

SURFTRIM® SURFACE MOUNT

Sealed Construction

FEATURES

- Process seal provides protection against contaminants (flux, solvents, etc.) during production.
- Designed for flow and reflow soldering.
- Available in carrier and reel packaging.

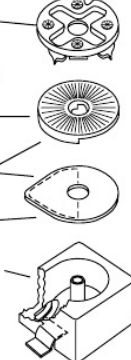
SPECIFICATIONS

Operating Temperature Range: -25°C to +85°C
 Voltage Rating: 100 VDC
 Dielectric Withstanding Voltage: 220 VDC
 Insulation Resistance: 10⁴ Megohms min
 Torque: 15 to 100 g-cm (0.2 to 1.39 oz-in)

CONSTRUCTION DETAILS OF 4 x 4.5 mm GKG MODELS

Model GKG _____ 27 Shown

- Special "drive assembly" with pointed spring fingers to engage rotor upper surface contour. Spring fingers also provide proper tension for smooth torque and low resistance.
- Special rotor with die-formed "drive" contour on upper surface.
- Flat-lapped and lubricated surfaces join for reliable capacitance settings.
- Special ceramic stator insert with metalized electrode.
- Solid one-piece housing with integrally molded terminals and contact areas. Central tubular column is spun-out into a flare after assembly to maintain built-in spring tension.



4 x 4.5 x 2.7 mm Models

Capacitance (pF)		TCC (ppm/°C)	Q min (1 MHz)	Color Code	Bulk Pack Model No.	Carrier and Reel Pack Model No.	Bulk Pack Model No.	Carrier and Reel Pack Model No.	Bulk Pack Model No.	Carrier and Reel Pack Model No.
*min	max									
1.4	3.0	0 ± 200	300**	†Red Dot	GKG 3R026	GKG 3R066	GKG 3R027	GKG 3R067	GKG 3R028	GKG 3R068
2.0	6.0	0 ± 200	500**	Blue	GKG 6R026	GKG 6R066	GKG 6R027	GKG 6R067	GKG 6R028	GKG 6R068
3.0	10.0	0 ± 300	500**	White	GKG 10026	GKG 10066	GKG 10027	GKG 10067	GKG 10028	GKG 10068
4.5	20.0	N900 ± 300	500**	Red	GKG 20026	GKG 20066	GKG 20027	GKG 20067	GKG 20028	GKG 20068
6.5	30.0	N1100 ± 450	300	Green	GKG 30026	GKG 30066	GKG 30027	GKG 30067	GKG 30028	GKG 30068
15.0	50.0	N1700 ± 500	300	Orange	GKG 50H26	GKG 50H66	GKG 50H27	GKG 50H67	GKG 50H28	GKG 50H68

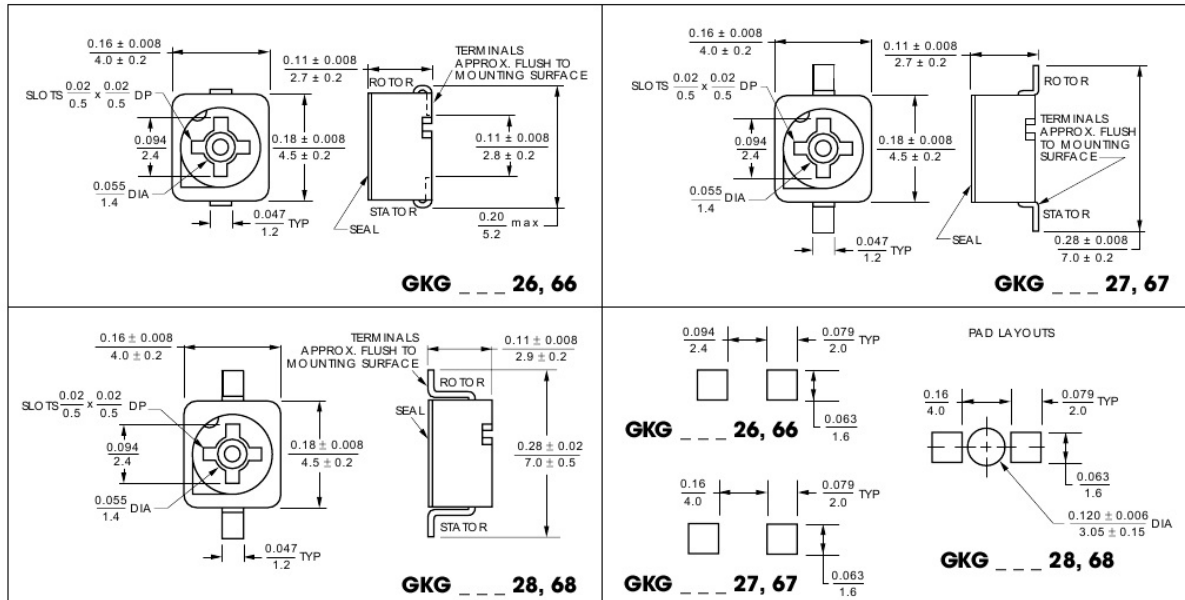
† Marking on bottom of capacitor.

