0.50	30	100	0.6	8.00	0.08
KPTC1206F6R0P035W****T	0.300	1.200	0.35	0.75	6	40	0.60	8.00	0.10
KPTC1206F160P035W****T	0.300	1.200	0.35	0.75	16	40	0.60	8.00	0.10
KPTC1206F240P035W****T	0.300	1.200	0.35	0.75	24	40	0.60	8.00	0.10
KPTC1206F300P035W****T	0.300	1.200	0.35	0.75	30	40	0.60	8.00	0.10
KPTC1206F300P035W****T	0.15	2.10	0.35	1.40	30	10	1.50	8.00	0.10
KPTC1206F6R0P035L****T	0.250	1.300	0.35	0.75	6	100	0.6	8.00	0.10
KPTC1206F13R2P035L****T	0.250	1.300	0.35	0.75	13.2	100	0.6	8.00	0.10
KPTC1206F160P035L****T	0.250	1.300	0.35	0.75	16	100	0.6	8.00	0.10
KPTC1206F240P035L****T	0.250	1.300	0.35	0.75	24	100	0.6	8.00	0.10
KPTC1206F330P035L****T	0.250	1.300	0.35	0.75	33	100	0.6	8.00	0.10
KPTC1206F13R2P050W****T	0.150	0.700	0.50	1.00	13.2	40	0.40	8.00	0.10
KPTC1206F8R0P050W****T	0.150	0.750	0.50	1.00	8	100	0.40	8.00	0.10
KPTC1206F160P050W****T	0.150	0.750	0.50	1.00	16	40	0.40	8.00	0.10
KPTC1206F240P050W****T	0.150	1.100	0.50	1.00	24	40	0.40	8.00	0.10
KPTC1206F300P050W****T	0.150	1.100	0.50	1.00	30	40	0.40	8.00	0.10
KPTC1206F120P050W****T	0.15	0.75	0.50	1.00	12	40	0.60	8.00	0.10
KPTC1206F240P050W****T	0.150	0.750	0.50	2.00	24.0	40	0.60	8.00	0.10
KPTC1206F6R0P050L****T	0.150	0.700	0.50	1.00	6	100	0.6	8.00	0.10
KPTC1206F13R2P050L****T	0.150	0.700	0.50	1.00	13.2	100	0.6	8.00	0.10
KPTC1206F150P050L****T	0.150	0.700	0.50	1.00	15	100	0.6	8.00	0.10
KPTC1206F160P050L****T	0.150	0.700	0.50	1.00	16	100	0.6	8.00	0.10
KPTC1206F240P050L****T	0.150	0.700	0.50	1.00	24	100	0.6	8.00	0.10
KPTC1206F330P050L****T	0.150	0.700	0.50	1.00	33	100	0.6	8.00	0.10
KPTC1206F160P065W****T	0.120	0.850	0.65	1.30	16	40	0.40	8.00	0.10
KPTC1206F6R0P075W****T	0.100	0.400	0.75	1.50	6	100	0.40	8.00	0.10
KPTC1206F8R0P075W****T	0.100	0.400	0.75	1.50	8	100	0.40	8.00	0.10
KPTC1206F13.2P075W****T	0.10	0.40	0.75	1.50	13.20	100.00	0.40	8.00	0.10
KPTC1206F160P075W****T	0.10	0.40	0.75	1.50	16.00	100.00	0.40	8.00	0.10
KPTC1206F240P075W****T	0.10	0.40	0.75	1.50	24.00	100.00	0.40	8.00	0.10
KPTC1206F300P075W****T	0.10	0.40	0.75	1.50	30.00	100.00	0.40	8.00	0.10
KPTC1206F120P075W****T	0.08	0.70	0.75	3.00	12	40	1.20	8.00	5.0
KPTC1206F160P075W****T	0.08	0.70	0.75	3.00	16	40	1.20	8.00	5.0
KPTC1206F6R0P075L****T	0.090	0.500	0.75	1.50	6	100	0.6	8.00	0.20
KPTC1206F120P075L****T	0.090	0.500	0.75	1.50	12.0	100	0.6	8.00	0.20
KPTC1206F13R2P075L****T	0.090	0.500	0.75	1.50	13.2	100	0.6	8.00	0.20
KPTC1206F160P075L****T	0.090	0.500	0.75	1.50	16	100	0.6	8.00	0.20
KPTC1206F240P075L****T	0.090	0.500	0.75	1.50	24	100	0.6	8.00	0.20
KPTC1206F330P075L****T	0.090	0.500	0.75	1.50	33	100	0.6	8.00	0.20

