

Performance Specification

Model	Marking	V _{max} (V dc)	I _{max} (A)	I _{hold} @25°C (A)	I _{trip} @25°C (A)	P _d Typ. (W)	Maximum Time To Trip		Resistance	
							Current (A)	Time (Sec)	R _{i min} (Ω)	R _{1max} (Ω)
K0603L001/60YR	X	60	20	0.01	0.03	0.5	0.2	1.00	15.000	100.000
K0603L002/60YR	Y	60	20	0.02	0.06	0.5	0.2	1.00	12.000	70.000
K0603L002YR	Y	9	20	0.02	0.06	0.5	0.2	1.00	12.000	70.000
K0603L002/30YR	Y	30	20	0.02	0.06	0.5	0.2	1.00	12.000	70.000
K0603L003/30YR	Z	30	20	0.03	0.09	0.5	0.2	1.00	6.000	50.000
K0603L003YR	Z	9	20	0.03	0.09	0.5	0.2	1.00	6.000	50.000
K0603L004/24YR	-	24.0	20	0.04	0.12	0.5	0.20	1.00	4.000	40.000
K0603L004/30YR	-	30.0	20	0.04	0.12	0.5	0.20	1.00	4.000	40.000
K0603L005/15YR	-	15.0	20	0.05	0.15	0.5	0.25	1.00	3.800	30.000
K0603L005YR	-	9.0	20	0.05	0.15	0.5	0.25	1.00	3.800	30.000
K0603L005/24YR	-	24.0	20	0.05	0.15	0.5	0.25	1.00	3.800	30.000
K0603L005/33YR	-	33.0	20	0.05	0.15	0.5	0.25	1.00	3.800	30.000
K0603L010/15YR	1	15.0	35	0.10	0.30	0.5	0.5	1.00	0.900	6.000
K0603L010YR	1	9.0	35	0.10	0.30	0.5	0.5	1.00	0.900	6.000
K0603L010/24YR	1	24.0	35	0.10	0.30	0.5	0.5	1.00	0.900	6.000
K0603L020YR	2	9.0	35	0.20	0.50	0.5	1.0	0.60	0.550	3.500
K0603L020/16YR	2	16.0	35	0.20	0.50	0.5	1.0	0.60	0.550	3.500
K0603L025YR	2	9.0	35	0.25	0.55	0.5	8.0	0.08	0.500	3.000
K0603L025/16YR	2	16.0	35	0.25	0.55	0.5	8.0	0.08	0.500	3.000
K0603L035YR	3	6.0	35	0.35	0.75	0.5	8.0	0.10	0.200	1.000
K0603L035/12YR	3	12.0	35	0.35	0.75	0.5	8.0	0.10	0.200	1.000
K0603L040YR	5	6.0	35	0.40	0.80	0.5	8.0	0.10	0.150	0.900
K0603L050YR	5	6.0	35	0.50	1.00	0.5	8.0	0.10	0.100	0.800
K0603L050/12YR	5	12.0	35	0.50	1.00	0.5	8.0	0.10	0.100	0.800
K0603L060YR	7	6.0	35	0.60	1.20	0.5	8.0	0.10	0.080	0.600
K0603L065YR	7	6.0	35	0.65	1.30	0.5	8.0	0.10	0.070	0.550
K0603L075YR	7	6.0	35	0.75	1.40	0.5	8.0	0.10	0.060	0.450
K0603L075/12YR	7	12.0	35	0.75	1.40	0.5	8.0	0.10	0.060	0.450
K0603L100YR	0	6.0	35	1.00	2.00	0.5	8.0	0.10	0.050	0.300

V_{max} = Maximum operating voltage device can withstand without damage at rated current (I_{max}).

I_{max} = Maximum fault current device can withstand without damage at rated voltage (V_{max}).

I_{hold} = Hold Current. Maximum current device will not trip in 25°C still air.

I_{trip} = Trip Current. Minimum current at which the device will always trip in 25°C still air.

P_d = Power dissipation when device is in the tripped state in 25°C still air environment at rated voltage.

R_{i min/max} = Minimum/Maximum device resistance prior to tripping at 25°C.

R_{1max} = Maximum device resistance is measured one hour post reflow.

CAUTION : Operation beyond the specified ratings may result in damage and possible arcing and flame.