* Re-rated in 1994 for lower min capacitance.

** Q at 10 MHz

Available without seal — consult factory.
 Carrier and reel specifications on page 11.

Add -07 to Model No. for 700/ reel, -25 for 2500/ reel.



All dimensions are in / mm. Unless otherwise specified, the tolerance on dimensions is ± 0.004 / 0.1.

PLASTIC ENCASED TYPE

Available With or Without Adjust Cavity Seal

FEATURES

- Very low cost due to automated production and solderless touch contact construction.
- Wide selection of capacitance ranges.
- Color coded housings.
- Easy blind tuning (2 slots at 90° angle in adjust cavity — accepts cross-slotted tool).
- Process seal on adjust screw access face (optional) provides protection against contaminants (flux, cleaning agents, etc.) during production.

SPECIFICATIONS

Operating Temperature Range: -25°C to +85°C
 Voltage Rating: 100 VDC
 Dielectric Withstanding Voltage: 220 VDC
 Insulation Resistance: 10⁴ Megohms min
 Torque: 10 to 100 g-cm (0.14 to 1.39 oz-in)



4 x 4.5 mm Models

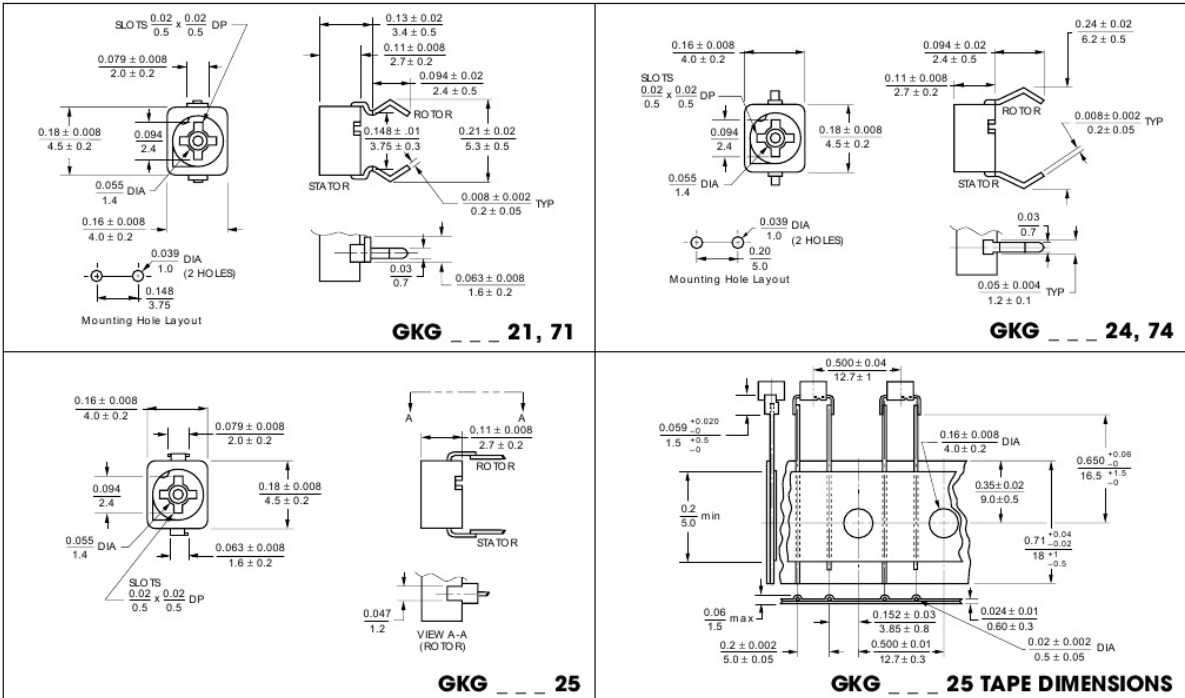
Capacitance (pF)		TCC (ppm / °C)	Q min		Color Code	Top Mount ³ Spring Lead Model No.		Top Mount ³ Spring Lead Model No.		Top Mount ⁴ Ammo Pack Model No.
min	max		1 MHz	10 MHz		Unsealed	Sealed	Unsealed	Sealed	Unsealed
1.4	3.0	0 ± 200	300	300	Red Dot	GKG 3R021	GKG 3R071	GKG 3R024	GKG 3R074	GKG 3R025
2.0	6.0	0 ± 200	500	300	Blue	GKG 6R021	GKG 6R071	GKG 6R024	GKG 6R074	GKG 6R025
3.0	10.0	0 ± 300	500	300	White	GKG 10021	GKG 10071	GKG 10024	GKG 10074	GKG 10025
4.5	20.0	N900 ± 350	500	300	Red	GKG 20021	GKG 20071	GKG 20024	GKG 20074	GKG 20025
6.5	30.0	N1100 ± 450	300	300	Green	GKG 30021	GKG 30071	GKG 30024	GKG 30074	GKG 30025
15.0	50.0	N1700 ± 500	300	N.A.	Orange	GKG 50021	GKG 50071	GKG 50024	GKG 50074	GKG 50025

