

Surface Mount Specialty Polymer Solid Aluminum Electrolytic Capacitors

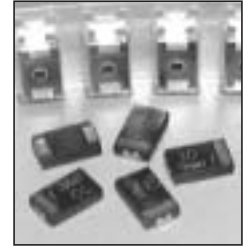
NSP Series

FEATURES

- NEW "X", "Y" & "Z" TYPE HIGH RIPPLE CURRENT/VERY LOW ESR
- LOW PROFILE (1.1MM HEIGHT), RESIN PACKAGE
- REPLACES MULTIPLE TANTALUM CHIPS IN HIGH CURRENT POWER SUPPLIES AND VOLTAGE REGULATORS
- FITS EIA (7343) "D" AND "E" TANTALUM CHIP LAND PATTERNS
- Pb-FREE AND COMPATIBLE WITH REFLOW SOLDERING

RoHS Compliant
includes all homogeneous materials

*See Part Number System for Details



CHARACTERISTICS

Rated Working Range	2.0 ~ 16VDC		
Rated Capacitance Range	2.2 ~ 560µF		
Operating Temperature Range	-40 ~ +105°C		
Capacitance Tolerance	± 20% (M)		
Max. Leakage Current (µA) After 2 Minutes (+20°C)	All Case Sizes	See Standard Products and Specifications Tables	
Max. Tan δ, 120Hz, +20°C			
High Temperature Load Life 1,000 Hours @ 105°C at Rated Working Voltage	Capacitance Change	Within ±10% of initial measured value	
	Tan δ	Less than specified max. value	
	Leakage Current	Less than specified max. value	
Damp Heat Test 500 Hours @ +60°C at 90 ~ 95% RH and Rated Working Voltage	Capacitance Change	8V ~ 16V	Within -20%/+40% of initial measured value
		6.3V	Within -20%/+50% of initial measured value
		4V	Within -20%/+60% of initial measured value
		2V, 2.5V	Within -20%/+70% of initial measured value
	Tan δ	Less than 200% of specified max. value	
Leakage Current	Less than specified max. value		

LOW ESR COMPONENT
SOLID POLYMER ELECTROLYTE
For Performance Data
see www.LowESR.com

