

# Gas Discharge Tube: GQF Series

## SMD 3-Electrode $\Phi 5 * T 7.2$ mm Type



### ■ Features

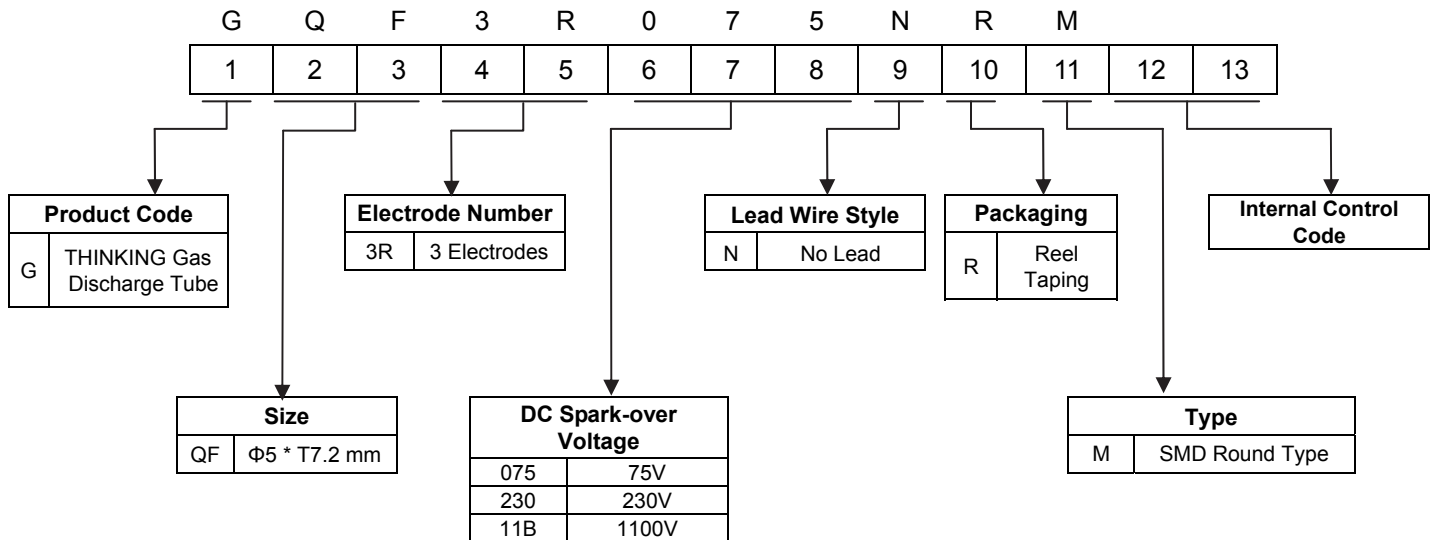
1. RoHS & HF compliant
2. Rugged ceramic-metal construction
3. DC spark-over voltage: 75~1100V
4. Low capacitance
5. Agency recognition :UL / cUL
6. Operating temperature :  $-30^{\circ}\text{C} \sim +85^{\circ}\text{C}$   
Storage temperature:  $-40^{\circ}\text{C} \sim +115^{\circ}\text{C}$