Environmental Specifications

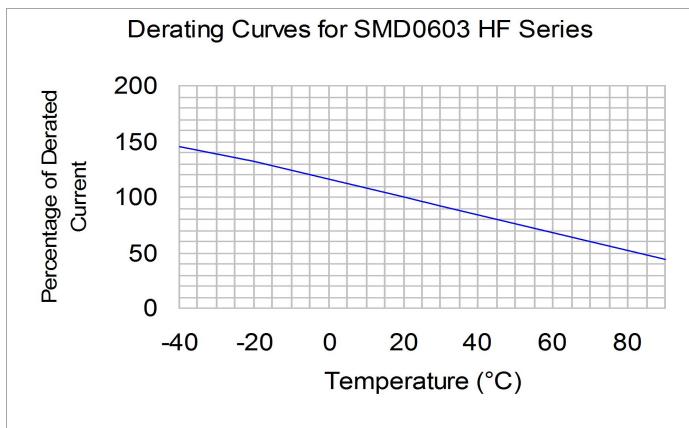
Test	條件	符合條件
Passive aging	+85°C, 1000 hrs.	I HOLD/I TRIP PASS
Humidity aging	+85°C, 85% R.H. , 168 hours	I HOLD/I TRIP PASS
Thermal shock	+85°C to -40°C, 20 times	I HOLD/I TRIP PASS
Resistance to solvent	MIL-STD-202,Method 215	电阻不變化
Vibration	MIL-STD-202,Method 201	电阻不變化
操作條件環境: - 40 ° C~+85° C		
在跳閘狀態下產品的表面最高溫度為125° C		

Thermal Derating Chart

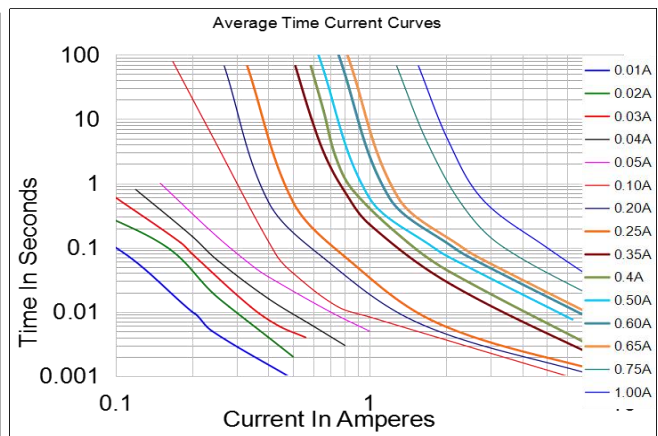
Recommended Hold Current(A) at Ambient Temperature(°C)

Model	Ambient Operation Temperature								
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
K0603L001/60YR	0.016	0.014	0.012	0.010	0.008	0.007	0.006	0.005	0.0035
K0603L002/60YR	0.031	0.027	0.024	0.020	0.016	0.014	0.012	0.011	0.007
K0603L003/30YR	0.047	0.041	0.036	0.030	0.024	0.021	0.018	0.016	0.0108
K0603L004/24YR	0.052	0.048	0.044	0.040	0.032	0.028	0.024	0.020	0.012
K0603L005/24YR	0.065	0.060	0.055	0.050	0.040	0.035	0.031	0.025	0.015
K0603L010/15YR	0.13	0.12	0.11	0.10	0.08	0.07	0.06	0.05	0.03
K0603L020/16YR	0.27	0.25	0.23	0.20	0.17	0.14	0.12	0.10	0.07
K0603L025/16YR	0.32	0.29	0.27	0.25	0.21	0.18	0.16	0.14	0.10
K0603L035/12YR	0.47	0.41	0.38	0.35	0.29	0.26	0.24	0.20	0.14
K0603L040YR	0.54	0.47	0.43	0.40	0.33	0.29	0.27	0.22	0.16
K0603L050/12YR	0.67	0.59	0.54	0.50	0.41	0.37	0.34	0.29	0.20
K0603L060YR	0.81	0.70	0.65	0.60	0.49	0.44	0.41	0.34	0.24
K0603L065YR	0.87	0.76	0.71	0.65	0.54	0.48	0.44	0.37	0.26
K0603L075/12YR	0.98	0.85	0.81	0.75	0.60	0.54	0.44	0.40	0.31
K0603L100YR	1.19	1.13	1.08	1.00	0.80	0.72	0.59	0.54	0.43

