



## SPECIFICATIONS

PRODUCT : **VARISTOR**

TYPE : **GNR34B□□□K**

MODEL :

CITATION :

REVISION : **B01**

TOTAL PAGES : **4**

PAGE : **1/4**

RELEASED DATE : **Feb. 06, 2002**

### REVISION HISTORY

NO	REV. DATE	DCR NO.	DESCRIPTION OF CHANGE	REV.
1	Feb. 06,2002		NEW RELEASE	B01
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

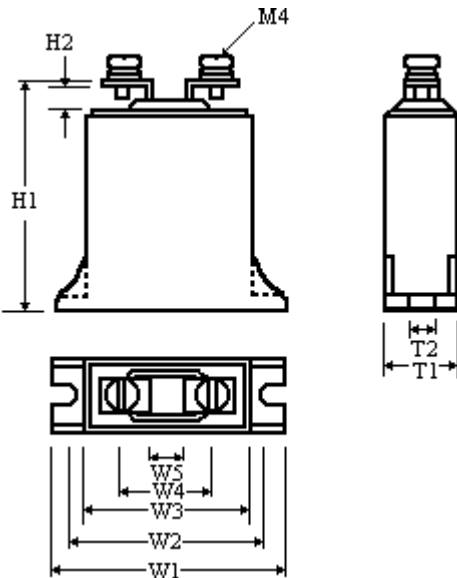
Approved by	Checked by	Edited by
Yu-Chang Huang	Cloud Chen	Andy Chiang

<b>CERAMATE</b>	TYPE	<b>GNR34B□□□K</b>	MODEL		PAGE	2/4
CITATION				DATE	<b>Feb. 06, 2002</b>	
SUBJECT	<b>QUALITY APPROVAL and STRUCTURE</b>			REV.	<b>B01</b>	

## 1. QUALITY SYSTEM APPROVAL

ISO9001 Certificate of approval No.97-HOU-AQ-1382

## 2. STRUCTURE

NO.	ITEM	DESCRIPTION																		
2.1	Main Material	Zinc Oxide																		
2.2	Package Material	Plastic																		
2.3	Marking	GNR, Part number																		
2.4	Appearance	Without dirt and crack, marking should be clear																		
2.5	Dimensions	 <table border="1" style="float: right; margin-top: 10px;"> <tr><td>H1</td><td>55.0</td></tr> <tr><td>H2</td><td>5.0</td></tr> <tr><td>T1</td><td>14.0</td></tr> <tr><td>T2</td><td>4.3</td></tr> <tr><td>W1</td><td>60.0</td></tr> <tr><td>W2</td><td>51.0± 0.5</td></tr> <tr><td>W3</td><td>40.0± 0.5</td></tr> <tr><td>W4</td><td>24.0</td></tr> <tr><td>W5</td><td>12.0</td></tr> </table> <p style="text-align: right;">Unit: mm</p>	H1	55.0	H2	5.0	T1	14.0	T2	4.3	W1	60.0	W2	51.0± 0.5	W3	40.0± 0.5	W4	24.0	W5	12.0
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<b>CERAMATE</b>	TYPE	<b>GNR34B□□□K</b>	MODEL		PAGE	3/4
CITATION				DATE	<b>Feb. 06, 2002</b>	
SUBJECT	<b>ELECTRICAL CHARACTERISTICS</b>			REV.	<b>B01</b>	

### 3. ELECTRICAL CHARACTERISTICS

NO.	ITEM	PERFORMANCE	TEST METHODS
3.0	Standard Conditions		Unless otherwise specified, all tests are made under environmental conditions as given below: Temperature: 5~35°C Relative humidity: 45~85 % RH
3.1	Maximum Allowable Voltage	AC : * Vrms DC : * V	Maximum continuous sine wave(RMS) or DC voltage which may be applied.
3.2	Varistor Voltage	V <sub>1mA</sub> : * V	Voltage across the varistor measured at C <sub>mA</sub> DC.
3.3	Varistor Voltage Temperature Coefficient	0 ~ -0.05 %/°C	$\frac{V_{CmA} \text{ at } 85^{\circ}\text{C} - V_{CmA} \text{ at } 25^{\circ}\text{C}}{V_{CmA} \text{ at } 25^{\circ}\text{C}} \times \frac{1}{60} \times 100$
3.4	Max. Clamping Voltage	* V at * A	Peak voltage across the varistor with a specified peak impulse current of 8x 20 μs waveform.
3.5	Rated Power	* W	Maximum 50~60Hz power which may be loaded for 1,000 hrs at 85± 2°C with $\Delta V_{CmA} / V_{CmA} \leq \pm 10\%$ .
3.6	Withstanding Surge Current	* A	The max. current within the varistor voltage change of less than ± 10% when one impulse current (8x 20 μs) applied.
			The max. current with a varistor voltage change of less than ± 10% when two times impulse current (8x 20 μs) are applied at intervals of 5 minutes.
3.7	Energy	* Joule	The max. energy absorbed with a varistor voltage change of less than ± 10% when one impulse(2ms) is applied.
3.8	Typical Capacitance	* pF	Capacitance shall be measured at 1 kHz± 10%, 1 Vrms max. 0V bias and 20± 2°C

\* See Page 4

PART NUMBER	MAXIMUM ALLOWABLE VOLTAGE		VARISTOR VOLTAGE (V)	CLAMPING VOLTAGE (MAX.)		RATED WATTAGE (MAX.) (W)	SURGE CURRENT (8/20 $\mu$ s)		MAXIMUM ENERGY (2ms) $W_{tm}$ (joule)	Typical Capacitance pF
	AC <sub>rms</sub> (V)	DC(V)		(V)	Ip(A)		I <sub>tm</sub> (A)			
			1 TIME			2 TIMES				
34B330K	20	26	30~36	65	60	0.3	10000	7000	60	39000
34B390K	25	31	35~43	77					75	29000
34B470K	30	38	42~52	93					95	25000
34B560K	35	45	50~62	110					110	22000
34B680K	40	56	61~75	135					125	19500
34B820K	50	65	74~90	135					125	16500
34B101K	60	85	90~110	165	300	1.4	25000	20000	175	13500
34B121K	75	100	108~132	200					200	11000
34B151K	95	125	135~165	250					235	9000
34B181K	115	150	162~198	300					280	7500
34B201K	130	170	185~225	340					310	6800
34B221K	140	180	198~242	360					330	6200
34B241K	150	200	216~264	395					360	5700
34B271K	175	225	247~303	455					390	5000
34B301K	190	250	270~330	505					410	4600
34B331K	210	275	297~363	545					440	4100
34B361K	230	300	324~396	595					460	3800
34B391K	250	320	351~429	650					490	3500
34B431K	275	350	387~473	710					550	3200
34B471K	300	385	423~517	775					600	2900
34B511K	320	410	459~561	845					640	2700
34B561K	350	460	504~616	920					710	2400
34B621K	385	505	558~682	1025					800	2200
34B681K	420	560	612~748	1120					910	2000
34B751K	460	615	675~825	1240	980	1800				
34B781K	485	640	702~858	1290	1000	1750				
34B821K	510	670	738~902	1355	1060	1650				
34B911K	550	745	819~1001	1500	1100	1500				
34B951K	575	765	855~1045	1570	1140	1430				
34B102K	625	825	900~1100	1650	1180	1360				
34B112K	680	895	990~1210	1815	1270	1250				
34B122K	750	990	1155~1320	1980	1350	1150				
34B142K	880	1140	1310~1540	2310	1200	1000				
34B162K	1000	1280	1700~1980	2640	1300	880				