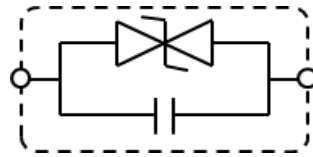


Multilayer Chip Varistor : AVR1608C390KT271N

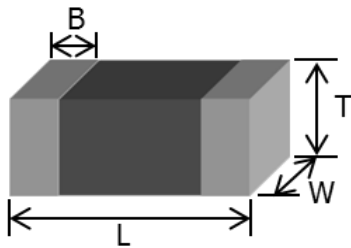
Features

- Automotive (AEC-Q200) grade
- Size : EIA0603 (1.6x0.8mm)
- Excellent ESD clamp characteristics
- High ESD durability : IEC61000-4-2, Contact 25kV
- Operating temperature range : -55°C ~ 150°C

Equivalent Circuit

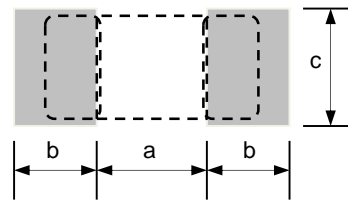


Shapes & Dimensions



Unit / mm				
EIA	L	W	T	B
0603	1.6±0.1	0.8±0.1	0.8±0.1	0.2 Min.

Recommended PCB Pattern



Unit / mm			
EIA	a	b	c
0603	0.6 to 0.8	0.6 to 0.8	0.6 to 0.8

Product Identification

AVRM 1608 C 390 K T 271 N
(1) (2) (3) (4) (5) (6) (7) (8)

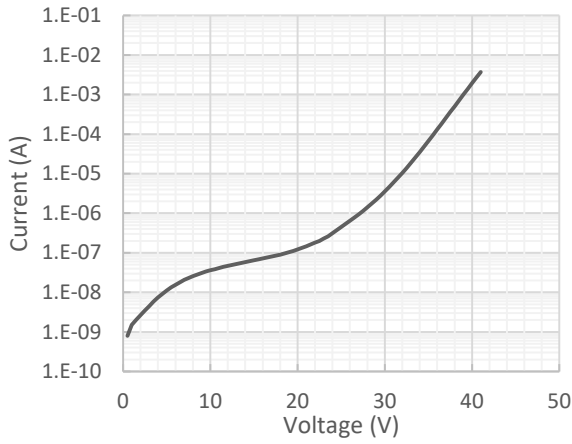
(1)	Series name / AVR1608
(2)	Dimension / 1608:1.6x0.8(mm)
(3)	Structure
(4)	Varistor voltage / 390:39x10 ⁰ (V)
(5)	Varistor voltage tolerance / K : ±10(%)
(6)	Packaging scheme / T : Taping
(7)	Capacitance / 271:27x10 ¹ (pF)
(8)	Capacitance tolerance / N : ±30(%)

Electrical Characteristics

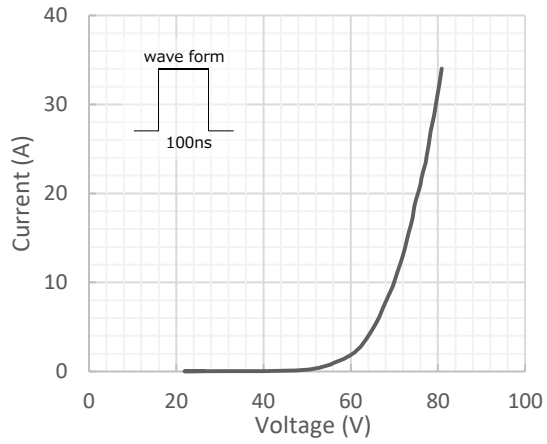
TDK Product Name	Varistor voltage (Breakdown voltage)	Rated voltage	Clamping voltage		Energy	Power Peak Pulse	Peak current	Capacitance
	V1mA	DC	8/20μs		10/1000μs	10/1000μs	8/20μs	1kHz, 1Vrms
	(V)	Max.	Typ.	Typ.	Max.	Typ.	Max.	Typ.
	(V)	Vdc	Vcl	Icl	E	Ppp	Ip	C
	(V)	(V)	(V)	(A)	(Joule)	(W)	(A)	(pF)
AVRM1608C390KT271N	39(35~43)	28	69	2	0.1	200.3	78	270(189~351)

