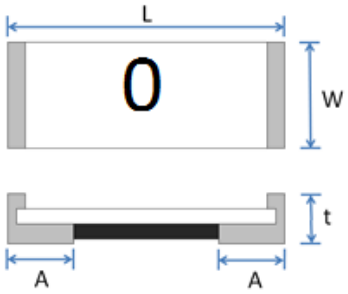
Features:
- Chip size from 0402 to 2512
- Max. resistance value less than 3 milliohm for 0402, less than 0.5 milliohm for all other sizes
- RoHS compliant – lead free

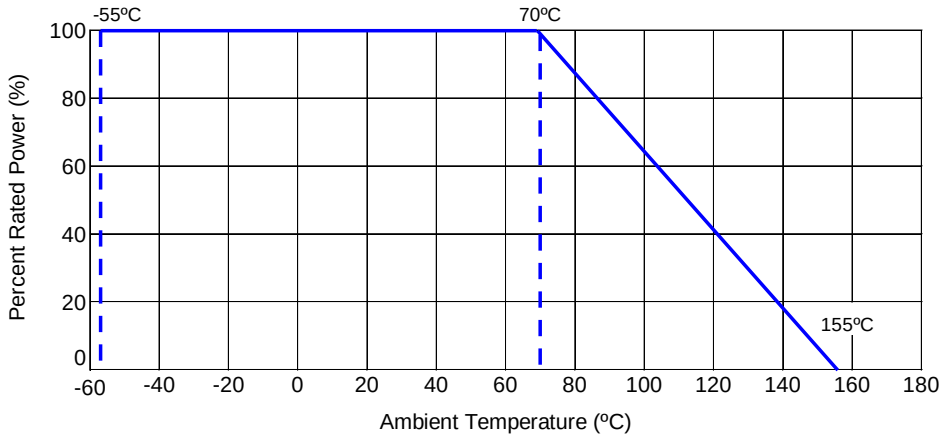
Applications:
- Switching power supply
- Voltage regulation module
- DC-DC converter, adaptor, battery pack, charger
- PDA and cell phone
- Power management applications

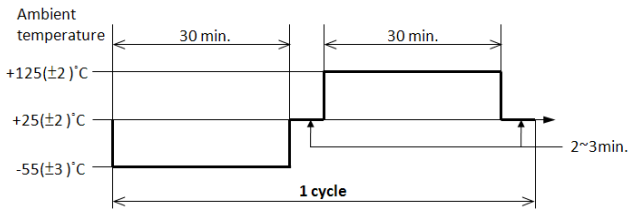
Electrical Specifications			
Type / Code	Current Rating (A)	Operating Temperature Range	Ohmic Range (Ω)
0402	6.5	-55ºC to +155°C	< 0.003
0603	22.4		< 0.0005
0805	31.6		
1206	38.7		
2512	63.2		



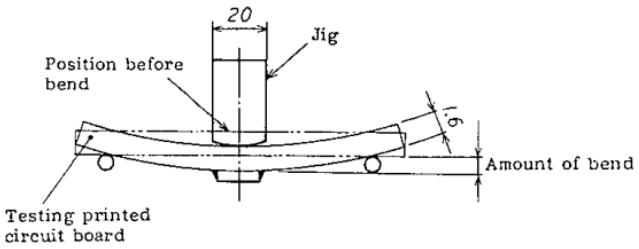
Mechanical Specifications					
Type / Code	L	W	t	A	Unit
0402	0.039 ± 0.004 1.00 ± 0.10	0.020 ± 0.002 0.50 ± 0.05	0.013 ± 0.002 0.33 ± 0.05	0.010 ± 0.004 0.25 ± 0.10	inches mm
0603	0.061 ± 0.004 1.55 ± 0.10	0.031 ± 0.004 0.80 ± 0.10	0.017 ± 0.004 0.43 ± 0.10	0.014 ± 0.008 0.35 ± 0.20	inches mm
0805	0.079 ± 0.006 2.00 ± 0.15	0.049 ± 0.006 1.25 ± 0.15	0.022 ± 0.004 0.55 ± 0.10	0.014 ± 0.008 0.35 ± 0.20	inches mm
1206	0.122 ± 0.008 3.10 ± 0.20	0.061 ± 0.004 1.55 ± 0.10	0.022 ± 0.004 0.55 ± 0.10	0.016 ± 0.008 0.40 ± 0.20	inches mm
2512	0.248 ± 0.008 6.30 ± 0.20	0.126 ± 0.008 3.20 ± 0.20	0.022 ± 0.004 0.55 ± 0.10	0.020 ± 0.010 0.50 ± 0.25	inches mm