¹Re-rated in 1993.

²Marking on bottom of capacitor.

³Magazine pack (120 pieces) for auto insertion available — consult factory for pricing.

⁴Ammo pack contains 1000 pcs.



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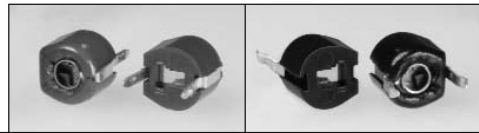
PLASTIC ENCASED TYPE GKG SERIES

FEATURES

- Very low cost.
- Wide selection of capacitance ranges.
- Suitable for printed circuit production methods using "spring leads" or "straight leads".

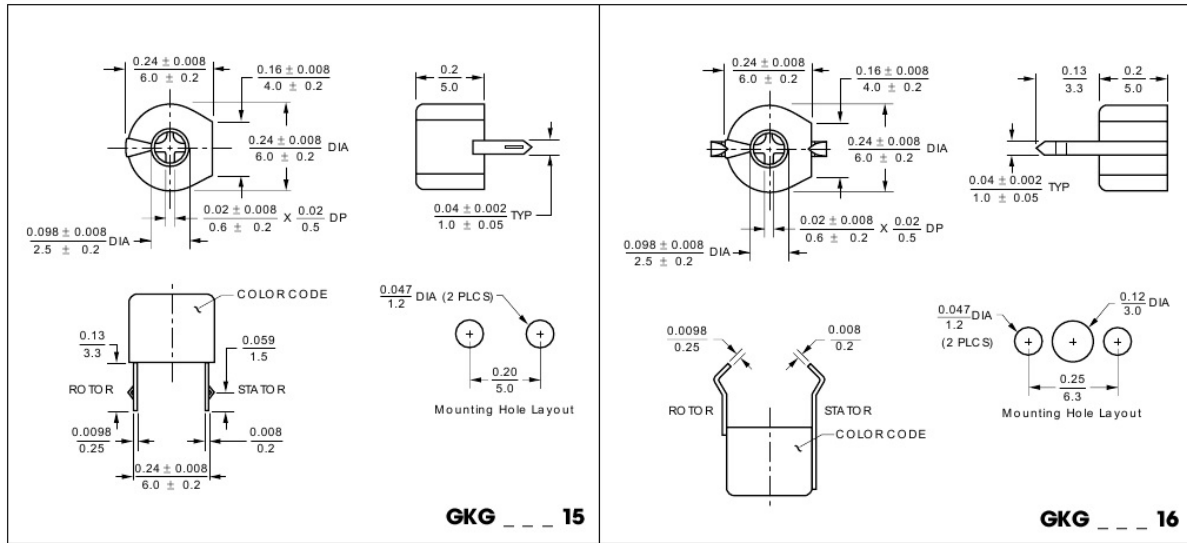
SPECIFICATIONS

Operating Temperature Range: -25°C to +85°C
 Voltage Rating: 100 VDC
 Dielectric Withstanding Voltage: 220 VDC
 Insulation Resistance: 10⁴ Megohms min
 Torque: 15 to 150 g-cm (0.21 to 2.1 oz-in)



