

# Surface Mount Gas Discharge Tube

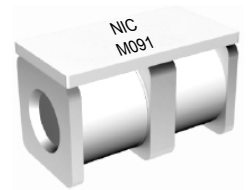
NGTD Series

## FEATURES

- THREE TERMINALS
- FAST RESPONSE, HIGH CURRENT (UP TO 5,000A @ 8/20 $\mu$ S)
- CASE SIZE 3020 (7.8MM X 5.0MM X 6.0MM)
- UL LISTED - ISOLATED LOOP CIRCUIT PROTECTORS-COMPONENTS

**RoHS Compliant**  
includes all homogeneous materials\*

\*See Part Number System for Details



## SPECIFICATIONS

Type	Breakdown Voltage <sup>1,2</sup> (100V/S)	Breakdown Voltage Tolerance (V)	Impulse Spark-over Voltage <sup>1,2</sup> (1KV/ $\mu$ s)	Impulse Discharge Current <sup>3</sup> (8/20 $\mu$ s)	Insulation Resistance	Cap. (1MHz, 0.5VDC)	Arc Voltage 1A	Application	Circuit
NGTD3020M091TR5F	90V	68 - 112	$\leq 700V$	5000A*	$\geq 1G\Omega$ @ 50V	$\leq 1.5pF$	$\sim 8V$	RS485 RS232 RS422	
NGTD3020M231TR5F	230V	200 - 380	$\leq 800V$	5000A*	$\geq 1G\Omega$ @ 100V		$\geq 15V$	DC12V AC24V	
NGTD3020M421TR5F	420V	336 - 504	$\leq 950V$	5000A*			$\sim 8V$	xDSL	
NGTD3020M102TR5F	1000V	950 - 1500	$\leq 1,800V$	2000A**			$\sim 15V$	xDSL (NEBS)	

\* 1 or 2  $\rightarrow$  3 : 2.5KA

\*\* 1 or 2  $\rightarrow$  3 : 1KA

Contact NIC regarding availability of values not shown.

1. Parameters are based on ITU-T K.12
2. The V-T waveform of the DC Breakdown Voltage and Impulse Spark-over Voltage must lie between the shades areas (see graph below)
3. Total Impulse Discharge Current 5,000A @ 8/20 $\mu$ s by IEC 61000-4-5, 10 shots.

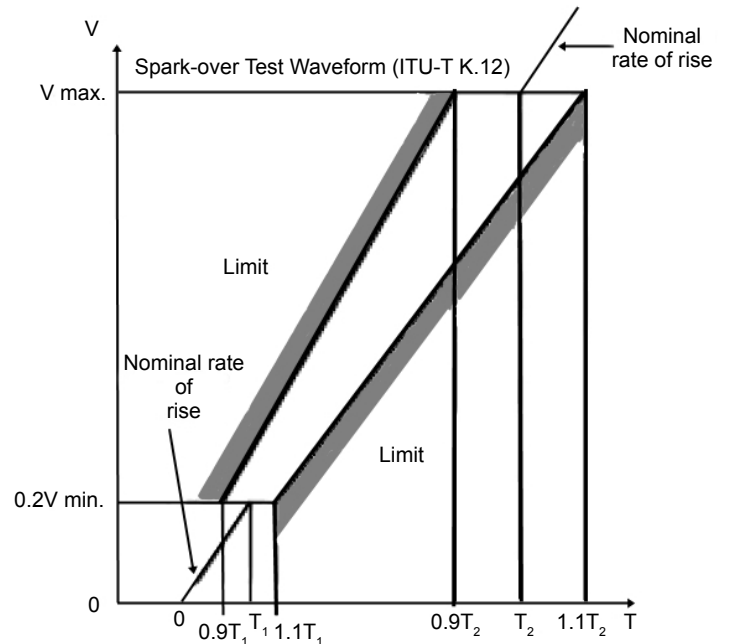
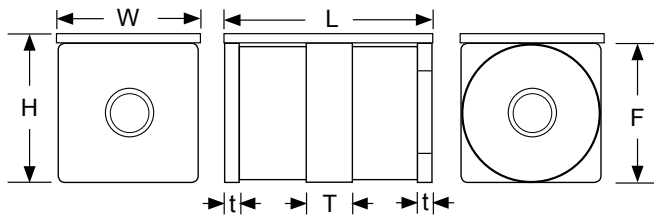
## UL Listing:

NIC COMPONENTS CORP  
Isolated Loop Circuit Protectors - Component  
RE: QVGG2.E467518



## DIMENSIONS (mm)

L	W	H	F	T	t
7.8 $\pm$ 0.3	5.0 $\pm$ 0.2	6.0 $\pm$ 0.3	5.0 $\pm$ 0.2	1.6 $\pm$ 0.2	0.5 $\pm$ 0.2