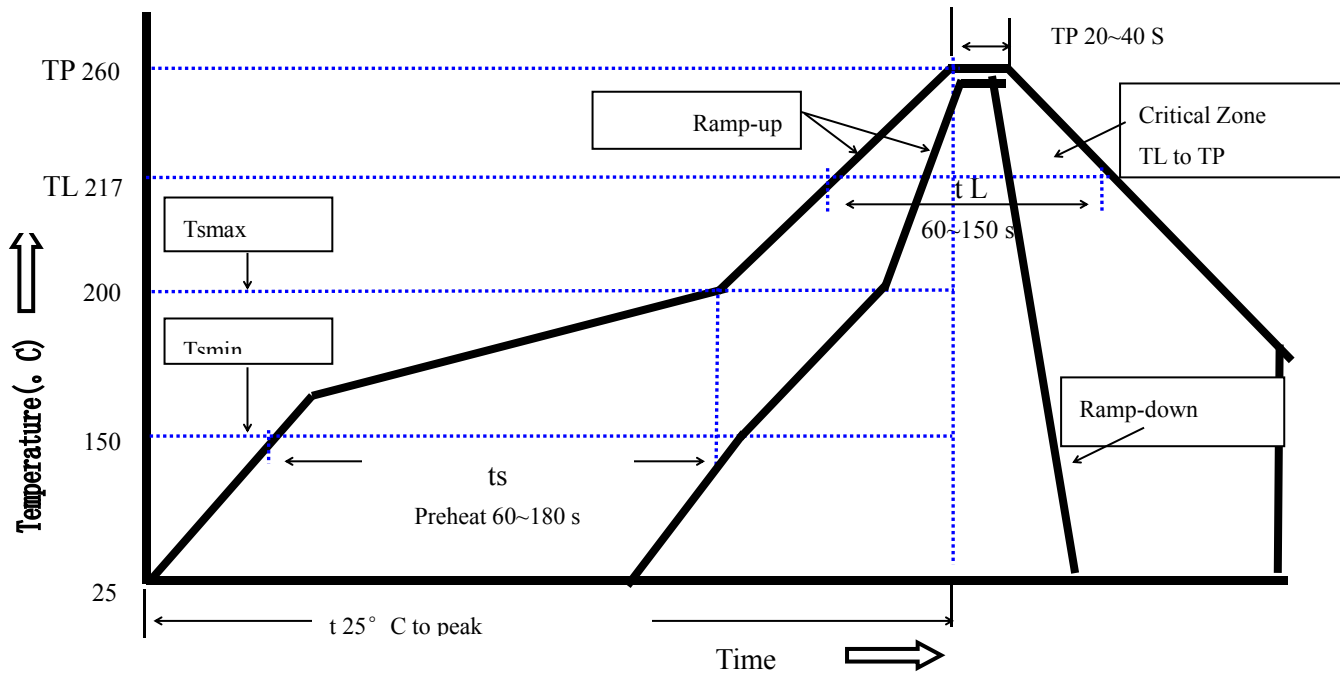
Thermal Derating Curve



Average Time-Current Curve



Soldering Parameters



Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate(Ts max to T p)	3°C/second max.
Preheat	
-Temperature Min(Ts min)	150°C
-Temperature Max(Ts max)	200°C
-Time(Ts min to Ts max)	60~180 seconds
Time maintained above:	
-Temperature(TL)	217°C
-Time(tL)	60~150 seconds
Peak Temperature(Tp)	260°C
Ramp-Down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max
Storage Condition	0°C~30°C,30%-60%RH

Recommended reflow methods: IR, vapor phase oven, hot air oven, N2 environment for lead-free

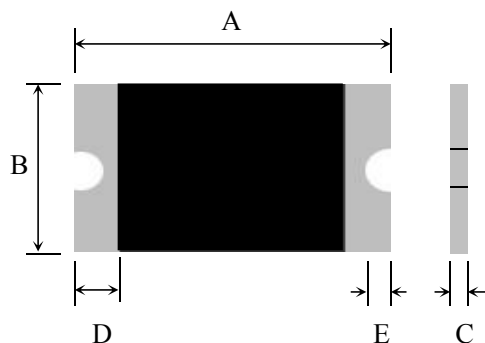
Recommended maximum paste thickness is 0.25mm

Devices can be cleaned using standard industry methods and solvents.