### ■ Recommended Applications

1. Cable Modem
2. xDSL
3. Set-Top Box
4. TV sets
5. Power supplier
6. Consumer electronics

### ■ Part Number Code



# Gas Discharge Tube: GQF Series

## SMD 3-Electrode $\Phi 5 * T 7.2$ mm Type



### ■ Characteristics

Part No.	DC Spark-over Voltage	Max. Impulse Breakdown Voltage		Max. Impulse Discharge Current (8/20 $\mu$ s)		Impulse Life (10/1000 $\mu$ s)	Normal Alternating Discharge Current		DC Holdover voltage	Minimum Insulation Resistance	Maximum Capacitance (1MHz)	Safety approvals	
	100V/S	100V/ $\mu$ s	1KV/ $\mu$ s	1 time	10 times	200A	50Hz 1Sec	Single 9 Cycles	<150ms			UL 1449 /cUL	UL 497B
	(V)	(V)	(V)	(KA)		(Times)	(A)		(V)				
GQF3R075NRM	75 $\pm$ 20%	600	700	10	5	300	5	30	52	1	2		√
GQF3R090NRM	90 $\pm$ 20%	500	600	10	5		5	30	52			√	
GQF3R120NRM	120 $\pm$ 20%	500	600	10	5		5	30	80			√	
GQF3R150NRM	150 $\pm$ 20%	500	600	10	5		5	30	80			√	
GQF3R200NRM	200 $\pm$ 20%	600	700	15	10		10	60	135			√	
GQF3R230NRM	230 $\pm$ 20%	600	700	15	10		10	60	135			√	
GQF3R250NRM	250 $\pm$ 20%	600	700	15	10		10	60	135			√	
GQF3R350NRM	350 $\pm$ 20%	650	750	15	10		10	60	135			√	
GQF3R400NRM	400 $\pm$ 20%	700	800	15	10		10	60	135			√	
GQF3R420NRM	420 $\pm$ 20%	700	800	15	10		10	60	135			√	
GQF3R470NRM	470 $\pm$ 20%	800	900	15	10		10	60	135			√	
GQF3R600NRM	600 $\pm$ 20%	900	1000	10	5		5	30	135			√	
GQF3R800NRM	800 $\pm$ 20%	1150	1400	10	5		5	30	135			√	
GQF3R11BNRM	1100 $\pm$ 20%	1450	1750	10	5		5	30	135			√	

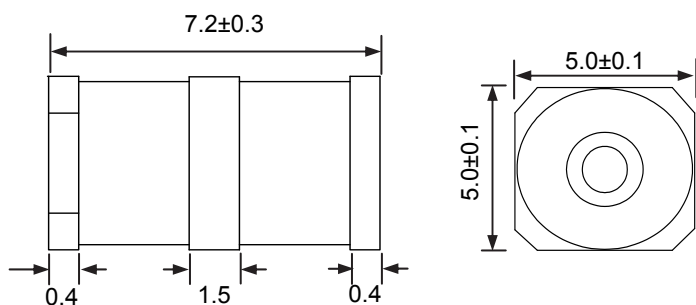
Note1: UL 497B File No: E245070, UL 1449 3rd File No:E314979

Note 2: Insulation resistance test conditions:

DC Spark-over Voltage	DC Measuring Voltage
75-90V	50V
120-400V	100V
420-1100V	250V

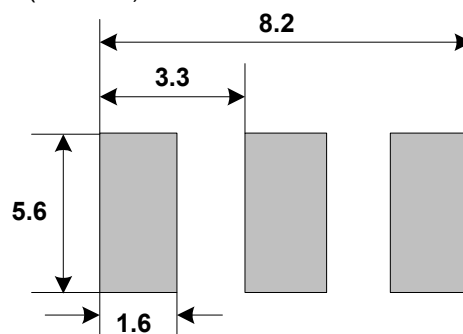
### ■ Dimension

(Unit: mm)



### ■ Recommended Pad Size

(Unit: mm)

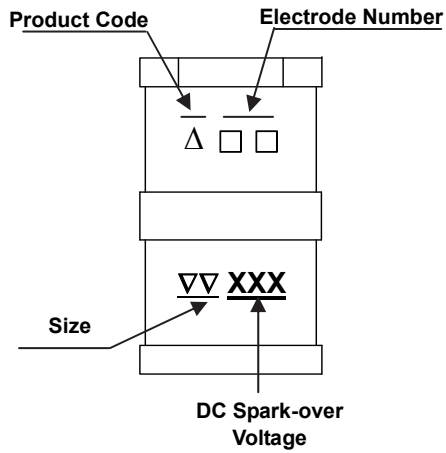


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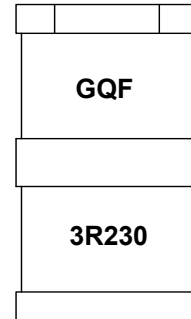
## SMD 3-Electrode $\Phi 5 * T 7.2$ mm Type