STANDARD PRODUCTS AND SPECIFICATIONS

NIC Part Number (Reflow 240°C)	NIC Part Number (Reflow 260°C)	WV (Vdc)	Cap. (µF)	Max. LC (µA)		Tan δ	Max. Ripple Current +105°C & 100KHz (mA)	Max. ESR +20°C & 100KHz (Ω)	Height H
				240°C	260°C				
NSP680M2D5TRF	N/A	2.0	68	8.1	N/A	0.06	2,000	0.028	1.1±0.1
NSP101M2D2TRF	NSP101M2D2ATRF		100	12.0	20.0	0.06	2,500	0.018	1.8±0.1
NSP101M2D2XTRF	NSP101M2D2XATRF		100	12.0	20.0	0.06	2,700	0.015	1.8±0.1
NSP101M2D2ZTRF	NSP101M2D2ZATRF		100	12.0	20.0	0.06	3,000	0.009	1.8±0.1
NSP121M2D2TRF	NSP121M2D2ATRF		120	14.4	24.0	0.06	2,500	0.018	1.8±0.1
NSP121M2D2XTRF	NSP121M2D2XATRF		120	14.4	24.0	0.06	2,700	0.015	1.8±0.1
NSP121M2D2ZTRF	NSP121M2D2ZATRF		120	14.4	24.0	0.06	3,000	0.009	1.8±0.1
NSP151M2D2TRF	NSP151M2D2ATRF		150	18.0	30.0	0.06	2,500	0.018	1.8±0.1
NSP151M2D2ZTRF	NSP151M2D2ZATRF		150	18.0	30.0	0.06	3,000	0.009	1.8±0.1
NSP181M2D2TRF	NSP181M2D2ATRF		180	21.6	36.0	0.06	2,500	0.018	1.8±0.1
N/A	NSP181M2D2ZATRF		180	-	36.0	0.06	3,000	0.009	1.8±0.1
NSP181M2D6ZTRF	NSP181M2D6ZATRF		180	21.6	36.0	0.06	3,000	0.009	1.9±0.2
NSP181M2D3TRF	NSP181M2D3ATRF		180	21.6	36.0	0.10	3,000	0.015	2.8±0.2
NSP181M2D3XTRF	NSP181M2D3XATRF		180	21.6	36.0	0.10	3,300	0.012	2.8±0.2
N/A	NSP221M2D2ATRF		220	-	44.0	0.10	2,500	0.018	1.8±0.1
N/A	NSP221M2D2ZATRF		220	-	44.0	0.10	3,000	0.009	1.8±0.1
NSP221M2D3TRF	NSP221M2D3ATRF		220	26.4	44.0	0.10	3,000	0.015	2.8±0.2
NSP221M2D6ZTRF	NSP221M2D6ZATRF		220	26.4	44.0	0.10	3,000	0.009	1.9±0.2
NSP221M2D3XTRF	NSP221M2D3XATRF		220	26.4	44.0	0.10	3,300	0.012	2.8±0.2
N/A	NSP221M2D6ATRF		220	-	44.0	0.06	2,700	0.015	1.9±0.2
N/A	NSP271M2D6ZATRF		270	-	37.5	0.06	3,000	0.009	1.9±0.2
NSP271M2D3TRF	NSP271M2D3ATRF		270	32.4	54.0	0.10	3,000	0.015	2.8±0.2
NSP271M2D3XTRF	NSP271M2D3XATRF		270	32.4	54.0	0.10	3,300	0.012	2.8±0.2
N/A	NSP271M2D3YATRF		270	-	54.0	0.10	3,400	0.009	2.8±0.2
NSP271M2D3ZTRF	NSP271M2D3ZATRF		270	32.4	54.0	0.10	3,500	0.007	2.8±0.2
NSP271M2D4TRF	NSP271M2D4ATRF		270	32.4	54.0	0.10	3,300	0.012	4.2±0.1
NSP271M2D4XTRF	NSP271M2D4XATRF		270	32.4	54.0	0.10	3,500	0.010	4.2±0.1
N/A	NSP331M2D6ATRF		330	-	66.0	0.06	2,700	0.015	1.9±0.2
N/A	NSP331M2D6ZATRF		330	-	45.0	0.10	3,000	0.009	1.9±0.2
NSP331M2D3TRF	NSP331M2D3ATRF		330	39.6	66.0	0.10	3,000	0.015	2.8±0.2
NSP331M2D3XTRF	NSP331M2D3XATRF		330	39.6	66.0	0.10	3,300	0.012	2.8±0.2
N/A	NSP331M2D3YATRF		330	-	66.0	0.10	3,400	0.009	2.8±0.2

PRECAUTIONS

Please review the notes on correct use, safety and precautions found on pages T10 & T11 of NIC's Electrolytic Capacitor catalog.
Also found at www.niccomp.com/precautions
If in doubt or uncertainty, please review your specific application - process details with NIC's technical support personnel: tpmg@niccomp.com