KPTC1206F6R0P100W****T	0.07	0.28	1.00	2.00	6.00	100.00	0.60	8.00	0.10
KPTC1206F8R0P100W****T	0.06	0.28	1.00	2.00	8.00	100.00	0.60	8.00	0.10
KPTC1206F120P100W****T	0.06	0.28	1.00	2.00	12.00	100.00	0.60	8.00	0.10
KPTC1206F13R2P100W****T	0.06	0.28	1.00	2.00	13.20	100.00	0.60	8.00	0.10
KPTC1206F160P100W****T	0.06	0.28	1.00	2.00	16.00	100.00	0.60	8.00	0.10
KPTC1206F240P100W****T	0.06	0.28	1.00	2.00	24.00	100.00	0.60	8.00	0.10
KPTC1206F6R0P100L****T	0.055	0.270	1.00	1.80	6	100	0.6	8.00	0.30
KPTC1206F13R2P100L****T	0.055	0.270	1.00	1.80	13.2	100	0.6	8.00	0.30
KPTC1206F160P100L****T	0.055	0.270	1.00	1.80	16	100	0.6	8.00	0.30
KPTC1206F6R0P110W****T	0.015	0.100	1.10	2.20	6.00	50.00	1.20	8.00	0.30
KPTC1206F6R0P110W****T	0.06	0.20	1.10	2.20	6.00	100.00	0.60	8.00	0.10
KPTC1206F8R0P110W****T	0.06	0.28	1.10	2.20	8.00	100.00	0.60	8.00	0.10
KPTC1206F120P110W****T	0.06	0.28	1.10	2.20	12.00	100.00	0.60	8.00	0.10
KPTC1206F13R2P110W****T	0.06	0.28	1.10	2.20	13.20	100.00	0.60	8.00	0.10
KPTC1206F160P110W****T	0.06	0.28	1.10	2.20	16.00	100.00	0.60	8.00	0.10
KPTC1206F240P110W****T	0.06	0.28	1.10	2.20	24.00	100.00	0.60	8.00	0.10
KPTC1206F6R0P100L****T	0.050	0.250	1.10	2.20	6	100	0.6	8.00	0.30
KPTC1206F13R2P100L****T	0.050	0.250	1.10	2.20	13.2	100	0.6	8.00	0.30
KPTC1206F160P110L****T	0.050	0.250	1.10	2.20	16	100	0.6	8.00	0.30
KPTC1206F6R0P150W****T	0.010	0.065	1.50	3.00	6.00	50.00	1.20	8.00	0.30
KPTC1206F6R0P150W****T	0.03	0.13	1.50	3.00	6.00	100.00	0.60	8.00	0.30
KPTC1206F8R0P150W****T	0.03	0.17	1.50	3.00	8.00	100.00	0.60	8.00	0.30
KPTC1206F6R0P150L****T	0.030	0.130	1.50	3.00	6	100	0.8	8.00	0.30
KPTC1206F13R2P150L****T	0.030	0.130	1.50	3.00	13.2	100	0.8	8.00	0.30
KPTC1206F160P150L****T	0.030	0.130	1.50	3.00	16	100	0.8	8.00	0.30
KPTC1206F6R0P175W****T	0.005	0.055	1.75	3.50	6.00	50.00	1.20	8.00	1.00
KPTC1206F6R0P200W****T	0.005	0.055	2.00	4.00	6.00	50.00	1.20	8.00	1.00
KPTC1206F120P200W****T	0.008	0.040	2.00	4.00	12.00	50.00	1.20	8.00	5.00
KPTC1206F6R0P200W****T	0.02	0.09	2.00	4.00	6.00	100.00	0.70	8.00	1.00
KPTC1206F120P200W****T	0.02	0.12	2.00	4.00	12.00	100.00	0.70	8.00	1.00
KPTC1206F6R0P200L****T	0.018	0.080	2.00	3.50	6	100	0.8	8.00	1.50
KPTC1206F6R0P250L****T	0.015	0.070	2.50	5.00	6	100	1.2	8.00	2.00
KPTC1206F6R0P260W****T	0.003	0.035	2.60	5.00	6.00	50.00	1.20	8.00	4.00
KPTC1206F120P260W****T	0.003	0.035	2.60	5.00	12.00	50.00	1.20	8.00	4.00
KPTC1206F6R0P300W****T	0.003	0.020	3.00	6.00	6.00	50.00	1.20	8.00	5.00
KPTC1206F120P300W****T	0.003	0.020	3.00	6.00	12.00	50.00	1.20	8.00	5.00
KPTC1206F6R0P350W****T	0.003	0.030	3.50	9.00	6.00	50.00	1.20	18.50	2.00
KPTC1206F120P350W****T	0.003	0.018	3.50	7.00	12.00	50.00	1.50	8.00	5.00
KPTC1206F6R0P380W****T	0.003	0.022	3.80	8.00	6.00	50.00	1.20	20.00	2.00
KPTC1206F6R0P400W****T	0.003	0.020	4.00	8.00	6.00	50.00	1.20	20.00	2.00
KPTC1206F120P400W****T	0.003	0.014	4.00	8.00	12.00	50.00	1.20	8.00	5.00
KPTC1206F6R0P450W****T	0.002	0.018	4.50	9.00	6.00	50.00	1.50	22.50	2.00
KPTC1206F120P450W****T	0.002	0.014	4.50	9.00	12.00	50.00	1.50	22.50	5.00

KPTC1206F6R0P500W****T	0.002	0.018	5.00	10.00	6.00	50.00	1.50	25.00	2.00
KPTC1206F120P500W****T	0.002	0.013	5.00	10.00	12.00	50.00	1.50	25.00	5.00
KPTC1206F6R0P550W****T	0.002	0.018	5.50	11.00	6.00	50.00	1.50	27.50	2.00
KPTC1206F6R0P600W****T	0.001	0.018	6.00	12.00	6.00	50.00	1.50	30.00	2.00
KPTC1206F6R0P650W****T	0.001	0.018	6.50	13.00	6.00	50.00	1.50	32.50	2.00
KPTC1206F6R0P700W****T	0.001	0.017	7.00	14.00	6.00	50.00	1.50	35.00	2.00
KPTC1206F6R0P750W****T	0.001	0.017	7.50	15.00	6.00	50.00	1.50	38.75	2.00

1210 Type

Part Number	Resistance @25℃		Hold Current	Trip Current	Rated Voltage	Max Current	Typical Power	Max time to trip Ttrip	
	Rmin(Ω)	R1max(Ω)	IH (A)	IT(A)	VDC(V)	I _{max} (A)	Pd	Current(A)	Times(Ses)
KPTC1210F300P005W****T	2.800	50	0.05	0.15	30	10	0.60	0.25	3.00
KPTC1210F500P005W****T	2.800	50	0.05	0.15	50	10	0.60	0.25	1.50
KPTC1210F600P005W****T	2.800	50	0.05	0.15	60	10	0.60	0.25	1.50
KPTC1210F300P005L****T	2.800	50.000	0.05	0.15	30	100	0.6	0.25	1.50
KPTC1210F600P005L****T	2.800	50.000	0.05	0.15	60	100	0.6	0.25	1.50
KPTC1210F300P010W****T	0.800	15	0.10	0.30	30	10	0.60	0.50	0.60
KPTC1210F500P010W****T	0.800	15	0.10	0.30	50	10	0.60	0.50	0.60
KPTC1210F600P010W****T	0.800	15	0.10	0.30	60	10	0.60	0.50	0.60
KPTC1210F300P010L****T	0.800	15.000	0.10	0.30	30	100	0.6	0.50	0.60
KPTC1210F600P010L****T	0.800	15.000	0.10	0.30	60	100	0.6	0.50	0.60
KPTC1210F300P020W****T	0.400	5	0.20	0.40	30	10	0.60	8.00	0.02
KPTC1210F240P020W****T	0.400	5	0.20	0.40	24	10	0.60	8.00	0.02
KPTC1210F300P020L****T	0.400	5.000	0.20	0.40	30	100	0.6	8.0	0.02
KPTC1210F600P020L****T	0.400	5.000	0.20	0.40	60	100	0.6	8.0	0.02
KPTC1210F300P025L****T	0.400	4.500	0.25	0.50	30	100	0.6	8.0	0.02
KPTC1210F600P025L****T	0.400	4.500	0.25	0.50	60	100	0.6	8.0	0.02
KPTC1210F6R0P035W****T	0.200	1.3	0.35	0.75	6	40	0.60	8.00	0.20
KPTC1210F120P035W****T	0.200	1.3	0.35	0.75	12	40	0.60	8.00	0.20
KPTC1210F160P035W****T	0.200	1.3	0.35	0.75	16	40	0.60	8.00	0.20
KPTC1210F240P035W****T	0.200	1.3	0.35	0.75	24	40	0.60	8.00	0.20
KPTC1210F6R0P035L****T	0.200	1.300	0.35	0.75	6	100	0.6	8.0	0.20
KPTC1210F13R2P035L****T	0.200	1.300	0.35	0.75	13.2	100	0.6	8.0	0.20
KPTC1210F160P035L****T	0.200	1.300	0.35	0.75	16	100	0.6	8.0	0.20
KPTC1210F240P035L****T	0.200	1.300	0.35	0.75	24	100	0.6	8.0	0.20
KPTC1210F13R2P050W****T	0.180	0.9	0.50	1.00	13.2	40	0.60	8.00	0.10
KPTC1210F160P050W****T	0.180	0.9	0.50	1.00	16	40	0.60	8.00	0.10
KPTC1210F6R0P050L****T	0.180	0.900	0.50	1.00	6	100	0.6	8.0	0.10
KPTC1210F13R2P050L****T	0.180	0.900	0.50	1.00	13.2	100	0.6	8.0	0.10
KPTC1210F160P050L****T	0.180	0.900	0.50	1.00	16	100	0.6	8.0	0.10
KPTC1210F240P050L****T	0.180	0.900	0.50	1.00	24	100	0.6	8.0	0.10

