

FEATURES

- | I(hold): 0.05~5.0A
- | RoHS compliant, Lead-Free
- | Fast time-to-trip
- | Bulk packaging, or tape and reel available
- | Low resistance
- | Radial leaded device



APPLICATIONS

- | PC motherboard - plug and
- | play protection
- | Industrial controls
- | Automotive electronics
- | Medical products

ENVIRONMENTAL SPECIFICATIONS

Test	Conditions	Resistance change
Passive aging	+85°C, 1000 hrs	±8% typical
Humidity aging	+85°C, 85%R.H., 168 hours	±8% typical
Thermal shock	+125°C to -55°C, 10 times	±12% typical
Resistance to solvent	MIL-STD-202, Method 215	No change
Vibration	MIL-STD-202, Method 201	No change
Ambient operating conditions : - 40°C to +85°C Maximum surface temperature of the device in the tripped state is 125 °C		

PERFORMANCE SPECIFICATION

Type Number	I_{hold}	I_{trip}	V_{max}	I_{max}	$P_{d typ}$	Max. Time to Trip		Ri_{min}	Ri_{max}
	A	A	V_{DC}	A	W	Current A	Tmax S	Ω	Ω
SK60-005	0.05	0.10	60	40	0.26	0.25	5	7.30	20.00
SK60-010	0.10	0.20	60	40	0.38	0.50	5	2.50	7.50
SK60-017	0.17	0.34	60	40	0.48	0.85	5	2.00	5.21
SK60-020	0.20	0.40	60	40	0.41	1.00	5	1.50	2.84
SK60-025	0.25	0.50	60	40	0.45	1.25	5	1.00	1.95
SK60-030	0.30	0.60	60	40	0.49	1.50	5	0.76	1.38
SK60-040	0.40	0.80	60	40	0.56	2.00	5	0.45	0.88
SK60-050	0.50	1.00	60	40	0.77	2.50	5	0.40	0.79
SK60-065	0.65	1.30	60	40	0.88	3.25	5	0.31	0.50
SK60-075	0.75	1.50	60	40	0.92	3.75	5	0.25	0.42
SK60-090	0.90	1.80	60	40	0.99	4.50	5	0.20	0.33
SK60-110	1.10	2.20	60	40	1.50	5.50	8	0.15	0.27
SK60-135	1.35	2.70	60	40	1.70	6.75	8	0.12	0.21
SK60-160	1.60	3.20	60	40	1.90	8.00	8	0.09	0.16
SK60-185	1.85	3.70	60	40	2.10	9.25	8	0.08	0.14
SK60-200	2.00	4.00	60	40	2.30	10.00	8	0.07	0.14
SK60-250	2.50	5.00	60	40	2.50	12.50	8	0.05	0.10
SK60-300	3.00	6.00	60	40	2.80	15.00	8	0.04	0.08
SK60-375	3.75	7.50	60	40	3.20	18.75	24	0.03	0.06
SK60-500	5.00	10.00	60	40	3.50	25.00	24	0.02	0.06

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.

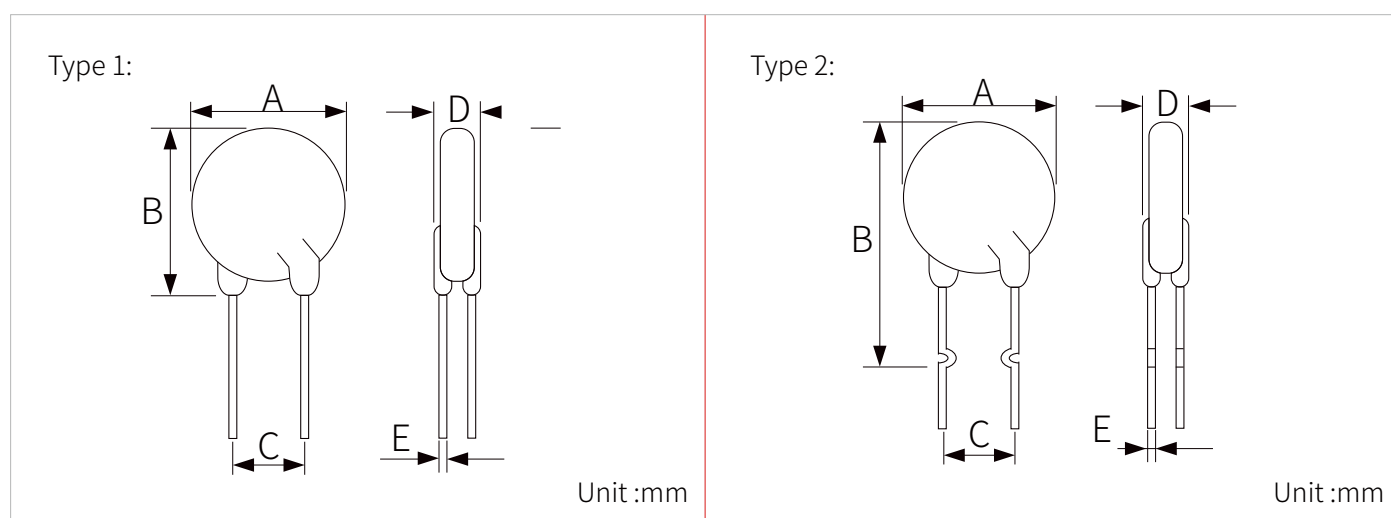
$Ri_{min/max}$ = Minimum/Maximum device resistance prior to tripping at 25°C.