6 mm Economy Models

Capacitance (pF)		TCC (ppm / °C)	Q min (1 MHz)	Color Code	Top Adjust Model No.	Bottom Adjust Model No.
min	max					
1.0	3.0	NPO ± 250	300	Black	GKG3R015	GKG3R016
2.0	5.0	NPO ± 250	300	Blue	GKG5R015	GKG5R016
3.0	10.0	NPO ± 250	300	White	GKG10015	GKG10016
5.0	20.0	N750 ± 250	300	Red	GKG20015	GKG20016
6.5	30.0	N1000 ± 500	200	Green	GKG30015	GKG30016
7.0	40.0	N2200 ± 800	200	Yellow	GKG40015	GKG40016
10.0	50.0	N2200 ± 800	200	Brown	GKG50015	GKG50016
12.0	60.0	N2200 ± 800	200	Brown	GKG60015	GKG60016
15.0	70.0	N2200 ± 800	200	Brown	GKG70015	GKG70016
18.0	90.0	N2200 ± 800	150	Brown	GKG90015	GKG90016

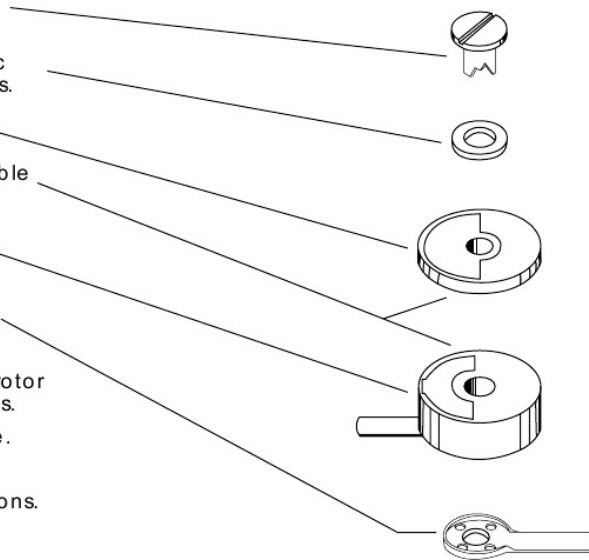


All dimensions are in / mm.
 Unless otherwise specified, the tolerance on dimensions is ± 0.004 / 0.1; except slot tolerance is ± 0.008 / 0.2.

RUGGED 5 mm GKU SERIES

FEATURES

- Proven rugged axle design prevents electrode shifting, maximizes stability.
- Plastic washer between adjust shaft and ceramic rotor to absorb tuning and environmental stresses.
- Special ceramic dielectric rotor with metalized electrode.
- Flat-lapped and lubricated surfaces join for reliable capacity settings.
- Solid one-piece stator electrode and terminal, recessed and integral with base. Cannot shift. Improves stability and resistance to humidity.
- Combination spring/contact/terminal maintains proper tension for smooth torque and low resistance.
- Soldered connection between adjust shaft and rotor electrode eliminates contact resistance problems.
- Compact form factor conserves mounting space.
- Straight line capacitance curve.
- Low cost for industrial and commercial applications.



SPECIFICATIONS

Operating Temperature Range: -55°C to +125°C

Voltage Rating: 250 VDC at 85°C
125 VDC at 125°C

Dielectric

Withstanding Voltage: 500 VDC at 85°C
250 VDC at 125°C

Insulation Resistance: 10⁴ Megohms min

Torque: 30 to 140 g-cm (0.42 to 1.94 oz-in)