KPTC1210F6R0P075W****T	0.070	0.45	0.75	1.50	6	40	0.60	8.00	0.10
KPTC1210F8R0P075W****T	0.070	0.45	0.75	1.50	8	40	0.60	8.00	0.10
KPTC1210F13R2P075W****T	0.070	0.45	0.75	1.50	13.2	40	0.60	8.00	0.10
KPTC1210F6R0P075L****T	0.070	0.400	0.75	1.50	6	100	0.6	8.0	0.10
KPTC1210F13R2P075L****T	0.070	0.400	0.75	1.50	13.2	100	0.6	8.0	0.10
KPTC1210F160P075L****T	0.070	0.400	0.75	1.50	16	100	0.6	8.0	0.10
KPTC1210F240P075L****T	0.070	0.400	0.75	1.50	24	100	0.6	8.0	0.10
KPTC1210F6R0P100L****T	0.050	0.230	1.00	2.00	6	100	0.6	8.0	0.30
KPTC1210F13R2P100L****T	0.050	0.230	1.00	2.00	13.2	100	0.6	8.0	0.30
KPTC1210F160P100L****T	0.050	0.230	1.00	2.00	16	100	0.6	8.0	0.30
KPTC1210F6R0P110W****T	0.010	0.210	1.10	2	6.00	50	1.20	5.50	3.00
KPTC1210F6R0P110W****T	0.050	0.21	1.10	2.20	6	40	0.60	5.00	1.00
KPTC1210F8R0P110W****T	0.050	0.24	1.10	2.20	8	40	0.60	8.00	0.30
KPTC1210F120P110W****T	0.050	0.24	1.10	2.20	12	40	0.60	8.00	0.30
KPTC1210F160P110W****T	0.050	0.24	1.10	2.20	16	40	0.60	8.00	0.30
KPTC1210F240P110W****T	0.05	0.30	1.10	5.50	24	40	1.00	8.00	5.00
KPTC1210F300P110W****T	0.05	0.30	1.10	3.30	30	40	1.50	8.00	5.00
KPTC1210F6R0P110L****T	0.050	0.210	1.10	2.20	6	100	0.6	8.0	0.30
KPTC1210F13R2P110L****T	0.050	0.210	1.10	2.20	13.2	100	0.6	8.0	0.30
KPTC1210F160P110L****T	0.050	0.210	1.10	2.20	16	100	0.6	8.0	0.30
KPTC1210F6R0P150W****T	0.009	0.011	1.50	3.0	6.00	50.0	1.20	8.0	3.00
KPTC1210F6R0P150W****T	0.030	0.11	1.50	3.00	6	40	0.60	5.00	5.00
KPTC1210F8R0P150W****T	0.030	0.11	1.50	3.00	8	40	0.60	8.00	0.50
KPTC1210F100P150W****T	0.030	0.11	1.50	3.00	10	40	0.60	8.00	0.50
KPTC1210F120P150W****T	0.030	0.14	1.50	3.00	12	40	0.60	8.00	0.50
KPTC1210F160P150W****T	0.030	0.14	1.50	3.00	16	40	0.60	8.00	0.50
KPTC1210F6R0P150L****T	0.030	0.110	1.50	3.00	6	100	0.6	8.0	0.50
KPTC1210F13R2P150L****T	0.030	0.110	1.50	3.00	13.2	100	0.6	8.0	0.50
KPTC1210F6R0P175W****T	0.006	0.045	1.75	4	6.00	50	1.20	8	3.00
KPTC1210F6R0P175W****T	0.020	0.09	1.75	3.50	6	40	0.70	8.00	1.00
KPTC1210F8R0P175W****T	0.020	0.09	1.75	3.50	8	40	0.70	8.00	1.00
KPTC1210F6R0P175L****T	0.020	0.080	1.75	3.50	6	100	0.8	8.0	0.60
KPTC1210F13R2P175L****T	0.020	0.080	1.75	3.50	13.2	100	0.8	8.0	0.60
KPTC1210F6R0P190W****T	0.005	0.030	1.90	5	6.00	50	1.20	8	3.00
KPTC1210F6R0P200W****T	0.005	0.030	2.00	5	6.00	50	1.20	8	3.00
KPTC1210F160P200W****T	0.02	0.22	2.00	6.00	16	40	1.50	10.00	5.00
KPTC1210F6R0P200L****T	0.015	0.070	2.00	4.00	6	100	0.8	8.0	1.00
KPTC1210F6R0P200W****T	0.004	0.040	2.60	5	6.00	50	1.20	8	4.00
KPTC1210F6R0P300W****T	0.004	0.040	3.00	8	6.00	50	1.20	18	4.00
KPTC1210F120P300W****T	0.003	0.020	3.00	6.0	12.00	50.0	1.20	8.0	5.00
KPTC1210F6R0P350W****T	0.003	0.018	3.50	7	6.00	50	1.20	18	2.00
KPTC1210F6R0P380W****T	0.003	0.018	3.80	8.0	6.00	50.0	1.20	19.0	2.00
KPTC1210F6R0P400W****T	0.003	0.018	4.00	8	6.00	50	1.20	20	2.00

KPTC1210F6R0P450W****T	0.003	0.016	4.50	9	6.00	50	1.50	23	2.00
KPTC1210F120P450W****T	0.002	0.013	4.50	9.0	12.00	50.0	1.50	22.5	2.00
KPTC1210F6R0P500W****T	0.003	0.016	5.00	10.0	6.00	50.0	1.50	25.0	2.00
KPTC1210F120P500W****T	0.002	0.012	5.00	10	12.00	50	1.50	25	2.00
KPTC1210F6R0P550W****T	0.002	0.016	5.50	11	6.00	50	1.50	28	2.00
KPTC1210F6R0P600W****T	0.001	0.015	6.00	12.0	6.00	50.0	1.50	30.0	2.00
KPTC1210F120P600W****T	0.001	0.015	6.00	12	12.00	50	1.50	30	2.00
KPTC1210F6R0P650W****T	0.001	0.015	6.50	13	6.00	50	1.50	33	2.00
KPTC1210F6R0P700W****T	0.001	0.015	7.00	14.0	6.00	50.0	1.50	35.0	2.00
KPTC1210F6R0P750W****T	0.001	0.015	7.50	15	6.00	50	1.50	38	2.00
KPTC1210F120P900W****T	0.0007	0.007	9.00	18.0	12.00	50.0	1.50	45.0	2.00
KPTC1210F120P1000W****T	0.0007	0.007	10.00	20	12.00	50	1.50	50	2.00