Multilayer Chip Varistor : AVR1608C390KT271N

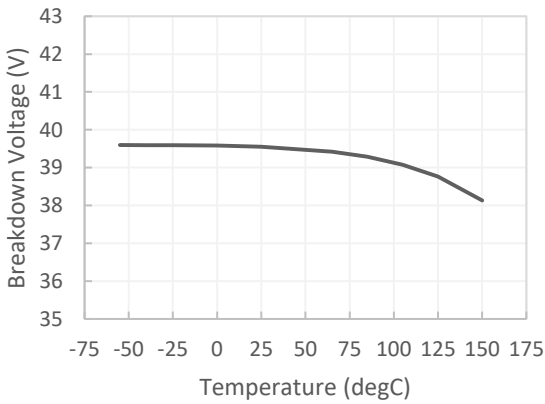
Current - Voltage



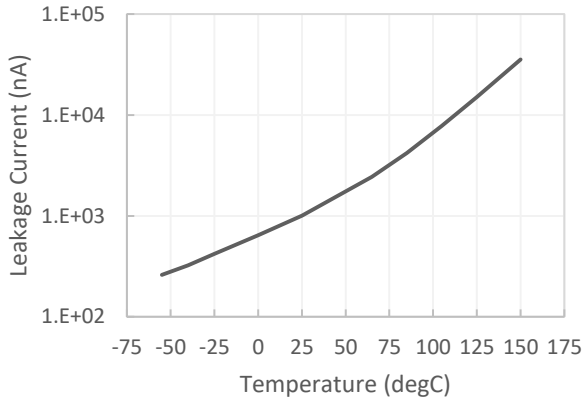
Current - Voltage (TLP)



Breakdown Voltage - Temp.



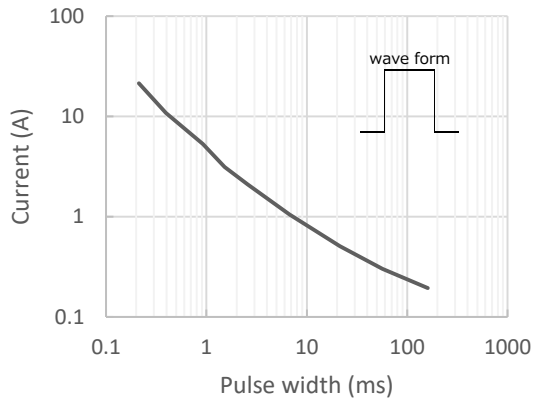
Leakage current - Temp.



※ Voltage : 28 V

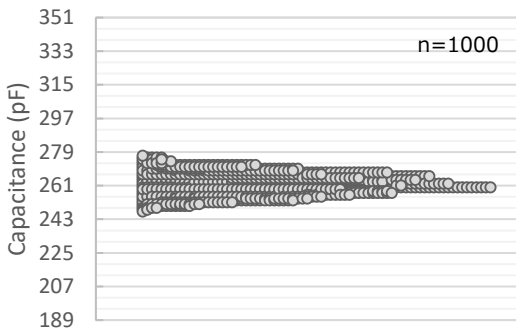
Durability of Pulse Current

(Typ. values)

