

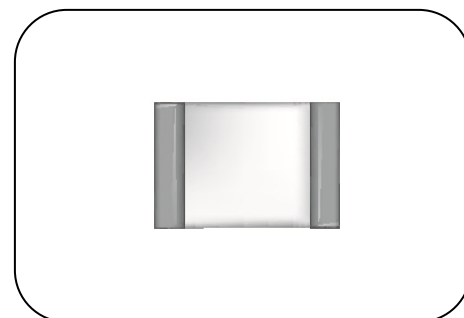
Gas Discharge Tube: GS22R Series

SMD L3.2 x W1.6 x H1.6 mm Type



■ Features

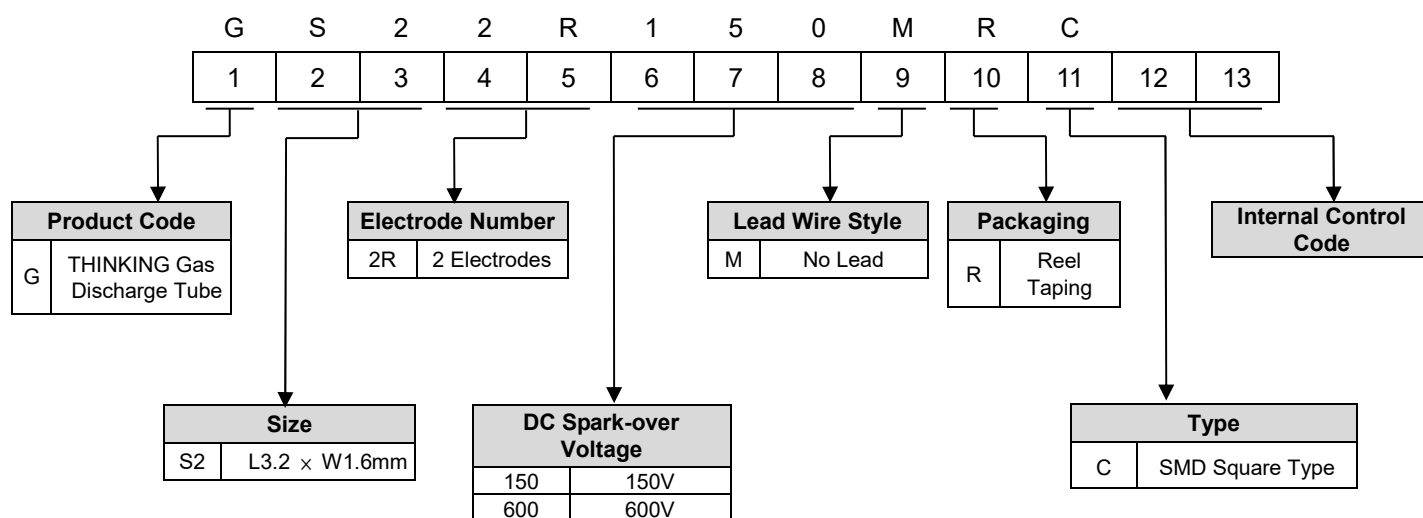
1. RoHS & HF compliant
2. SMD structure
3. DC spark-over voltage: 150~600V
4. Low capacitance
5. Agency recognition: UL
6. Operating temperature: -40℃~ +105℃
Storage temperature: -40℃ ~ +115℃



■ Recommended Applications

1. Cable modem
2. xDSL
3. Set-top box
4. TV sets
5. Ethernet port
6. Consumer electronics

■ Part Number Code



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■ Characteristics

Part No.	DC Spark-over Voltage	Max. Impulse Discharge Current	Impulse Withstanding Voltage Capacity	Normal Alternating Discharge Current	Impulse Life	Minimum Insulation Resistance	Maximum Capacitance	Safety Approvals
	100V/S	8/20μs	10/700μs	50Hz, 1 Sec	8/20μs, 50A			
	(V)	(A)	(KV)	(A)	(Times)			
GS22R150MRC	105~195	500A (Positive/ Negative 5 Times)	6KV R=40Ω (Positive/ Negative 5 Times)	0.5A 10 Times	300	Min. 100 (@DC 100V)	0.3	√
GS22R200MRC	140~260							√
GS22R400MRC	280~520							√
GS22R420MRC	294~546							√
GS22R500MRC	350~650							√
GS22R600MRC	420~780							√

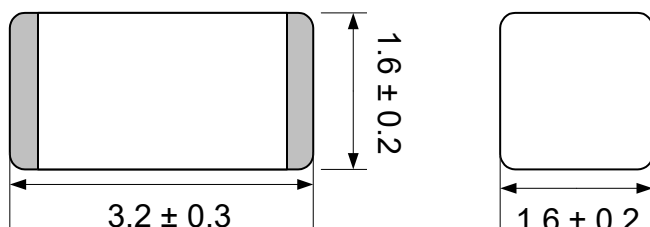
Note1: UL 1449 4th File No: E314979

Note2: Insulation resistance test condition:

DC Spark-over Voltage	DC Measuring Voltage
150-600V	100V

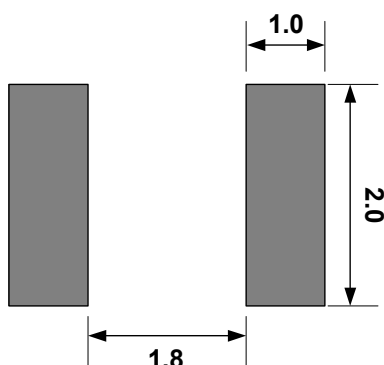
■ Dimension

(Unit: mm)



■ Recommended Pad Size

(Unit: mm)