$R1_{max}$ = Maximum device resistance is measured one hour post reflow.

THERMAL DERATING CHART-IH(A)

Part Number	Ambient Operation Temperature								
	-40 °C	-20 °C	0 °C	25 °C	40 °C	50 °C	60 °C	70 °C	85 °C
SK60-005	0.077	0.068	0.060	0.050	0.041	0.036	0.032	0.027	0.020
SK60-010	0.180	0.136	0.119	0.100	0.081	0.072	0.063	0.054	0.040
SK60-017	0.280	0.231	0.202	0.170	0.138	0.122	0.107	0.092	0.068
SK60-020	0.340	0.272	0.238	0.200	0.162	0.144	0.126	0.108	0.080
SK60-025	0.420	0.340	0.298	0.250	0.203	0.180	0.158	0.135	0.100
SK60-030	0.520	0.408	0.357	0.300	0.243	0.216	0.189	0.162	0.120
SK60-040	0.660	0.544	0.476	0.400	0.324	0.288	0.252	0.216	0.160
SK60-050	0.830	0.680	0.595	0.500	0.405	0.360	0.315	0.270	0.200
SK60-065	1.100	0.884	0.774	0.650	0.527	0.468	0.410	0.351	0.260
SK60-075	1.260	1.020	0.893	0.750	0.608	0.540	0.473	0.405	0.300
SK60-090	1.520	1.224	1.071	0.900	0.729	0.648	0.567	0.486	0.360
SK60-110	1.820	1.496	1.309	1.100	0.891	0.792	0.693	0.594	0.440
SK60-135	2.200	1.836	1.607	1.350	1.094	0.972	0.851	0.729	0.540
SK60-160	2.600	2.176	1.904	1.600	1.296	1.152	1.008	0.864	0.640
SK60-185	3.000	2.516	2.202	1.850	1.499	1.332	1.166	0.999	0.740
SK60-200	3.210	2.720	2.380	2.000	1.620	1.440	1.260	1.080	0.800
SK60-250	4.050	3.400	2.975	2.500	2.025	1.800	1.575	1.350	1.000
SK60-300	4.820	4.080	3.570	3.000	2.430	2.160	1.890	1.620	1.200
SK60-375	6.020	5.100	4.463	3.750	3.038	2.700	2.363	2.025	1.500
SK60-500	8.000	6.800	5.950	5.000	4.050	3.600	3.150	2.700	2.000

DIMENSIONS



Part Number	A(max)	B(max)	C(max)	D(typ)	E	TYPE
SK60-005	5.0	8.5	5.1	3	Φ0.5	TYPE 2
SK60-010	5.5	9.5	5.1	3	Φ0.5	TYPE 2
SK60-017	7.4	12.7	5.1	3	Φ0.5	TYPE 2
SK60-020	7.4	12.7	5.1	3	Φ0.5	TYPE 2
SK60-025	7.4	12.7	5.1	3	Φ0.5	TYPE 2
SK60-030	7.4	13.0	5.1	3	Φ0.5	TYPE 2
SK60-040	7.8	16.2	5.1	3	Φ0.5	TYPE 2
SK60-050	7.8	16.2	5.1	3	Φ0.5	TYPE 2
SK60-065	9.7	17.8	5.1	3	Φ0.6	TYPE 2
SK60-075	10.4	18.4	5.1	3	Φ0.6	TYPE 2
SK60-090	11.7	18.4	5.1	3	Φ0.6	TYPE 2
SK60-110	13.0	18.0	5.1	3	Φ0.8	TYPE 1
SK60-135	14.5	19.6	5.1	3	Φ0.8	TYPE 1
SK60-160	16.3	21.3	5.1	3	Φ0.8	TYPE 1
SK60-185	17.8	22.9	5.1	3	Φ0.8	TYPE 1
SK60-200	17.8	22.9	5.1	3	Φ0.8	TYPE 1
SK60-250	21.3	26.4	10.2	3	Φ0.8	TYPE 1
SK60-300	21.3	26.4	10.2	3	Φ0.8	TYPE 1
SK60-375	28.5	33.5	10.2	3	Φ0.8	TYPE 1
SK60-500	28.5	33.5	10.2	3	Φ0.8	TYPE 1