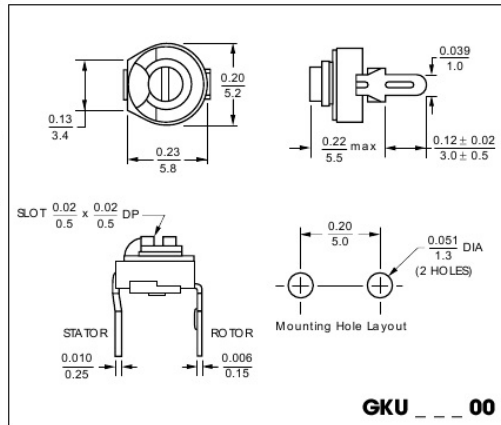
5 mm Rugged Models

Capacitance Range (pF)		TCC (ppm / °C)	Q min (10 MHz)	Color Code or Mark	Model No.
min	max				
1.5	† 5.5	0 ± 250	300	Black	GKU4R000
2.0	† 8.0	N100 ± 200	300	Red	GKU6R000
2.8	† 12.0	N600 ± 300	300	None	GKU10000
3.3	†† 20.5	N800 ± 300	300	Blue	GKU18000
3.8	† 28.5	N1350 ± 650	200	Purple	GKU25000
4.5	30.0	N1350 ± 650	200	Orange	GKU30000
5.0	40.0	N1600 ± 800	200	Brown	GKU40000
6.0	50.0	N1300 ± 500	150 (1MHz)	Green	GKU50000
7.0	60.0	N1300 ± 500	150 (1MHz)	Pink	GKU60000
15.0	90.0	N1500 ± 800	100 (1MHz)	None	GKU900000

† Re-rated in 1992 †† Re-rated in 1986

All dimensions are in / mm. Unless otherwise specified, the tolerance on dimensions is ± 0.004 / 0.1.

EW Electronics



ECONOMY 5 mm GKU SERIES

FEATURES

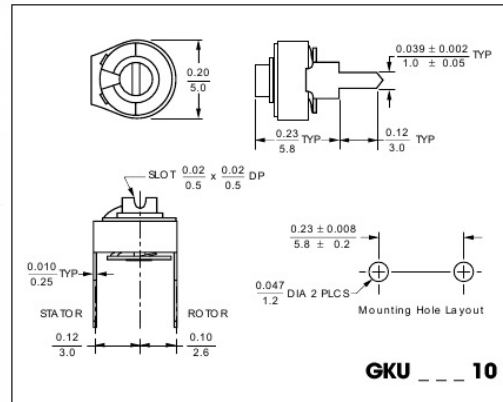
- Economical for consumer and industrial applications.
- Rotor soldered to tuning axle for stability.
- For lead-through-hole connection to printed circuit boards.

SPECIFICATIONS

Operating Temperature Range: -25°C to +85°C
 Voltage Rating: 250 VDC
 Dielectric Withstanding Voltages: 500 VDC
 Insulation Resistance: 10⁴ Megohms min
 Torque: 35 to 200 g-cm (0.49 to 2.8 oz-in)

5 mm Economy Models

Capacitance Range (pF)		TCC (ppm / °C)	Q min (1 MHz)	Model No.
min	max			
1.0	3.0	0 ± 250	300	GKU3R010
2.0	6.0	0 ± 250	300	GKU6R010
3.0	10.0	N750 ± 250	300	GKU10010
4.8	20.0	N750 ± 250	300	GKU20010
5.5	30.0	N1000 ± 250	200	GKU30010
6.8	40.0	N2200 ± 800	200	GKU40010
9.8	50.0	N2200 ± 800	200	GKU50010
12.0	60.0	N2200 ± 800	200	GKU60010
14.0	70.0	N2200 ± 800	200	GKU70010



ECONOMY 7 mm GKT SERIES

FEATURES

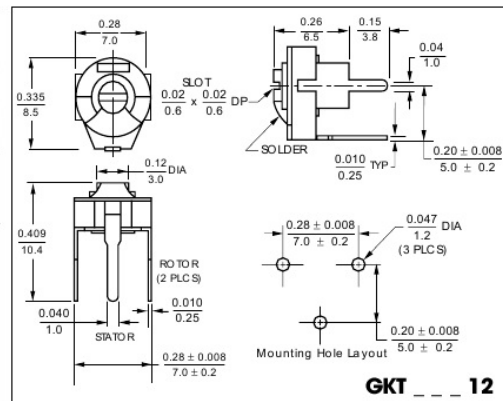
- Economical for consumer and industrial applications.
- Rotor soldered to tuning axle for stability.
- For lead-through-hole connection to printed circuit boards.
- Three hole mounting pattern.