1812 Type

Part Number	Resistance @25℃		Hold Current	Trip Current	Rated Voltage	Max Current	Typical Power	Max time to trip Ttrip	
	Rmin(Ω)	R1max(Ω)	IH (A)	IT(A)	VDC(V)	Imax(A)	Pd	Current(A)	Times(Ses)
KPTC1812F600P010W****T	0.700	15.0	0.10	0.30	60	10	0.80	0.5	1.50
KPTC1812F300P010W****T	0.700	15.0	0.10	0.30	30	10	0.80	0.5	1.50
KPTC1812F500P010W****T	0.700	15.0	0.10	0.30	50	10	0.80	0.5	1.50
KPTC1812F300P010L****T	0.750	15.000	0.10	0.30	30	100	0.8	0.5	1.50
KPTC1812F600P010L****T	0.750	15.000	0.10	0.30	60	100	0.8	0.5	1.50
KPTC1812F600P014W****T	0.400	6.5	0.14	0.34	60	10	0.80	1.50	0.15
KPTC1812F500P014W****T	0.400	6.5	0.14	0.34	50	10	0.80	1.50	0.15
KPTC1812F600P014L****T	0.650	6.000	0.14	0.34	60	100	0.8	1.5	0.15
KPTC1812F300P020W****T	0.750	5.0	0.20	0.40	30	10	0.80	8.00	0.20
KPTC1812F500P020W****T	0.400	6.0	0.20	0.40	50	10	0.80	1.50	0.15
KPTC1812F600P020W****T	0.400	6.0	0.20	0.40	60	10	0.80	1.50	0.15
KPTC1812F300P020L****T	0.350	5.000	0.20	0.40	30	100	0.8	8.0	0.02
KPTC1812F600P020L****T	0.350	5.000	0.20	0.40	60	100	0.8	8.0	0.02
KPTC1812F300P035W****T	0.300	3.0	0.30	0.60	30	10	0.80	8.00	0.10
KPTC1812F300P030L****T	0.250	3.000	0.30	0.60	30	100	0.8	8.0	0.10
KPTC1812F600P030L****T	0.250	3.000	0.30	0.60	60	100	0.8	8.0	0.10
KPTC1812F160P035W****T	0.200	1.8	0.35	0.70	16	40	0.80	8.00	0.10
KPTC1812F300P035W****T	0.200	1.8	0.35	0.70	30	40	0.80	8.00	0.10
KPTC1812F150P050W****T	0.150	1.0	0.50	1.00	15	40	0.80	8.00	0.15
KPTC1812F160P050W****T	0.150	1.0	0.50	1.00	16	40	0.80	8.00	0.15
KPTC1812F240P050W****T	0.150	1.0	0.50	1.00	24	40	0.80	8.00	0.15
KPTC1812F300P050W****T	0.150	1.0	0.50	1.00	30	100	0.80	8.00	0.15
KPTC1812F330P050W****T	0.150	1.0	0.50	1.00	33	40	0.80	8.00	0.15
KPTC1812F600P050W****T	0.150	1.0	0.50	1.00	60	100	0.80	8.00	0.15
KPTC1812F150P050L****T	0.150	1.000	0.50	1.00	15	100	0.8	8.0	0.15

KPTC1812F330P050L****T	0.150	1.000	0.50	1.00	33	100	0.8	8.0	0.15
KPTC1812F600P050L****T	0.150	1.000	0.50	1.00	60	100	0.8	8.0	0.15
KPTC1812F160P075W****T	0.110	0.45	0.75	1.50	16	40	0.80	8.00	0.20
KPTC1812F240P075W****T	0.110	0.45	0.75	1.50	24	40	0.80	8.00	0.20
KPTC1812F330P075W****T	0.110	0.4	0.75	1.50	33	40	0.80	8.00	0.20
KPTC1812F330P075W****T	0.05	0.50	0.75	3.00	33	40	1.5	8.0	5.0
KPTC1812F13R2P075L****T	0.090	0.450	0.75	1.50	13.2	100	0.8	8.0	0.20
KPTC1812F160P075L****T	0.090	0.450	0.75	1.50	16	100	0.8	8.0	0.20
KPTC1812F240P075L****T	0.090	0.450	0.75	1.50	24	100	0.8	8.0	0.20
KPTC1812F330P075L****T	0.090	0.450	0.75	1.50	33	100	0.8	8.0	0.20
KPTC1812F8R0P100L****T	0.055	0.270	1.00	1.80	8	100	0.8	8.0	0.30
KPTC1812F160P100L****T	0.055	0.270	1.00	1.80	16	100	0.8	8.0	0.30
KPTC1812F240P100L****T	0.055	0.270	1.00	1.80	24	100	0.8	8.0	0.30
KPTC1812F330P100L****T	0.055	0.270	1.00	1.80	33	100	0.8	8.0	0.30
KPTC1812F6R0P110W****T	0.040	0.21	1.10	2.20	6	100	0.80	8.00	0.30
KPTC1812F8R0P110W****T	0.040	0.225	1.10	2.20	8	100	0.80	8.00	0.30
KPTC1812F120P110W****T	0.040	0.225	1.10	2.20	12	100	0.80	8.00	0.30
KPTC1812F160P110W****T	0.040	0.225	1.10	2.20	16	100	0.80	8.00	0.50
KPTC1812F240P110W****T	0.060	0.2	1.10	2.20	24	100	0.80	8.00	0.50
KPTC1812F330P110W****T	0.055	0.22	1.10	2.20	33	100	1.20	8.00	0.50
KPTC1812F240P110W****T	0.040	0.300	1.10	4.40	24	40	1.5	8.0	3.0
KPTC1812F240P110W****T	0.040	0.300	1.10	4.40	24	40	1.5	8.0	3.0
KPTC1812F8R0P110L****T	0.050	0.250	1.10	2.20	8	100	0.8	8.0	0.30
KPTC1812F160P110L****T	0.050	0.250	1.10	2.20	16	100	0.8	8.0	0.30
KPTC1812F240P110L****T	0.050	0.250	1.10	2.20	24	100	0.8	8.0	0.30
KPTC1812F330P110L****T	0.050	0.250	1.10	2.20	33	100	0.8	8.0	0.30
KPTC1812F6R0P125W****T	0.035	0.14	1.25	2.50	6	40	0.80	8.00	0.40
KPTC1812F8R0P125W****T	0.035	0.14	1.25	2.50	8	100	0.80	8.00	0.40
KPTC1812F120P125W****T	0.035	0.14	1.25	2.50	12	100	0.80	8.00	0.40
KPTC1812F160P125W****T	0.035	0.14	1.25	2.50	16	100	0.80	8.00	0.40
KPTC1812F300P125W****T	0.035	0.21	1.25	2.50	30	100	0.80	8.00	0.40
KPTC1812F160P125L****T	0.050	0.140	1.25	2.50	16	100	0.8	8.0	0.40
KPTC1812F240P125L****T	0.050	0.140	1.25	2.50	24	100	0.8	8.0	0.40
KPTC1812F330P125L****T	0.050	0.140	1.25	2.50	33	100	0.8	8.0	0.40
KPTC1812F6R0P150W****T	0.030	0.12	1.50	3.00	6	100	0.80	8.00	0.50
KPTC1812F8R0P150W****T	0.030	0.12	1.50	3.00	8	100	0.80	8.00	0.50
KPTC1812F120P150W****T	0.030	0.12	1.50	3.00	12	100	1.00	8.00	0.50
KPTC1812F160P150W****T	0.030	0.12	1.50	3.00	16	100	1.00	8.00	0.50
KPTC1812F240P150W****T	0.030	0.14	1.50	3.00	24	100	1.20	8.00	1.50
KPTC1812F240P150W****T	0.025	0.180	1.50	6.00	24	40	1.5	10.0	5.0
KPTC1812F330P150W****T	0.025	0.200	1.50	6.00	33	40	1.5	10.0	5.0
KPTC1812F8R0P150L****T	0.040	0.160	1.50	3.00	8	100	0.8	8.0	0.50
KPTC1812F160P150L****T	0.040	0.160	1.50	3.00	16	100	0.8	8.0	0.50