Surface Mount Specialty Polymer Solid Aluminum Electrolytic Capacitors

NSP Series

NIC Part Number (Reflow 240°C)	NIC Part Number (Reflow 260°C)	WV (Vdc)	Cap. (μ F)	Max. LC (μ A)		Tan δ	Max. Ripple Current +105°C & 100KHz (mA)	Max. ESR +20°C & 100KHz (Ω)	Height H	
				240°C	260°C					
NSP331M2D3ZTRF	NSP331M2D3ZATRF	2.0	330	39.6	66.0	0.10	3,500	0.007	2.8±0.2	
NSP331M2D4TRF	NSP331M2D4ATRF		330	39.6	66.0	0.10	3,300	0.012	4.2±0.1	
NSP331M2D4XTRF	NSP331M2D4XATRF		330	39.6	66.0	0.10	3,500	0.010	4.2±0.1	
NSP391M2D3TRF	NSP391M2D3ATRF		390	46.8	78.0	0.10	3,000	0.015	2.8±0.2	
N/A	NSP391M2D3YATRF		390	-	78.0	0.10	3,400	0.009	2.8±0.2	
NSP391M2D3ZTRF	NSP391M2D3ZATRF		390	46.8	78.0	0.10	3,500	0.007	2.8±0.2	
NSP391M2D4TRF	NSP391M2D4ATRF		390	46.8	78.0	0.10	3,300	0.012	4.2±0.1	
NSP391M2D4XTRF	NSP391M2D4XATRF		390	46.8	78.0	0.10	3,500	0.010	4.2±0.1	
N/A	NSP391M2D4YATRF		390	-	78.0	0.10	3,700	0.007	4.2±0.1	
NSP391M2D4ZTRF	NSP391M2D4ZATRF		390	46.8	78.0	0.10	4,000	0.005	4.2±0.1	
NSP471M2D4TRF	NSP471M2D4ATRF		470	56.4	94.0	0.10	3,300	0.012	4.2±0.1	
N/A	NSP471M2D3YATRF		470	-	94.0	0.10	3,400	0.009	2.8±0.1	
NSP471M2D4XTRF	NSP471M2D4XATRF		470	56.4	94.0	0.10	3,500	0.010	4.2±0.1	
N/A	NSP471M2D4YATRF		470	-	94.0	0.10	3,700	0.007	4.2±0.1	
NSP471M2D4ZTRF	NSP471M2D4ZATRF		470	56.4	94.0	0.10	4,000	0.005	4.2±0.1	
NSP561M2D4TRF	NSP561M2D4ATRF		560	67.2	112.0	0.10	3,300	0.012	4.2±0.1	
N/A	NSP561M2D4YATRF		560	-	112.0	0.10	3,700	0.007	4.2±0.1	
NSP561M2D4ZTRF	NSP561M2D4ZATRF		560	67.2	112.0	0.10	4,000	0.005	4.2±0.1	
NSP560M2.5D5TRF	N/A		2.5	56	8.4	-	0.06	2,000	0.028	1.1±0.1
NSP820M2.5D2TRF	NSP820M2.5D2ATRF			82	12.3	20.5	0.06	2,500	0.018	1.8±0.1
NSP820M2.5D2XTRF	NSP820M2.5D2XATRF	82		12.3	20.5	0.06	2,700	0.015	1.8±0.1	
NSP101M2.5D2TRF	NSP101M2.5D2ATRF	100		15.0	25.0	0.06	2,500	0.018	1.8±0.1	
NSP101M2.5D2XTRF	NSP101M2.5D2XATRF	100		15.0	25.0	0.06	2,700	0.015	1.8±0.1	
NSP101M2.5D2ZTRF	NSP101M2.5D2ZATRF	100		15.0	25.0	0.06	3,000	0.009	1.8±0.1	
NSP121M2.5D2TRF	NSP121M2.5D2ATRF	120		18.0	30.0	0.06	2,500	0.018	1.8±0.1	
NSP121M2.5D2ZTRF	NSP121M2.5D2ZATRF	120		18.0	30.0	0.06	3,000	0.009	1.8±0.1	
NSP151M2.5D2TRF	NSP151M2.5D2ATRF	150		22.5	37.5	0.06	2,500	0.018	1.8±0.1	
N/A	NSP151M2.5D2ZATRF	150		-	37.5	0.06	3,000	0.009	1.8±0.1	
