

# NIC Components [SMT] Surface Mount Resistors & Thermistors

## Full Value Support: E-24, E-96, & E-192

100	101	102	104	105	106	107	109	110	111	113	114
115	117	118	120	121	123	124	126	127	129	130	132
133	135	137	138	140	142	143	145	147	149	150	152
154	156	158	160	162	164	165	167	169	172	174	176
178	180	182	184	187	189	191	193	196	198	200	203
205	208	210	213	215	218	220	221	223	226	229	232
234	237	240	243	246	249	252	255	258	261	264	267
270	271	274	280	284	287	291	294	298	300	301	305
309	312	316	320	324	328	330	332	336	340	344	348
352	357	360	361	365	370	374	379	383	388	390	392
397	402	407	412	417	422	427	430	432	437	442	448
453	459	464	470	475	481	487	493	499	505	510	511
517	523	530	536	542	549	556	560	562	569	576	583
590	597	604	612	619	620	626	634	642	649	657	665
673	680	681	690	698	706	715	723	732	741	750	759
768	777	787	796	806	816	820	825	835	845	856	866
876	887	898	909	910	920	931	942	953	965	976	988

E-24 Only E-96 Only E-192 Only E-24 & E-192 E-24, E-96 & E-192



NRC\* Thick Film Resistors



NRSN Resistor Arrays



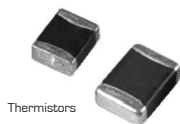
NTR\* Thin Film Resistors

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- ◇ Compare up to 5 results Side-By-Side
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Series controlled to IATF-16949 certified lines and AECQ-200 Qualified



Thermistors



## Thick Film & MELF Resistors

Series	Type	Size Range	Resistance Range	Max Power	Tolerances	TCR (PPM)
NRC(E)	General Purpose	0603 ~ 1206	47MΩ* ~ 4.7GΩ	1/8W	0.1%, 0.25% (NFR Only) 0.5%, 1% (E-24 & E-96) 5% (E-24) 10% (K) E12 & 20% (M) E-96	±500 ~ ±1500
NRSN(E)	Chips & Arrays	0201x2 ~ 1206x4	1.0Ω* ~ 1MΩ	1/8W		±200 ~ ±650
NRCGA	Anti-Surge	0402 ~ 2512	1Ω ~ 20MΩ	2W		±100 ~ ±300
NRCW	High Power	0402 ~ 2512	1.0Ω ~ 1MΩ	2W		±100
NRCA	Automotive Grade	0201 ~ 2512	1.0Ω ~ 10MΩ	1W		±100 ~ ±400
NRC-AS	Sulfur Resistant Chips & Arrays	0201 ~ 2512	1Ω ~ 10MΩ	1W		±100 ~ ±200
NRC-S		0402 ~ 2512	1Ω ~ 22MΩ	1W		±100 ~ ±400
NRCPA		0402 ~ 2512	1Ω ~ 1MΩ	2W		±100 ~ ±200
NRSNS		0402x4 & 0603x4	10Ω ~ 1MΩ	1/10W		±100 ~ +800/-100 ~300
NRCL	Lead Free Resistors	0201 ~ 1210	1.0Ω* ~ 10MΩ	1/3W		±100 ~ +800/-100
NRSNL	Chips & Arrays	0402x2 ~ 1206x4	1Ω* ~ 1MΩ	1/10W	±100 ~ ±200	

\* Zero Jumpers are available; refer to series datasheet for more information.

## Thin Film Resistors

Series	Type	Size Range	Resistance Range	Max Power	Tolerances	TCR (PPM)
NTR	General Thin Film	0201 ~ 2512	1Ω ~ 3MΩ	1/2W	0.01% , 0.05% , 0.1% 0.25%, 0.5%, 1% (All E-24, E-96, & E-192)	±1 ~ ±50
NTR-H	Higher Power	0201 ~ 2512	1Ω ~ 1MΩ	1W		±5 ~ ±50
NTRA	Automotive Grade	0402 ~ 2512	10Ω ~ 1MΩ	1/2W		±10 ~ ±50
NTRC	Anti-Corrosive	0402 ~ 2512	10Ω ~ 1MΩ	1/2W		±25 ~ ±50
NTRT	Tantalum Nitride	0402 ~ 1206	10Ω ~ 1MΩ	1/2W		±10 ~ ±50
NTRF	40Ghz RF Rated	0402 ~ 1206	10Ω ~ 1kΩ	1/3W		±25 ~ ±50
NTRN	Aluminum Nitride	0603 ~ 1210	10Ω ~ 30.1kΩ	6W		±25 ~ ±50
NTRM	Metal Film Chip	0402 ~ 1206	10Ω ~ 5.1MΩ	1/4W		±5 ~ ±50
NFR	Metal Film MELF	0102 ~ 0207	0.1Ω ~ 10MΩ	1W		±5 ~ ±100

## Current Sensing Resistors

Series	Type	Size Range	Resistance Range	Max Power	Tolerances	TCR (PPM)
NCST	Thick Film	2512	1mΩ ~ 1Ω	3W	1% 3% 5%	±200 ~ ±600
NCSS	Metal Strip	0805 ~ 2512	1mΩ ~ 50mΩ	2W		±75 ~ ±275
NCLP		2512	1mΩ ~ 500mΩ	3W		±50
NCLS	Metal Foil on Ceramic	0603 ~ 2512	5mΩ ~ 40mΩ	2W	All E-24 & E-96	±50 ~ ±100
NCSA	High Current Shunt Resistor	2512 ~ 5930	.1mΩ ~ 2mΩ	15W		±50 ~ ±200
NCSW	Thin Film	0402 ~ 2512	100mΩ ~ 910mΩ	1W		±200 ~ ±300