KPTC1812F240P150L****T	0.040	0.160	1.50	3.00	24	100	0.8	8.0	0.50
KPTC1812F6R0P160W****T	0.025	0.12	1.60	3.20	6	100	1.00	8.00	1.00
KPTC1812F8R0P160W****T	0.025	0.12	1.60	3.20	8	100	1.00	8.00	1.00
KPTC1812F120P160W****T	0.025	0.12	1.60	3.20	12	100	1.00	8.00	1.00
KPTC1812F160P160W****T	0.025	0.12	1.60	3.20	16	100	1.00	8.00	1.00
KPTC1812F240P160W****T	0.025	0.14	1.60	3.20	24	100	1.00	8.00	1.00
KPTC1812F6R0P160L****T	0.030	0.130	1.60	2.80	8	100	0.8	8.0	1.00
KPTC1812F13R2P160L****T	0.030	0.130	1.60	2.80	13.2	100	0.8	8.0	1.00
KPTC1812F160P160L****T	0.030	0.130	1.60	2.80	16	100	0.8	8.0	1.00
KPTC1812F8R0P200W****T	0.020	0.08	2.00	4.00	8	100	1.20	8.00	3.00
KPTC1812F120P200W****T	0.020	0.08	2.00	4.00	12	100	1.20	8.00	3.00
KPTC1812F160P200W****T	0.020	0.08	2.00	4.00	16	100	1.20	8.00	3.00
KPTC1812F200P200W****T	0.020	0.08	2.00	4.00	20	100	1.20	8.00	3.00
KPTC1812F240P200W****T	0.020	0.1	2.00	4.00	24	40	1.20	8.00	3.00
KPTC1812F8R0P200L****T	0.020	0.100	2.00	4.00	8	100	0.8	8.0	2.00
KPTC1812F13R2P200L****T	0.020	0.100	2.00	4.00	13.2	100	0.8	8.0	2.00
KPTC1812F160P200L****T	0.020	0.100	2.00	4.00	16	100	0.8	8.0	2.00
KPTC1812F240P200L****T	0.020	0.100	2.00	4.00	24	100	0.8	8.0	2.00
KPTC1812F160P250W****T	0.015	0.1	2.50	5.00	16	100	1.20	8.00	5.00
KPTC1812F120P250W****T	0.015	0.1	2.50	5.00	12	100	1.20	8.00	5.00
KPTC1812F8R0P250W****T	0.015	0.1	2.50	5.00	8	100	1.20	8.00	5.00
KPTC1812F6R0P260W****T	0.015	0.08	2.60	5.20	6	100	1.20	8.00	5.00
KPTC1812F8R0P260W****T	0.015	0.08	2.60	5.20	8	100	1.20	8.00	5.00
KPTC1812F120P260W****T	0.015	0.08	2.60	5.20	12	100	1.20	8.00	5.00
KPTC1812F160P260W****T	0.015	0.08	2.60	5.20	16	100	1.20	8.00	5.00
KPTC1812F8R0P260L****T	0.015	0.050	2.60	5.00	8	100	0.8	8.0	2.50
KPTC1812F13R2P260L****T	0.015	0.080	2.60	5.00	13.2	100	0.8	8.0	2.50
KPTC1812F160P260L****T	0.015	0.080	2.60	5.00	16	100	0.8	8.0	2.50
KPTC1812F240P260L****T	0.015	0.080	2.60	5.00	24	100	0.8	8.0	2.50
KPTC1812F240P300W****T	0.003	0.030	3.00	6.00	24	50	1.50	15.0	5.00
KPTC1812F6R0P300W****T	0.120	0.06	3.00	6.00	6	100	1.20	8.00	5.00
KPTC1812F8R0P300W****T	0.120	0.06	3.00	6.00	8	100	1.20	8.00	5.00
KPTC1812F120P300W****T	0.120	0.06	3.00	6.00	12	100	1.20	8.00	5.00
KPTC1812F160P300W****T	0.120	0.06	3.00	6.00	16	100	1.20	8.00	5.00
KPTC1812F6R0P300L****T	0.012	0.040	3.00	5.00	6	100	0.8	8.0	4.00
KPTC1812F8R0P300L****T	0.012	0.040	3.00	5.00	8	100	0.8	8.0	4.00
KPTC1812F120P300L****T	0.012	0.040	3.00	5.00	12.0	100	0.8	8.0	4.00
KPTC1812F13R2P300L****T	0.012	0.040	3.00	5.00	13.2	100	0.8	8.0	4.00
KPTC1812F160P300L****T	0.012	0.040	3.00	5.00	16.0	100	0.8	8.0	4.00
KPTC1812F120P350W****T	0.003	0.020	3.50	7.00	12	50	1.50	17.5	5.00
KPTC1812F6R0P350L****T	0.008	0.030	3.50	6.00	6	100	2.0	10.0	4.00
KPTC1812F6R0P375L****T	0.007	0.028	3.75	7.00	6	100	2.0	12.0	4.00
KPTC1812F210P400W****T	0.003	0.013	4.0	8.0	21	50	1.50	20.0	5.00

KPTC1812F6R0P400L****T	0.006	0.025	4.00	8.00	6	100	2.0	12.0	5.00
KPTC1812F210P450W****T	0.002	0.012	4.5	9.0	21	50	1.80	22.5	5.00
KPTC1812F120P500W****T	0.001	0.013	5.00	10.0	12	50	1.50	30.0	5.00
KPTC1812F160P500W****T	0.001	0.013	5.00	10.0	16	50	1.50	30.0	5.00
KPTC1812F210P500W****T	0.001	0.010	5.00	10.0	21	50	1.5	25.0	5.00
KPTC1812F240P500W****T	0.001	0.010	5.00	10.0	24	50	1.50	25.0	5.00
KPTC1812F8R0P750W****T	0.0005	0.008	7.50	15.0	8	50	1.50	37.5	5.00
KPTC1812F120P750W****T	0.0005	0.008	7.50	15.0	12	50	1.50	37.5	5.00
KPTC1812F120P750W****T	0.0005	0.008	7.50	15.0	12	50	1.50	37.5	5.00
KPTC1812F210P750W****T	0.0005	0.008	7.50	15.0	21	15	1.50	37.5	5.00
KPTC1812F8R0P800W****T	0.0005	0.008	8.00	16.0	8	50	1.50	40.0	5.00
KPTC1812F120P900W****T	0.0005	0.007	9.00	18.0	12	50	1.50	45.0	5.00
KPTC1812F200P900W****T	0.0005	0.007	9.00	18.0	20	20	1.50	45.0	5.00