SPECIFICATIONS

Operating Temperature Range: -25°C to +85°C
 Voltage Rating: 250 VDC
 Dielectric Withstanding Voltages: 500 VDC
 Insulation Resistance: 10⁴ Megohms min
 Torque: 32 to 200 g-cm (0.45 to 2.8 oz-in)

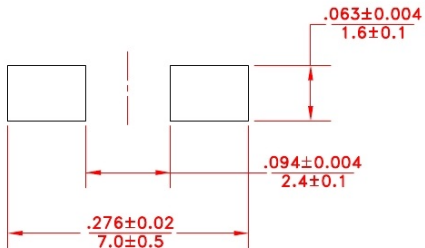
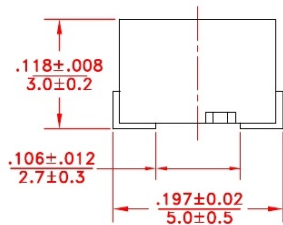
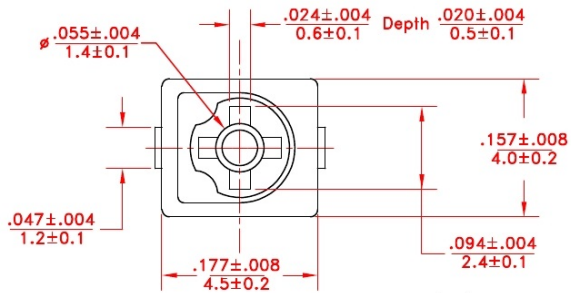
7 mm Economy Models

Capacitance Range (pF)		TCC (ppm / °C)	Q min (1 MHz)	Model No.
min	max			
2.0	5.0	0 ± 200	300	GKT5R012
2.5	10.0	0 ± 200	300	GKT10012
3.0	20.0	N470 ± 200	300	GKT20012
4.5	30.0	N550 ± 800	300	GKT30012
6.0	50.0	N1400 ± 800	200	GKT50012
8.5	63.0	N2200 ± 250	200	GKT60012
10.5	81.0	N2200 ± 250	200	GKT80012
12.0	90.0	N2200 ± 250	200	GKT90012



All dimensions are in / mm. Unless otherwise specified, the tolerance on dimensions is ± 0.004 / 0.1.

REV	DESCRIPTION	DATE	APP
00	NEW DRAWING	03/07/18	I.D.



STANDARD LAND PATTERN

cls.	Part Number	Capacitance(pF)		Q at 1MHz (min.)	Rated voltage (V.D.C.)	Temperature Characteristics		Case color
		Min. (+0%)	Max. (+50/-0%)			Temp. Coefficient	Drift (pF max.)	
I	G3R086	1.4	3.0	300	100	NP0±200(0±200)		Brown
II	G6R086	2.0	6.0	500	100	NP0±200(0±200)		Blue
	G10086	3.0	10.0	500	100	NP0±300(0±300)		White
III	G20086	4.5	20.0	500	100	N750±400(-750±400)		Red
IV	G30086	6.5	30.0	300	100	N1200±500(-1200±500)		Green
	G40086	8.5	40.0	300	100	N1200±500(-1200±500)		Yellow
	G50086	1.4	*50.0	300	50	N750±300(-750±300)		Black

SPECIFICATIONS:

1. Operating temperature range: -25°C to + 85°C
2. Insulation resistance: 10⁴ megohms min
3. Dielectric withstanding voltage: Rated voltage x 2.2
4. Torque: 0.2 to 1.39 oz-in (15 to 100 g-cm)
5. Stable characteristics over a wide frequency range
6. Dielectric: PTFE
7. Designed to withstand flux baths and solder baths (with cover film type)
8. All dimensions in/mm.

TOLERANCES: (EXCEPT AS NOTED)		EW Electronics		
DECIMAL: ±0.02 in ±0.5mm	MATERIAL:	SCALE: 8:1	DRAWN BY: APPROVED:	
FRACTIONAL: 1/64	TITLE: GXXX86	USED FOR:		
ANGULAR: 1°	DATE: 03/07/2018	DRAWING NUMBER: GXXX86	REV: 00	