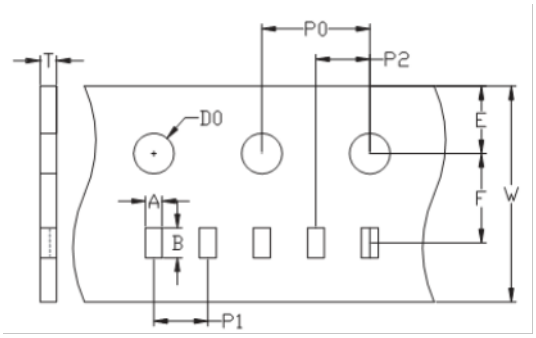
Power Derating Curve:



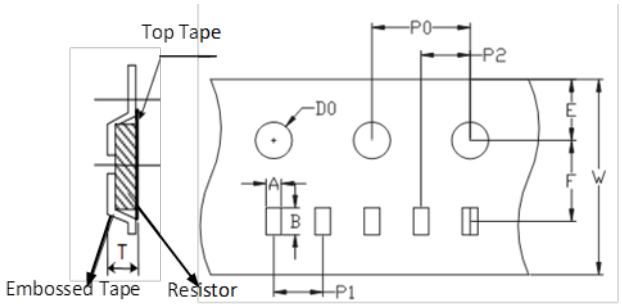
Environmental Performance Characteristics		
Item	Test Condition	Specification
Short Time Overload	2.5X rated current for 5 seconds (JIS-C5202-5.5)	For 0402 size max. 0.003Ω All other sizes max. 0.0005Ω
Damp Heat with Load	Specimens shall be placed in a chamber and subject to a relative humidity of 90~95% and to a temperature of 40ºC ± 2ºC for the period of 1000 hours (MIL-STD_202, Method 103)	
High Temperature Exposure	Part (mounted on board) is exposed in the heat chamber 125ºC ± 3ºC for 1000 hours (JIS_C5202-7.2)	
Load Life	Apply rated power at 70ºC ± 2ºC for 1000 hours with 1.5 hours ON and 0.5 hour OFF (JIS_C5202-7.10)	
Rapid Change of Temperature	Part (mounted on board) is exposed, -55ºC ± 3ºC (30 min.)/+155 ± 2ºC (30 minutes) for 5 cycles. The following conditions as per picture below. (JIS_C5202-7.4) 	

Note: Test board surface temperature shall not exceed 100ºC when applying rated current.
Storage Conditions: 5ºC ~ 35ºC. RH: 40%-75%

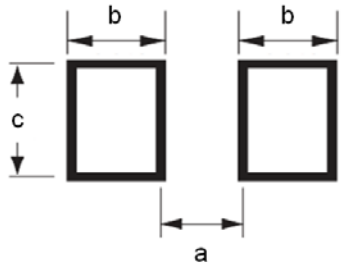
Function Performance Characteristics		
Item	Test Condition	Specification
Bending Strength	Mount part to test substrate. Apply pressure in direction of arrow unit band width reaches 0.5mm (+0.2/-0mm)(illustrated in the figure below) and hold for 10 seconds ± 1 second. (JIS_C5202-6.1) Unit: mm 	For 0402 size max. 0.003Ω All other sizes max. 0.0005Ω
Solvent Resistance	The part shall be completely immersed in the isopropyl alcohol for 3 minutes +0.5, -0 minutes, 25ºC ± 5ºC (MIL_STD_202, Method 215)	Verify that marking remains. (Not required for laser etched parts or parts with no marking)
Resistance to Solder Heat	The part shall be immersed into the flux specified in the solder bath 260 ºC ± 5 ºC for 10 seconds ± 1 second (MIL_STD_202, Method 210)	For 0402 size max. 0.003Ω All other sizes max. 0.0005Ω
Solderability	The part shall be immersed into the flux specified in the solder bath 235ºC ± 5ºC for 2 seconds ± 0.5 seconds. It shall be immersed to a point 10mm from its root. (Sn96.5/Ag3.0/Cu0.5) (JIS-C 5202 6.11)	Solder shall be covered 95% or more of the electrode area