### ■ Marking

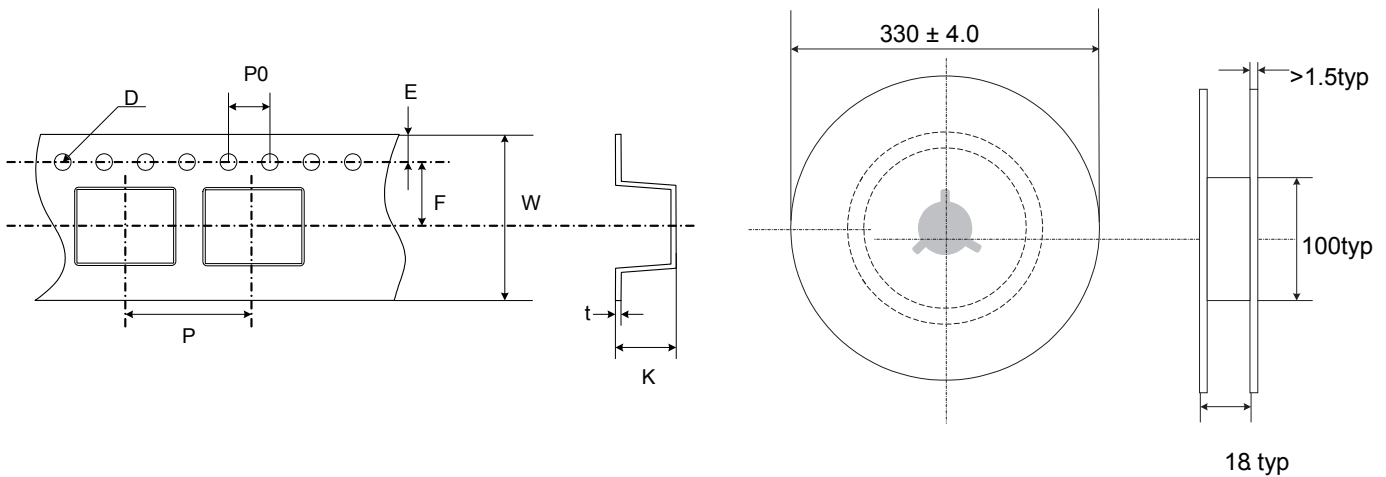


Example:



### ■ Packaging

#### ● Taping



Quantity: 900pcs per reel (13")

Unit: mm

ITEM	P	P0	W	F	E	D	K	t
Spec.	12.0	4.0	16.0	7.5	1.75	$\Phi 1.55$	5.5	0.5
Tolerance	$\pm 0.1$	$\pm 0.1$	$\pm 0.3$	$\pm 0.1$	$\pm 0.1$	$\pm 0.05$	$\pm 0.1$	$\pm 0.05$

### ■ Warehouse Storage Conditions of Products

#### ● Storage Conditions:

1. Storage Temperature:  $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$
2. Relative Humidity:  $\leq 75\% \text{RH}$
3. Keep away from corrosive atmosphere and sunlight.