Note 1: All temperature refer to topside of the package, measured on the package body surface.

Note 2: If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements

Physical Dimensions(mm.)



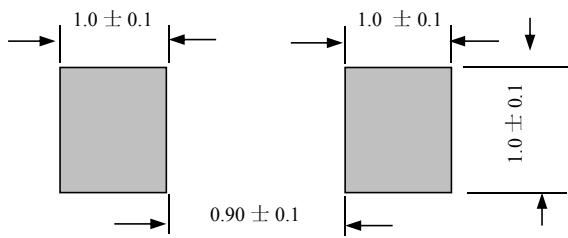
型號	A		B		C		D	E
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Min.
K0603L001/60YR	1.45	1.85	0.65	1.05	0.40	1.00	0.15	0.10
K0603L002/60YR	1.45	1.85	0.65	1.05	0.40	1.00	0.15	0.10
K0603L002YR	1.45	1.85	0.65	1.05	0.40	1.00	0.15	0.10
K0603L002/30YR	1.45	1.85	0.65	1.05	0.40	1.00	0.15	0.10
K0603L003/30YR	1.45	1.85	0.65	1.05	0.40	1.00	0.15	0.10
K0603L003YR	1.45	1.85	0.65	1.05	0.40	1.00	0.15	0.10
K0603L004/24YR	1.45	1.85	0.65	1.05	0.40	1.00	0.15	0.10
K0603L004/30YR	1.45	1.85	0.65	1.05	0.40	1.00	0.15	0.10
K0603L005/15YR	1.45	1.85	0.65	1.05	0.40	1.00	0.15	0.10
K0603L005YR	1.45	1.85	0.65	1.05	0.40	1.00	0.15	0.10
K0603L005/24YR	1.45	1.85	0.65	1.05	0.40	1.00	0.15	0.10
K0603L005/33YR	1.45	1.85	0.65	1.05	0.40	1.00	0.15	0.10
K0603L010/15YR	1.45	1.85	0.65	1.05	0.40	1.00	0.15	0.10
K0603L010YR	1.45	1.85	0.65	1.05	0.40	1.00	0.15	0.10
K0603L010/24YR	1.45	1.85	0.65	1.05	0.40	1.00	0.15	0.10
K0603L020YR	1.45	1.85	0.65	1.05	0.40	1.00	0.15	0.10
K0603L020/16YR	1.45	1.85	0.65	1.05	0.40	1.00	0.15	0.10
K0603L025YR	1.45	1.85	0.65	1.05	0.40	1.00	0.15	0.10
K0603L025/16YR	1.45	1.85	0.65	1.05	0.40	1.00	0.15	0.10
K0603L035YR	1.45	1.85	0.65	1.05	0.35	0.90	0.15	0.10
K0603L035/12YR	1.45	1.85	0.65	1.05	0.35	0.90	0.15	0.10
K0603L040YR	1.45	1.85	0.65	1.05	0.40	0.90	0.15	0.10
K0603L050YR	1.45	1.85	0.65	1.05	0.55	1.15	0.15	0.10
K0603L050/12YR	1.45	1.85	0.65	1.05	0.55	1.15	0.15	0.10
K0603L060YR	1.45	1.85	0.65	1.05	0.55	1.15	0.15	0.10
K0603L065YR	1.45	1.85	0.65	1.05	0.55	1.15	0.15	0.10
K0603L075YR	1.45	1.85	0.65	1.05	0.55	1.15	0.15	0.10
K0603L075/12YR	1.45	1.85	0.65	1.05	0.55	1.15	0.15	0.10
K0603L100YR	1.45	1.85	0.65	1.05	0.55	1.15	0.15	0.10

Termination Pad Characteristics

Terminal pad materials: Tin-plated Nickel-Copper

Terminal pad solder ability: Meets EIA specification RS186-9E and ANSI/J-STD-002 Category 3.

Recommended Pad Layout (mm.)



注：在此印锡面积条件下，推荐钢网厚度为 $\geq 0.12\text{MM}$ (钢网厚度不够要增大刷锡面积)

Packaging Quantity

Part Number	Quantity
K0603L Series	4,000 pcs/reel

Tape & reel packaging per EIA481-1