Packaging Specifications – Paper Tape											
Type / Code	A	B	E	F	W	P0	P1	P2	D0	T	Unit
0402	0.028 ± 0.002 0.70 ± 0.05	0.047 ± 0.002 1.20 ± 0.05	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.002 3.50 ± 0.05	0.315 ± 0.008 8.00 ± 0.20	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.079 ± 0.002 2.00 ± 0.05	0.061 ± 0.002 1.55 ± 0.05	0.018 ± 0.004 0.45 ± 0.10	inches mm
0603	0.043 ± 0.004 1.10 ± 0.10	0.075 ± 0.004 1.90 ± 0.10	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.002 3.50 ± 0.05	0.315 ± 0.008 8.00 ± 0.20	0.157 ± 0.004 4.00 ± 0.10	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.002 2.00 ± 0.05	0.061 ± 0.002 1.55 ± 0.05	0.025 ± 0.004 0.64 ± 0.10	inches mm
0805	0.063 ± 0.004 1.60 ± 0.10	0.094 ± 0.004 2.40 ± 0.10	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.002 3.50 ± 0.05	0.315 ± 0.008 8.00 ± 0.20	0.157 ± 0.004 4.00 ± 0.10	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.002 2.00 ± 0.05	0.059 ± 0.002 1.50 ± 0.05	0.038 ± 0.004 0.97 ± 0.10	inches mm
1206	0.079 ± 0.004 2.00 ± 0.10	0.142 ± 0.004 3.60 ± 0.10	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.002 3.50 ± 0.05	0.315 ± 0.008 8.00 ± 0.20	0.157 ± 0.004 4.00 ± 0.10	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.002 2.00 ± 0.05	0.061 ± 0.002 1.55 ± 0.05	0.038 ± 0.004 0.97 ± 0.10	inches mm

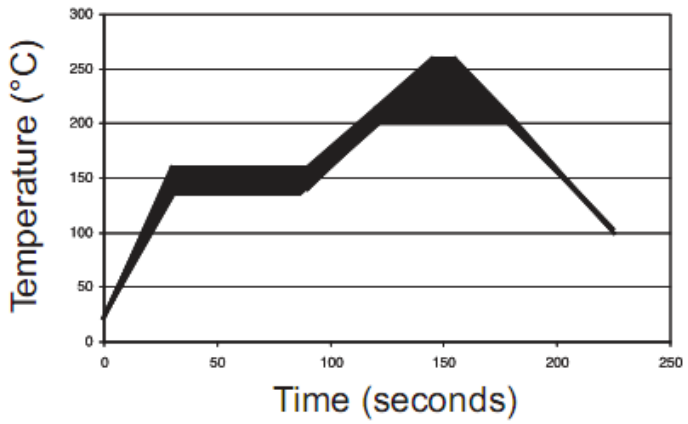


Packaging Specifications – Embossed Plastic Tape											
Type / Code	A	B	E	F	W	P0	P1	P2	D0	T	Unit
2512	0.138 ± 0.004 3.50 ± 0.10	0.268 ± 0.004 6.80 ± 0.10	0.069 ± 0.004 1.75 ± 0.10	0.217 ± 0.002 5.50 ± 0.05	0.472 ± 0.008 12.00 ± 0.20	0.157 ± 0.002 4.00 ± 0.05	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.002 2.00 ± 0.05	0.059 ± 0.004 1.50 ± 0.10	0.039 ± 0.008 1.00 ± 0.20	inches mm

Recommended Pad Layout					
Type / Code	a	b	c	Unit	
0402	0.024 0.60	0.020 0.50	0.024 0.60	inches mm	
0603	0.035 0.90	0.028 0.70	0.039 1.00	inches mm	
0805	0.047 1.20	0.047 1.20	0.055 1.40	inches mm	
1206	0.087 2.20	0.051 1.30	0.071 1.80	inches mm	
2512	0.150 3.80	0.083 2.10	0.134 3.40	inches mm	

Soldering Recommendations:

- Peak reflow temperatures and durations
  - ✓ IR Reflow Peak = 260ºC max for 10 seconds
  - ✓ Wave Solder = 260ºC max for 10 seconds
- Compatible with lead and lead-free solder reflow processes
- Recommended IR reflow profile:



How to Order

1	2	3	4	5	6	7	8	9	10	11	12	13
H	**C**	**J**	**0**	**6**	**0**	**3**	**Z**	**T**	**0**	**R**	**0**	**0**

Product Series
HCJ

Size	Rating Current
0402	6.5A
0603	22.4A
0805	31.6A
1206	38.7A
2512	63.2A

Tolerance			
Code	Tol	Size	Value (Ω)
Z	Zero Ohm	0402	<0.003
		0603	<0.0005
		0805	
		1206	
		2512	

Packaging			
Code	Description	Size	Quantity
T	Paper Tape	0402	10,000
		0603, 0805, 1206	5,000
	Embossed Plastic	2512	4,000

Resistance Value
Four characters with the multiplier used as the decimal holder.
0 ohm = 0R00