## Negative Temperature Thermistors

Series	Size Range	Resistance Range	Max Power	Tolerances	Beta Ranges
NST	0201 ~ 0805	2.2kΩ ~ 470kΩ	200mW	1%, 2%, 3%, 5%, 10% (1% & 3% Beta)	3380 ~ 4350K

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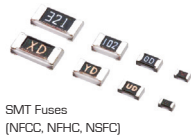
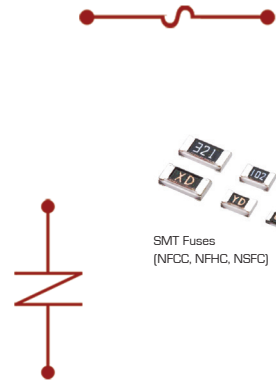
# NIC Components SMT & LDD Circuit Protection Components

### Circuit Protection Applications

- ◇ Over-current Protection
- ◇ Over-voltage Protection
- ◇ Power Supplies & Modules
- ◇ Power Adapters (AC, DC, AC/DC)
- ◇ Lighting
- ◇ Office Equipment
- ◇ Telecom Equipment
- ◇ Industrial Equipment

### Circuit Protection Co-Sells

- ◇ High Voltage Capacitors
- ◇ High Reliability Film Capacitors
- ◇ Power Transformers
- ◇ Power Inductors
- ◇ High Voltage Resistors



## Surface Mount Chip Fuses

Series	Product	Type	Size Range	Current Ratings	Voltage Rating	Time/Current
NFCC	Secondary Protection Thick Film Safety Fuses	Low Current	0402 ~ 1206	0.15A ~ 2.5A	24 ~ 50Vdc	5s under 200%
NFHC		High Current	0402 ~ 1206	3.15A ~ 5A	24 ~ 50Vdc	5s under 250%
NFSC	UL Certified	Transient Current	0603	0.5A ~ 5A	32Vdc	5s under 200%
NFVC-F	Primary Protection Safety Fuses	High Current	6125	0.4A ~ 20A	65 & 125Vac	5s under 200% ~ 20s under 200%
NFVC-H		High Voltage	6125	1.0A ~ 5A	250Vac	120s under 200%
NFVC-S		UL Certified	Slow Blow	6125	1.0A ~ 5A	125Vac

## Surface Mount Chip Varistors

Series	Product	Type	Size Range	Working Voltages	Varistor Voltages	Min. Capacitance
NVX	Multilayer Chip Varistors General, ESD, & High Speed Styles	Standard Range	0402 ~ 1206	5.5 ~ 14Vdc	10 ~ 67V	3pF
NVH		High Voltage	1206 ~ 2220	5.5 ~ 100Vdc	10 ~ 132V	100pF
NVA		SMT Array Chip	0805	5.5 ~ 18Vdc	10 ~ 28V	10pF

## Surface Mount Diodes

Series	Product	Type	Sizes	Max Vdc Range	Io Current	Operating Range
NRD	Surface Mount Rectifier Diodes	Silicon	SMA	50Vdc ~ 1kVdc	1A	-55°C ~ +150°C
NSD		Schottky		20Vdc ~ 100Vdc	1A	-60°C ~ +150°C
NDTV	TVS Diodes	Voltage Suppressors	SMA, SMB, SMC, SMD	11Vdc ~ 75Vdc	1A, 2A	-55°C ~ +150°C

## Surface Mount Gas Discharge Tubes

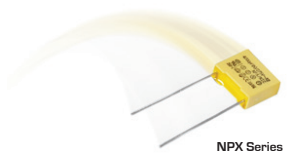
Series	Product	# of Terminals	Size	Breakdown Voltage (100V/S)	Impulse Spark-Over Voltage (1kV/us)	Impulse Discharge Current (8/20us)	Arc Voltage (1A)	Applications
NGTA	Surface Mount Gas Discharge Tubes	2	1812	150V ~ 450V	≤650V ~ ≤750V	1,000A	8V ~ 15V	Coaxial, RS485, RS232, RS422, DC12V, AC24V, xDSL, Ethernet
NGTC		2	1812	200V ~ 600V	≤700V ~ ≤1,200V	2,000A		RS485, RS232, RS422, DC12V, AC24V, xDSL, Ethernet
NGTD		3	3020	90V ~ 1,000V	≤700V ~ ≤1,800V	5,000A		RS485, RS232, RS422, DC12V, AC24V, xDSL, NEBS
NGTF		2	2016	900V ~ 1,200V	≤650V ~ ≤2,000V	5,000A		RS485, RS232, RS422, DC12V, AC24V, AC Power
NGTM		2	2332	90V ~ 3,600V	≤600V ~ ≤5,000V	20,000A		DC Power, AC Power

## Radial Leaded Boxed Safety Film Capacitors

Series	Description	Series Type	Safety Rating	Operating Range	Capacitance Range	Voltage Range
NPXH	Radial Film Safety Capacitors Metallized Polypropylene Interference Suppression	Extended Values	X2	-40°C ~ 110°C	0.001uF ~ 10uF	330Vac
NPXI		Superior Performance		-40°C ~ 110°C	0.01uF ~ 10uF	300Vac
NPXF		Standard Range	X1	-40°C ~ 110°C	0.001uF ~ 10uF	440Vac
NPYT	Radial Film Y2 Safety Class	Standard Range	Y2	-40°C ~ 85°C	0.01uF ~ 18uF	100 ~ 630V

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