#### ● Period of Storage: 1 year

# Gas Discharge Tube: GQF-W Series

## SMD 3-Electrodes $\Phi 5 * T 7.2$ mm Symmetrical Type



### ■ Features

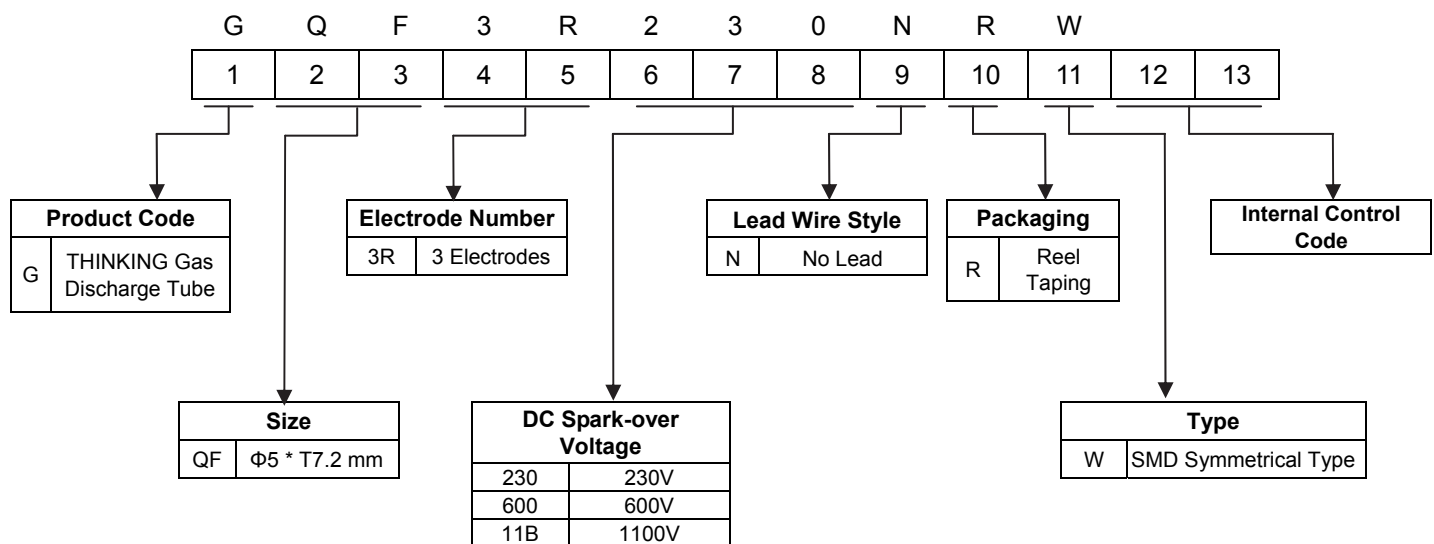
1. RoHS & HF compliant
2. Rugged ceramic-metal construction
3. DC spark-over voltage: 230~1100V
4. Low capacitance
5. Agency recognition: UL / cUL
6. Operating temperature :  $-30^{\circ}\text{C} \sim +85^{\circ}\text{C}$   
Storage temperature:  $-40^{\circ}\text{C} \sim +115^{\circ}\text{C}$



### ■ Recommended Applications

1. Cable Modem
2. xDSL
3. Set-Top Box
4. TV sets
5. Power supplier
6. Consumer electronics

### ■ Part Number Code



# Gas Discharge Tube: GQF-W Series

## SMD 3-Electrodes $\Phi 5 \times T 7.2$ mm Symmetrical Type



### ■ Characteristics

Part No.	DC Spark-over Voltage	Max. Impulse Breakdown Voltage		Max. Impulse Discharge Current (8/20 $\mu$ s)		Impulse Discharge Life (10/1000 $\mu$ s)	Nom. AC Discharge Current		DC Holdover Voltage	Minimum Insulation Resistance	Maximum Capacitance (1MHz)	Safety approvals	
	100V/S	100V/ $\mu$ s	1KV/ $\mu$ s	1 Time	10 Times		200A	50Hz 1Sec				Single 9 cycles	<150ms
	(V)	(V)	(V)	(KA)		Times	(A)		(V)	(G $\Omega$ )	(pF)		
GQF3R230NRW	230 $\pm$ 20%	600	700	10	5	300	5	20	135	1	2		√
GQF3R250NRW	250 $\pm$ 20%	600	700	10	5		5	20	135				√
GQF3R350NRW	350 $\pm$ 20%	650	750	10	5		5	20	135				√
GQF3R400NRW	400 $\pm$ 20%	700	800	10	5		5	20	135				√
GQF3R420NRW	420 $\pm$ 20%	700	800	10	5		5	20	135				√
GQF3R470NRW	470 $\pm$ 20%	800	900	10	5		5	20	135				√
GQF3R600NRW	600 $\pm$ 20%	900	1000	10	5		5	20	135				√
GQF3R800NRW	800 $\pm$ 20%	1150	1400	10	5		5	20	135				√
GQF3R11BNRW	1100 $\pm$ 20%	1450	1750	10	5		5	20	135				√

Note 1: UL 497B File No: E245070 , UL 1449 3rd File No: E314979

Note 2: Insulation resistance test conditions:

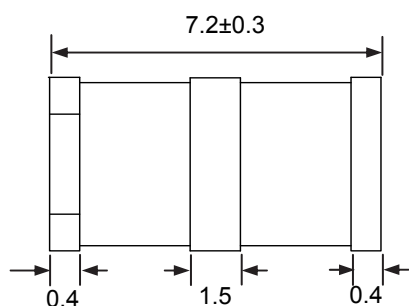
DC Spark-over Voltage	DC Measuring Voltage
145-400V	100V
420-1100V	250V

Note 3: DC Spark-over Voltage @ 100V/ $\mu$ s for L1 / L2 to ground and L1 to L2.