※ Notes:

a. I_H : Holding Current: maximum current at which the device will not trip in 25°C still air.

b. I_T : Tripping Current minimum current at which the device will trip in 25°C still air.

c. V_{max} : Maximum voltage device can withstand without damage at rated current.

d. I_{max} : Maximum fault current device can withstand without damage at rated voltage.

e. T_{trip} : Maximum time to trip(s) at assigned current.

f. P_d : Rated working power.

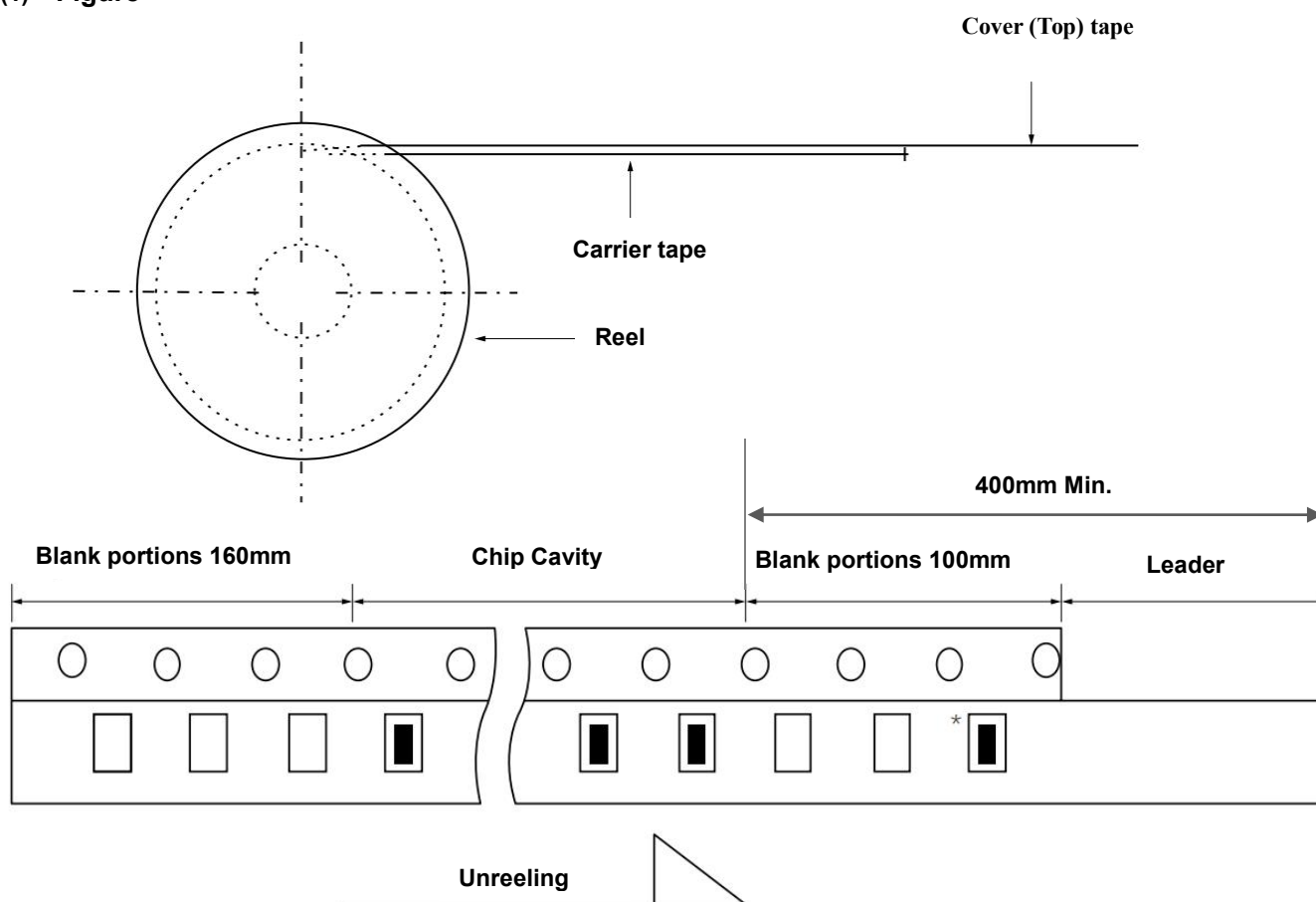
g. R_{min} : Minimum resistance of device prior to trip at 25°C.

h. $R1_{max}$: Maximum resistance of device is measured one hours post reflow at 25°C.

i. All electrical function test is conducted after PCB mounted.

■ Packaging

(1) Figure



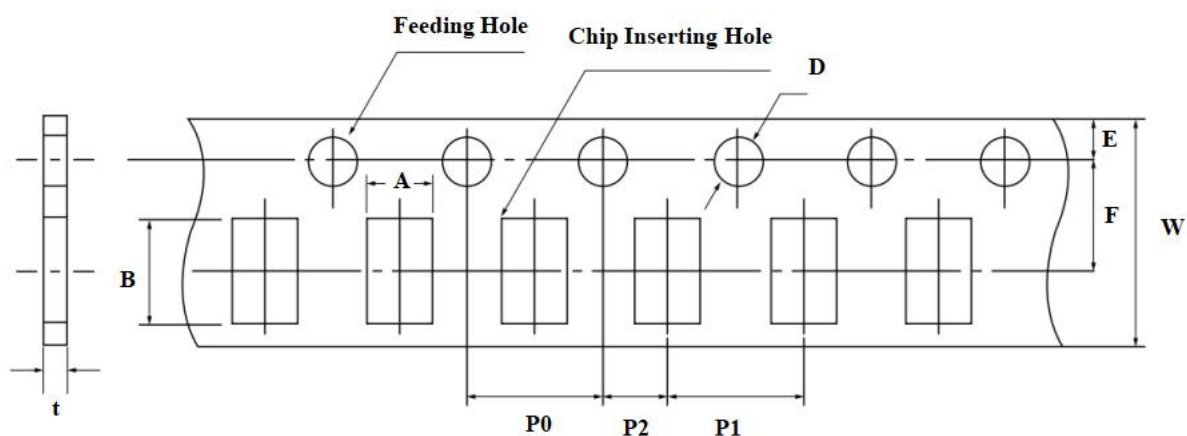
(2) Quantity

Size(EIA)		0201	0402	0603	0805
Taping Type		PAPER	PAPER	PAPER	PAPER
Quantity	Reel	10K	10K	4K	3.5K
	Inner Box	10K×10=100K	10K×10=100K	4K×10=40K	3.5K×10=35K
	Outer Box	10K×10×6=600K	10K×10×6=600K	4K×10×6=240K	3.5K×10×6=210K