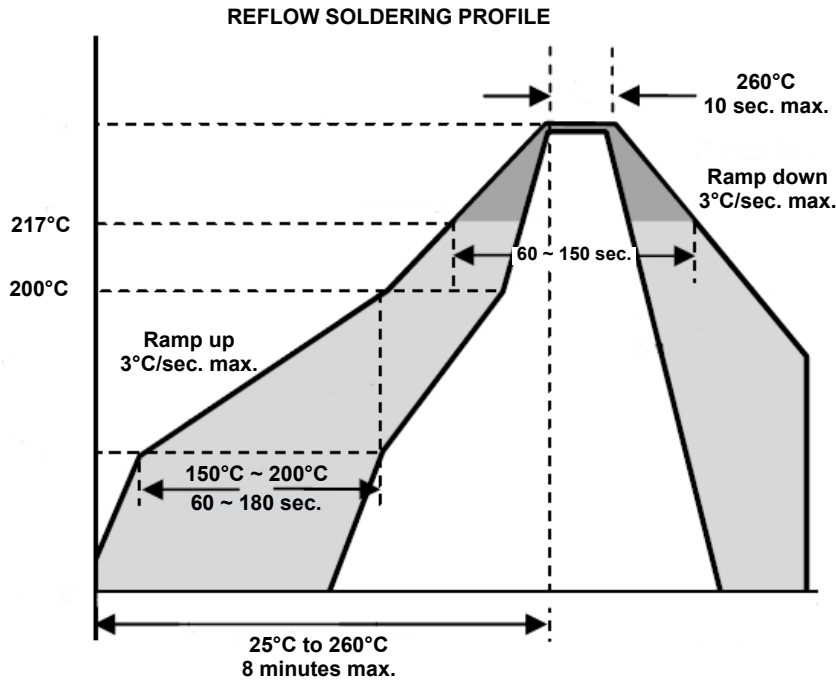


## PART NUMBERING SYSTEM

NGTD 3020 M 351 TR 5 E

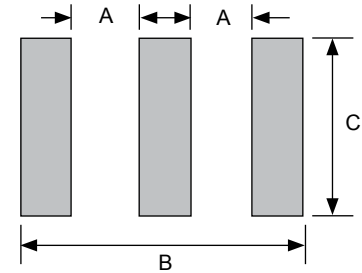
- RoHS Compliant
- 5 = 5KA Impulse Discharge Current
- TR = Tape & Reel
- Voltage Code: 421 = 42 x 10<sup>1</sup> = 420 Volts
- Tolerance Code (M =  $\pm 20\%$ , See Specifications Table)
- Case Size Code (see dimensions table)
- Series



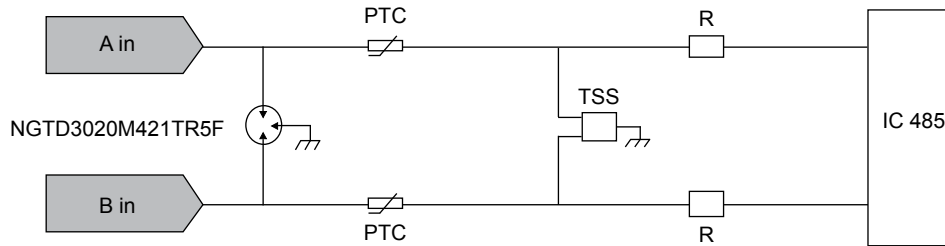


**LAND PATTERN DIMENSIONS (mm)**

Case Size	A	B	C
3020	1.5	9.6	5.0

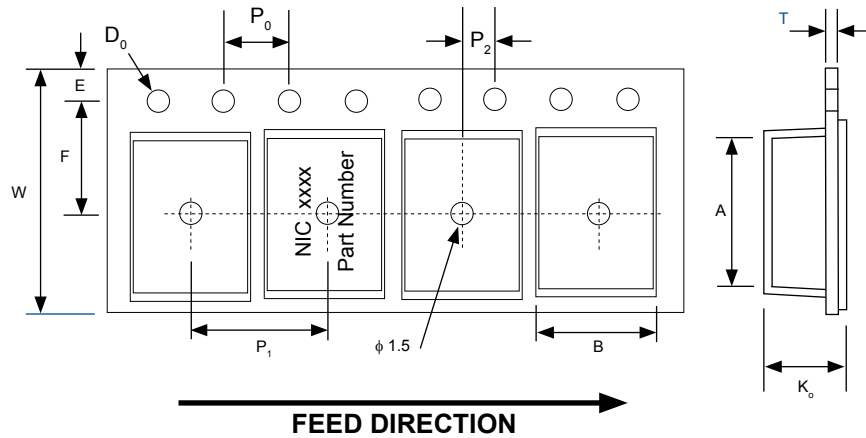


**NGTD RS485/232 Application**



### EMBOSED PLASTIC CARRIER DIMENSIONS (mm)

Case Size	A	B	$\phi D_0$	E	F	$P_0$	$P_1$	$P_2$	T	$K_0$	W
3020	8.4 $\pm 0.2$	5.4 $\pm 0.2$	1.50 $\pm 0.2$	1.75 $\pm 0.2$	7.50 $\pm 0.2$	4.0 $\pm 0.2$	8.0 $\pm 0.2$	2.0 $\pm 0.2$	0.5 $\pm 0.2$	6.3 $\pm 0.2$	16.0 $\pm 0.3$



### REEL DIMENSIONS (mm) AND QUANTITY

Case Size	A	B	C	W	Qty
3020	$\phi 330$	$\phi 13 \pm 0.5$	$\phi 50$ min.	$16.8 \pm 0.2$	1,000