NSP151M2.5D6ZTRF	NSP151M2.5D6ZATRF	150		22.5	37.5	0.06	3,000	0.009	1.9±0.2	
NSP151M2.5D3TRF	NSP151M2.5D3ATRF	150		22.5	37.5	0.10	3,000	0.015	2.8±0.2	
NSP151M2.5D3XTRF	NSP151M2.5D3XATRF	150		22.5	37.5	0.10	3,300	0.012	2.8±0.2	
NSP181M2.5D3TRF	NSP181M2.5D3ATRF	180		27.0	45.0	0.10	3,000	0.015	2.8±0.2	
NSP181M2.5D3XTRF	NSP181M2.5D3XATRF	180		27.0	45.0	0.10	3,300	0.012	2.8±0.2	
NSP181M2.5D6ZTRF	NSP181M2.5D6ZATRF	180		27.0	45.0	0.10	3,000	0.009	1.9±0.2	
N/A	NSP221M2.5D6ATRF	220		-	55.0	0.06	2,700	0.015	1.9±0.2	
NSP221M2.5D3TRF	NSP221M2.5D3ATRF	220		33.0	55.0	0.10	3,000	0.015	2.8±0.2	
NSP221M2.5D3XTRF	NSP221M2.5D3XATRF	220		33.0	55.0	0.10	3,300	0.012	2.8±0.2	
N/A	NSP221M2.5D3YATRF	220		-	78.0	0.10	3,400	0.009	2.8±0.2	
NSP221M2.5D3ZTRF	NSP221M2.5D3ZATRF	220		33.0	55.0	0.10	3,500	0.007	2.8±0.2	
NSP221M2.5D4TRF	NSP221M2.5D4ATRF	220		33.0	55.0	0.10	3,300	0.012	4.2±0.1	
NSP221M2.5D4XTRF	NSP221M2.5D4XATRF	220		33.0	55.0	0.10	3,500	0.010	4.2±0.1	
NSP271M2.5D3TRF	NSP271M2.5D3ATRF	270		40.5	67.5	0.10	3,000	0.015	2.8±0.2	
N/A	NSP271M2.5D3YATRF	270		-	78.0	0.10	3,400	0.009	2.8±0.2	
NSP271M2.5D3ZTRF	NSP271M2.5D3ZATRF	270		40.5	67.5	0.10	3,500	0.007	2.8±0.2	
NSP271M2.5D4TRF	NSP271M2.5D4ATRF	270		40.5	67.5	0.10	3,300	0.012	4.2±0.1	
NSP271M2.5D4XTRF	NSP271M2.5D4XATRF	270		40.5	67.5	0.10	3,500	0.010	4.2±0.1	
NSP331M2.5D4TRF	NSP331M2.5D4ATRF	330		49.5	82.5	0.10	3,300	0.012	4.2±0.1	
NSP331M2.5D4XTRF	NSP331M2.5D4XATRF	330		49.5	82.5	0.10	3,500	0.010	4.2±0.1	
N/A	NSP331M2.5D4YATRF	330		-	82.5	0.10	3,700	0.007	4.2±0.1	
NSP331M2.5D4ZTRF	NSP331M2.5D4ZATRF	330		49.5	67.5	0.10	4,000	0.005	4.2±0.1	
NSP391M2.5D4TRF	NSP391M2.5D4ATRF	390		58.5	97.5	0.10	3,300	0.012	4.2±0.1	
N/A	NSP391M2.5D4YATRF	390		-	97.5	0.10	3,700	0.007	4.2±0.1	
NSP391M2.5D4ZTRF	NSP391M2.5D4ZATRF	390		58.5	97.5	0.10	4,000	0.005	4.2±0.1	
NSP471M2.5D4TRF	NSP471M2.5D4ATRF	470		70.5	117.5	0.10	3,300	0.012	4.2±0.1	
N/A	NSP471M2.5D4YATRF	470		-	117.5	0.10	3,700	0.007	4.2±0.1	
NSP390M4D5TRF	N/A	4.0		39	9.3	-	0.06	2,000	0.028	1.1±0.1
NSP470M4D5TRF	N/A			47	11.3	-	0.06	2,000	0.028	1.1±0.1
NSP560M4D2TRF	NSP560M4D2ATRF			56	13.4	22.4	0.06	2,500	0.018	1.8±0.1
NSP560M4D2XTRF	NSP560M4D2XATRF		56	13.4	22.4	0.06	2,700	0.015	1.8±0.1	