Note 4: Impulse Breakdown Voltage @ 100V/ $\mu$ s and 1000V/ $\mu$ s for L1 / L2 to ground.

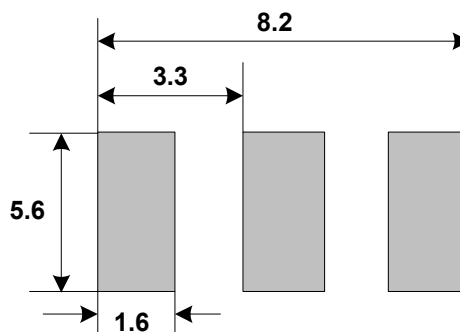
### ■ Dimension

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### ■ Recommended Pad Size

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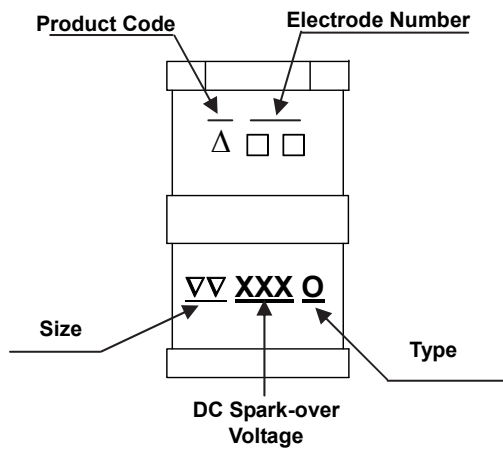


# Gas Discharge Tube: GQF-W Series

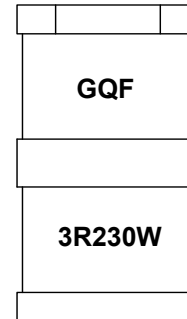
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### ■ Marking

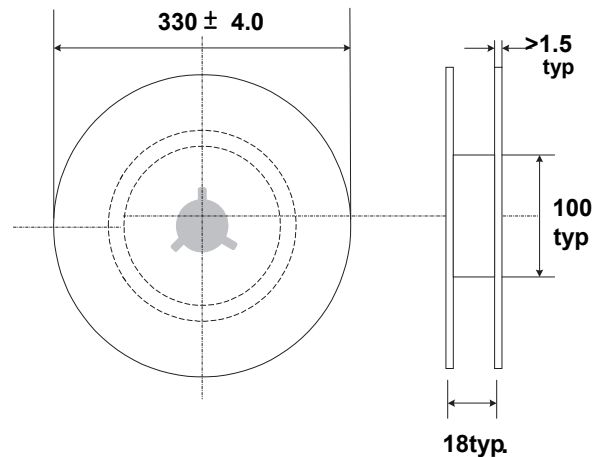
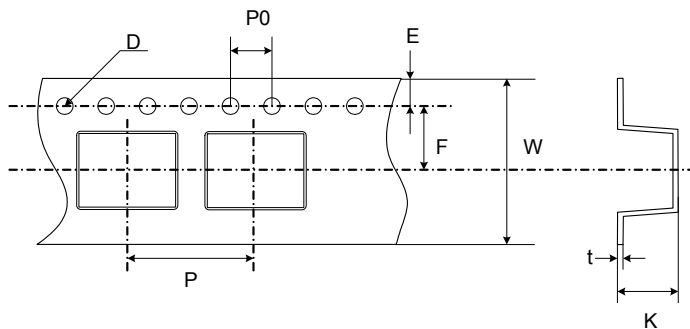


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### ■ Packaging

#### ● Taping



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Unit: mm

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### ■ Warehouse Storage Conditions of Products

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