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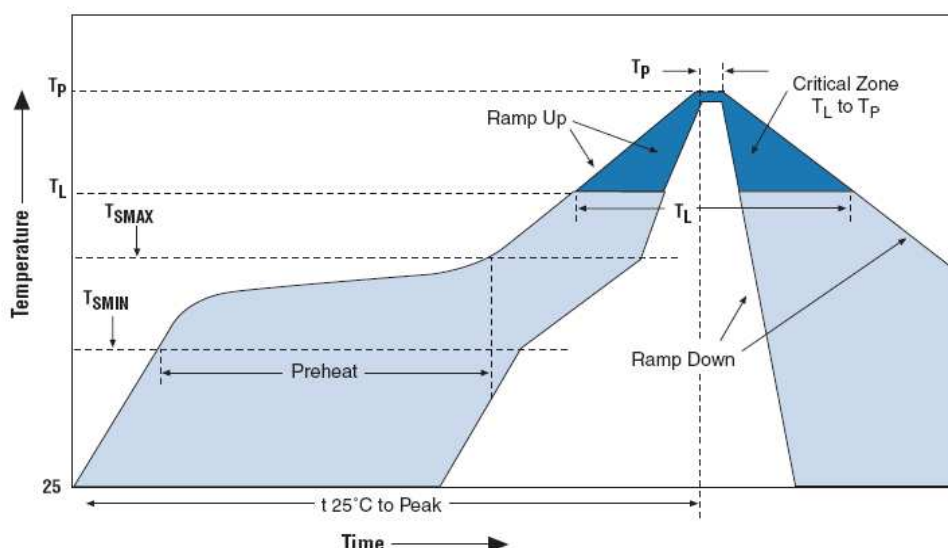


■ Soldering Recommendation

● Recommended Reworking Conditions with Soldering Iron

Item	Conditions
Temperature of Soldering Iron-tip	360°C (max.)
Soldering Time	3 sec. (max.)
Diameter of Soldering Iron-tip	Φ3mm (max.)
Caution: Please do not touch the component surface with soldering iron directly to avoid its damage.	

● IR-Reflow Soldering Profile



Lead-Free Reflow Profile Recommendation (IPC/JEDEC J-STD-020C)

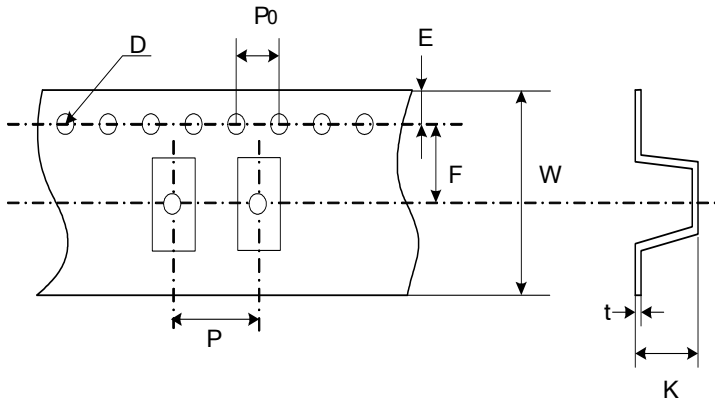
Reflow Parameter	Lead-Free Assembly
Minimum preheat temperature (TsMIN)	150°C
Maximum preheat temperature (TsMAX)	200°C
Preheat Time	60-180 seconds
TsMAX to TL ramp-up rate	3°C/second maximum
Time above temperature TL (tL)	217°C 60-120 seconds
Peak Temperature (TP)	245°C ~260°C(recommended 250°C)
Time 25°C to TP	6 minute maximum
Time within 5° of Peak TP	10-20 seconds
Ramp-down rate	4°C/second maximum

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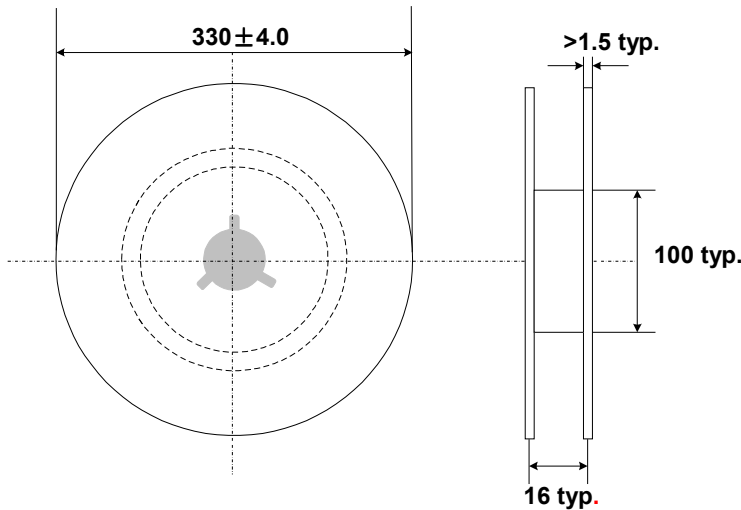
- Packaging
 - Taping



Quantity (MPQ): 3,000pcs

(Unit: mm)

Item	P	P0	W	F	E	D	K	t
Spec.	8.0	4.0	12.0	5.45	1.75	Φ1.55	2.0	0.3
Tolerance	±0.1	±0.1	±0.3	±0.1	±0.1	±0.05	±0.1	±0.05



- Warehouse Storage Conditions of Products
 - Storage Conditions:
 1. Storage Temperature: -10℃~+40℃
 2. Relative Humidity: ≤75%RH
 3. Keep away from corrosive atmosphere and sunlight.
 - Period of Storage: 1 year