Size(EIA)		1206	1210	1812
Taping Type		PAPER	PAPER	PAPER
Quantity	Reel	3K	3K	1.5K
	Inner Box	3K×10=30K	3K×10=30K	1.5K×10=15K
	Outer Box	3K×10×6=180K	3K×10×6=180K	1.5K×10×6=90K

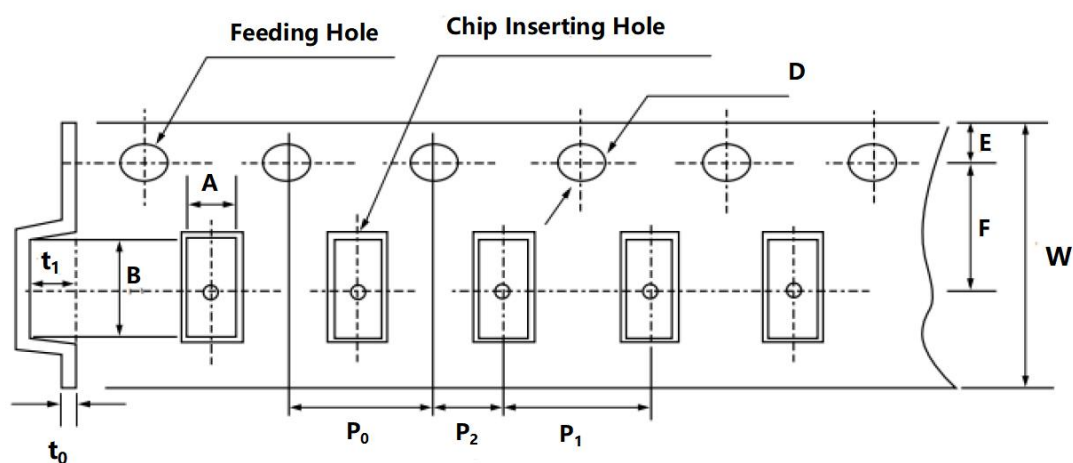
(3) Tape Size

❖ Cardboard (Paper) tape



Size (EIA)	A	B	W	F	E	P1	P2	P0	D	t
0201	0.38±0.1	0.68±0.10	8.00 ±0.30	3.50 ±0.05	1.75 ±0.10	2.00 ±0.05	2.00 ±0.05	4.00 ±0.10	φ1.50 +0.1/-0.03	≤0.5
0402	0.65±0.1	1.15±0.1				2.00 ±0.05				≤0.8
0603	1.0±0.2	1.8±0.2				4.00 ±0.10				≤1.1

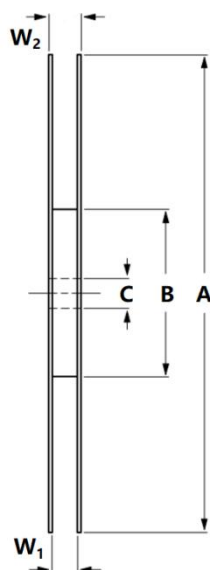
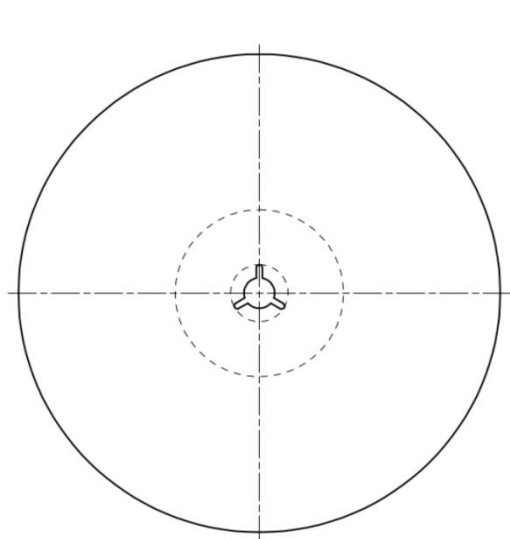
❖ Embossed (Plastic) tape



unit: mm

Size	A	B	W	F	E	P1	P2	P0	D	t ₀	t ₁
0805	3.5 ±0.2	5.1 ±0.15	8.00 ±0.30	3.50 ±0.05	1.75 ±0.10	4.00 ±0.10	2.00 ±0.05	4.00 ±0.10	φ1.50 +0.1/-0.03	≤0.5	≤1.1
1206	1.88 ±0.10	3.50 ±0.10									≤2.0
1210	2.18 ±0.10	3.46 ±0.10									≤2.8
1812	3.66 ±0.10	4.95 ±0.10	12.0 ±0.30	5.5 ±0.05	1.75 ±0.10	8.00 ±0.10	2.00 ±0.05	4.00 ±0.10	φ1.50 +0.1/-0.03	≤0.5	≤3.8

(4) Reel Size

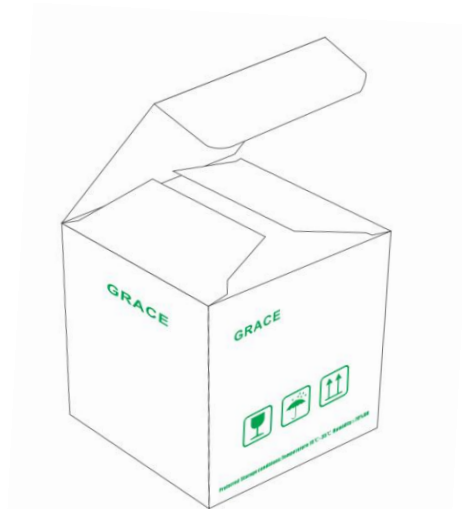
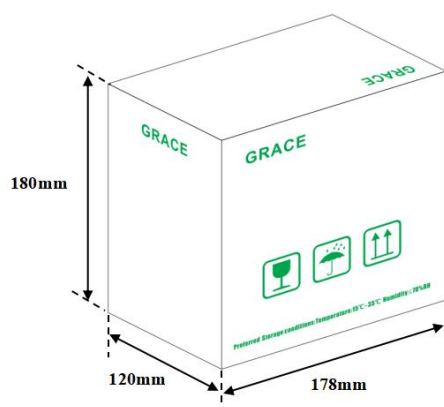


Type	Symbol	Dimensions(mm)
7"Reel	A	178±2
	B	60±2
	C	13.5±0.2
	W1	12.4+2.0/-0.0
	W2	≤18.4