ENVIRONMENTAL SPECIFICATIONS

Items	Test Conditions	Accept/Reject Criteria
Resistance	In still air@25°C	$R_{min} \leq R \leq R_{max}$
Time to Trip	Specified current, V_{max} , 25°C	$T \leq \text{max. Time to trip}(T_{trip})$
Hold Current	60 min, at I_H	No trip
Trip Cycle Life	V_{max} , I_{max} , 100 cycles	No arcing or burning
Trip Endurance	V_{max} , 24 hours	No arcing or burning

PARAMETER CHARACTERISTIC CURVE

FIG.1: Thermal Derating Curve

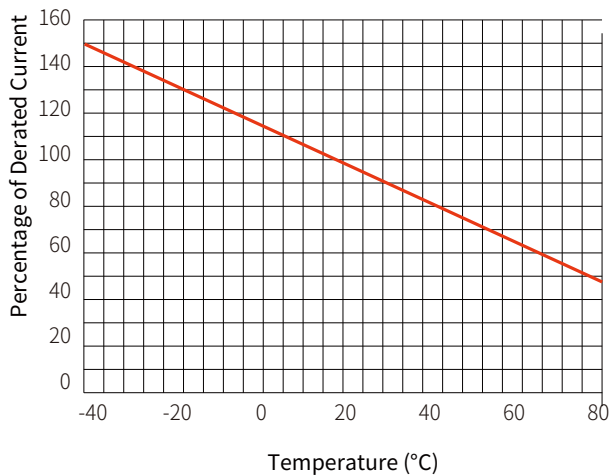
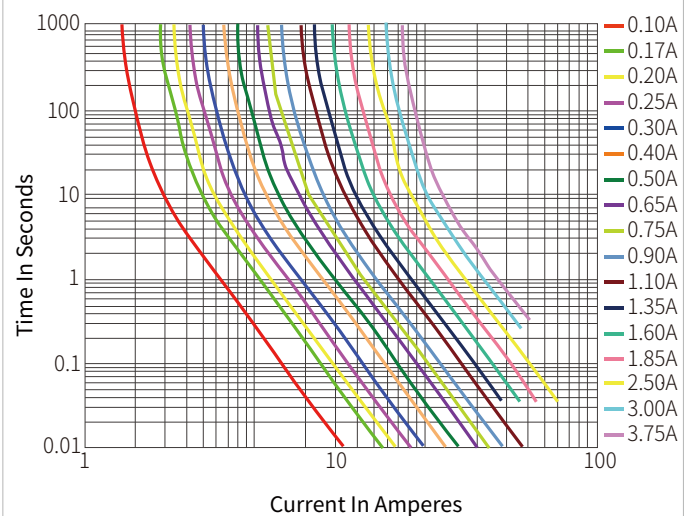
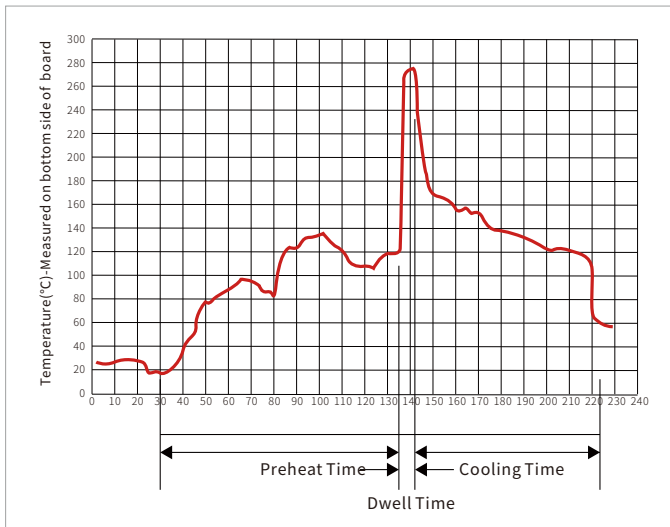


FIG.2: Average Time-Current Curve



WAVE SOLDERING



Wave Parameter		Lead-free assembly
Pre Heat	Temperature Min	100°C
	Temperature Max	150°C
	Time(min to max)	60 – 180 secs
Solder pot Temperature		280°C Max
Solder Dwell Time		2-5 seconds

ORDERING INFORMATION

Part Number	Base Quantity	Packing Option
SK60-005~SK60-110	1000pcs	Bulk
SK60-135~SK60-200	500pcs	Bulk
SK60-250~SK60-500	200pcs	Bulk

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