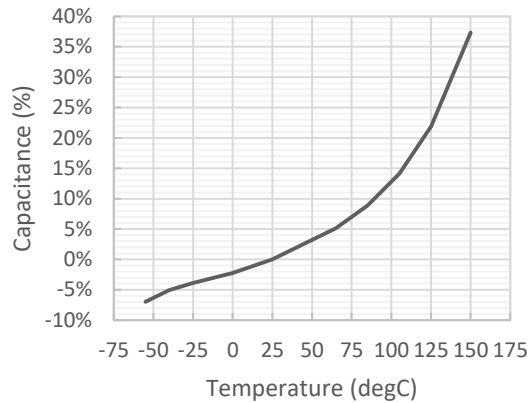


Multilayer Chip Varistor : AVR1608C390KT271N

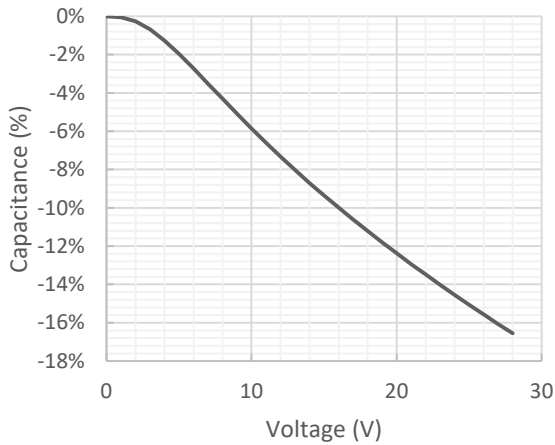
Capacitance Dispersion ※1kHz, 1Vrms



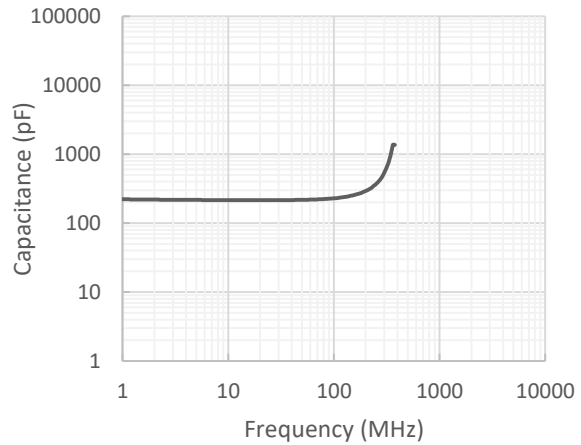
Capacitance - Temp. ※1kHz, 1Vrms



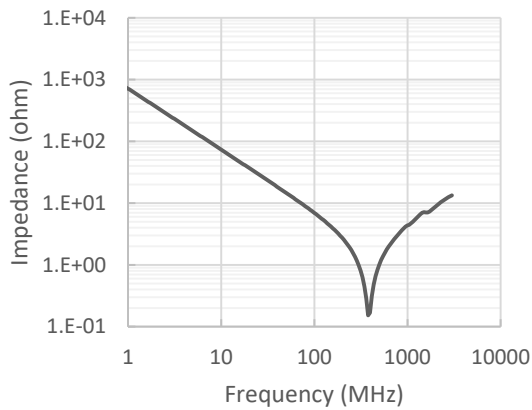
DC bias ※1MHz, 1Vrms



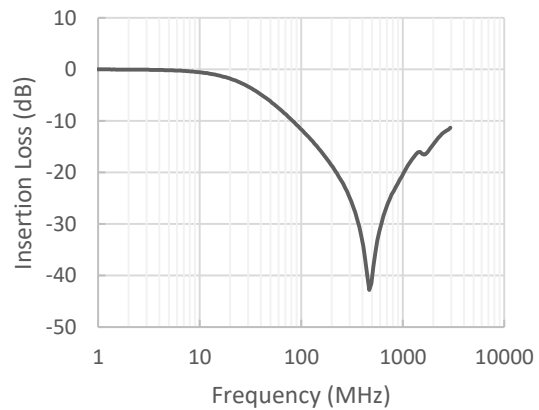
Capacitance - Freq.



Impedance - Freq.



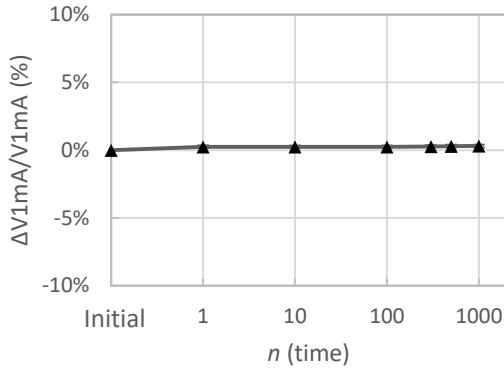
Insertion Loss



Multilayer Chip Varistor : AVR1608C390KT271N

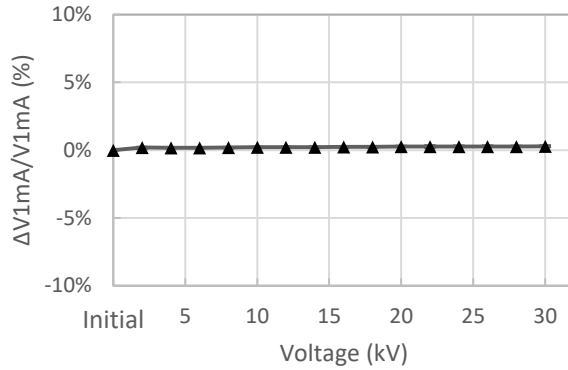
ESD Discharge

▶ 150pF/330ohm, ±25kV, 1000times



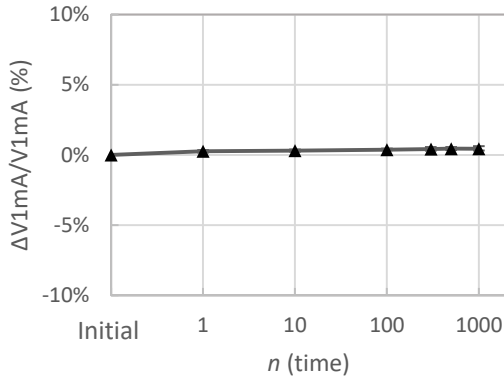
ESD Discharge

▶ 150pF/330ohm, ~±30kV, 10times



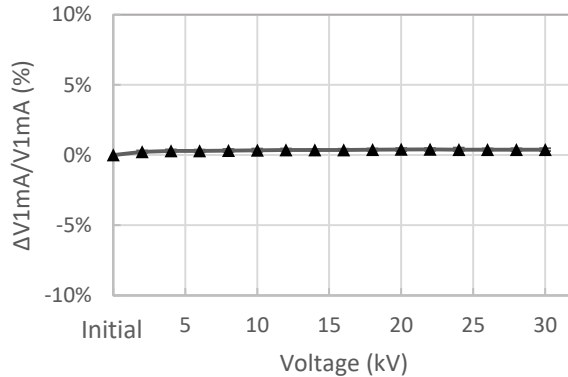
ESD Discharge

▶ 330pF/2000ohm, ±25kV, 1000times



ESD Discharge

▶ 330pF/2000ohm, ~±30kV, 10times



※Criteria : $\Delta V1mA/V1mA \leq 10\%$