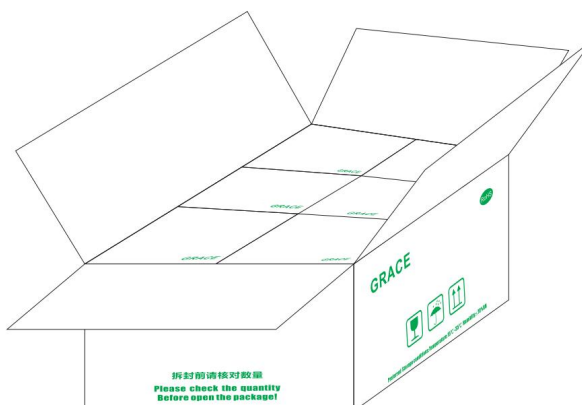
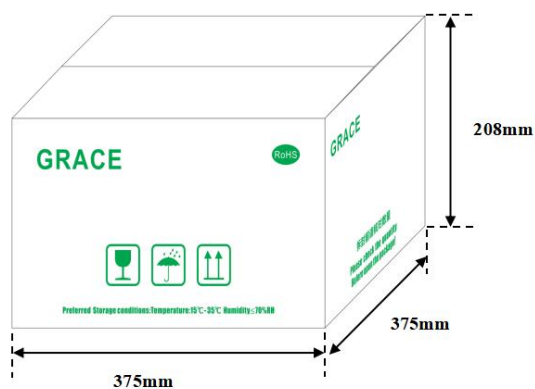
(5) BOX package

Double packaging with the paper type of inner box and outer box.

❖ Inner Box :



❖ Outer Box :



※ Box size specifications for reference.

■ Storage environment

(1) Recommendation for temperature/humidity

- ❖ Even taping and packaging materials are designed to endure a long-term storage, they should be stored with a temperature of $-10\sim 40^{\circ}\text{C}$ and an RH of $0\sim 70\%$ otherwise, too high temperatures or humidity may deteriorate the quality of the chip rapidly.
- ❖ Packaging material may be deformed if packages are stored where they are exposed to heat of direct sunlight.
- ❖ As oxidization is accelerated when relative humidity is above 70%RH, the lower the humidity is, the better the solder ability is.
- ❖ As the temperature difference may cause dew condensation during the storage of the chip, it is a must to maintain a temperature control environment.

(2) Shelf Life

- ❖ An allowable storage period should be within 12 months from the outgoing date of delivery in consideration of solder ability.
- ❖ As for chips in storage over 12 months, please check solder ability before use.

(3) Caution for corrosive environment

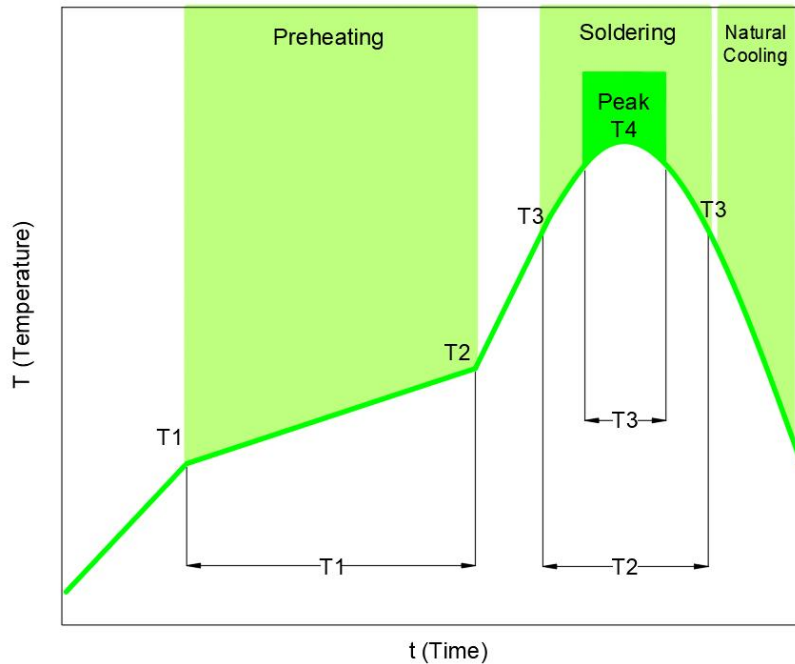
As corrosive gases may deteriorate the solder ability of chip outer termination, it is a must to store chip in an environment without gases. chip that is exposed to corrosive gases may cause its quality issues due to the corrosion of plating layers and the penetration of moisture.

■ Process of Mounting and Soldering

(1) Reflow soldering

The reflow soldering temperature conditions are composed of temperature curves of Preheating, Temp. rise, Heating, Peak and Gradual cooling. Large temperature difference inside the chip caused by rapid heat application to the chip may lead to excessive thermal stresses, contributing to the thermal cracks. The Preheating temperature requires controlling with great care so that tombstone phenomenon may be prevented.

Follow the recommended soldering conditions to avoid degradation of performance .



Item	Specification
Preheating temperature	150 ~ 200 °C
Solder melting temperature	260 °C
Maximum temperature	260 °C max.
Preheating time	60-120sec.
Time to reach higher than the solder melting temperature	20-40sec.
number of possible reflow cycles	2 max.

※ Pre-heating is necessary for all constituents including the PCB to prevent the mechanical damages on the chip . The temperature difference between the PCB and the component surface must be kept to the minimum.

a. Average Ramp-Up Rate: 3°C/second max

- b. Ramp-Down Rate: 6°C/second max
- c. Use non-activated flux. (Max. Cl content less than 0.1%)
- d. Devices cannot be wave soldered.

(2) Cleaning

- ❖ In general, cleaning is unnecessary if rosin flux is used.

When acidic flux is used strongly, chlorine in the flux may dissolve into some types of cleaning fluids, thereby affecting the performance of the chip.

This means that the cleansing solution must be carefully selected and should always be new.

- ❖ Cautions for cleaning

The chip or solder joint may be cracked with the vibration of PCB, if ultrasonic vibration is too strong during cleaning. Therefore, test should be done for the cleaning equipment and its process before the cleaning in order to avoid damages on the chip, you can refer to the following conditions for cleaning.

Ultrasound output	Ultrasound frequency	Cleaning time
20W/liter or less	40kHz or less	5minutes or less

 Limitation

Please contact us with usage environment information such as voltage, current, temperature, or other special conditions before using our products for the applications listed below. The products are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or quality require especially high reliability, or whose failure, malfunction or trouble might directly cause damage to society, person, or property. Please understand that we are not responsible for any damage or liability caused by use of the products in any of the applications below.

If you have any questions regarding this 'Limitation', you should first contact our sales personnel or application engineers.

- ❖ Aerospace/Aviation equipment1wheeler, 2wheeler and 3wheeler vehicle
- ❖ Automotive of Transportation equipment
- ❖ Military equipment
- ❖ Atomic energy-related equipment
- ❖ Undersea equipment
- ❖ Medical equipment
- ❖ Disaster prevention/crime prevention equipment
- ❖ Power plant control equipment
- ❖ Traffic signal equipment
- ❖ Data-processing equipment
- ❖ Electric heating apparatus, burning equipment
- ❖ Safety equipment
- ❖ Any other applications with the same as or similar complexity or reliability to the applications