Surface Mount Specialty Polymer Solid Aluminum Electrolytic Capacitors

NSP Series

NIC Part Number (Reflow 240°C)	NIC Part Number (Reflow 260°C)	WV (Vdc)	Cap. (µF)	Max. LC (µA)		Tan δ	Max. Ripple Current +105°C & 100KHz (mA)	Max. ESR +20°C & 100KHz (Ω)	Height H	
				240°C	260°C					
NSP680M4D2TRF	NSP680M4D2ATRF	4.0	68	16.3	27.2	0.06	2,500	0.018	1.8±0.1	
NSP680M4D2XTRF	NSP680M4D2XATRF		68	16.3	27.2	0.06	2,700	0.015	1.8±0.1	
NSP820M4D2TRF	NSP820M4D2ATRF		82	19.7	32.8	0.06	2,500	0.018	1.8±0.1	
NSP820M4D2XTRF	NSP820M4D2XATRF		82	19.7	32.8	0.06	2,700	0.015	1.8±0.1	
NSP820M4D2ZTRF	NSP820M4D2ZATRF		82	19.7	32.8	0.06	3,000	0.009	1.8±0.1	
NSP820M4D6ZTRF	NSP820M4D6ZATRF		82	19.7	32.8	0.06	3,000	0.009	1.9±0.2	
NSP101M4D2TRF	NSP101M4D2ATRF		100	24.0	40.0	0.06	1,800	0.025	1.8±0.1	
NSP101M4D6ZTRF	NSP101M4D6ZATRF		100	24.0	40.0	0.06	3,000	0.009	1.9±0.2	
NSP121M4D3TRF	NSP121M4D3ATRF		120	28.8	48.0	0.10	3,000	0.015	2.8±0.2	
NSP121M4D3XTRF	NSP121M4D3XATRF		120	28.8	48.0	0.10	3,300	0.012	2.8±0.2	
N/A	NSP151M4D6ATRF		150	-	60.0	0.06	2,700	0.015	1.9±0.2	
NSP151M4D3TRF	NSP151M4D3ATRF		150	36.0	60.0	0.10	3,000	0.015	2.8±0.2	
NSP151M4D3XTRF	NSP151M4D3XATRF		150	36.0	60.0	0.10	3,300	0.012	2.8±0.2	
N/A	NSP151M4D3YATRF		150	-	60.0	0.10	3,400	0.009	2.8±0.2	
NSP151M4D3ZTRF	NSP151M4D3ZATRF		150	36.0	60.0	0.10	3,500	0.007	2.8±0.2	
NSP181M4D3TRF	NSP181M4D3ATRF		180	43.2	72.0	0.10	2,500	0.018	2.8±0.2	
NSP181M4D4TRF	NSP181M4D4ATRF		180	43.2	72.0	0.10	3,300	0.012	4.2±0.1	
N/A	NSP181M4D3YATRF		180	-	72.0	0.10	3,400	0.009	2.8±0.2	
NSP181M4D4XTRF	NSP181M4D4XATRF		180	43.2	72.0	0.10	3,500	0.010	4.2±0.1	
NSP221M4D4TRF	NSP221M4D4ATRF		220	52.8	88.0	0.10	3,300	0.012	4.2±0.1	
NSP221M4D4XTRF	NSP221M4D4XATRF		220	52.8	88.0	0.10	3,500	0.010	4.2±0.1	
N/A	NSP221M4D4YATRF		220	-	88.0	0.10	3,700	0.007	4.2±0.1	
NSP221M4D4ZTRF	NSP221M4D4ZATRF		220	52.8	88.0	0.10	4,000	0.005	4.2±0.1	
NSP271M4D4TRF	NSP271M4D4ATRF		270	52.8	108.0	0.10	3,300	0.012	4.2±0.1	
N/A	NSP271M4D4YATRF		270	-	108.0	0.10	3,700	0.007	4.2±0.1	
N/A	NSP331M4D4ATRF		330	-	132.0	0.10	3,300	0.012	4.2±0.1	
NSP100M6.3D2TRF	NSP100M6.3D2ATRF		6.3	10	3.0	6.3	0.06	1,400	0.055	1.8±0.1
NSP220M6.3D2TRF	NSP220M6.3D2ATRF	22		5.5	13.9	0.06	1,600	0.040	1.8±0.1	
NSP330M6.3D5TRF	N/A	33		8.3	20.8	0.06	2,000	0.028	1.1±0.1	
NSP330M6.3D2TRF	NSP330M6.3D2ATRF	33		8.3	20.8	0.06	2,000	0.028	1.8±0.1	
NSP470M6.3D2TRF	NSP470M6.3D2ATRF	47		11.8	29.6	0.06	2,500	0.018	1.8±0.1	
NSP470M6.3D2XTRF	NSP470M6.3D2XATRF	47		11.8	29.6	0.06	2,700	0.015	1.8±0.1	
NSP560M6.3D2ZTRF	N/A	56		14.1	-	0.06	3,000	0.009	1.8±0.1	
NSP680M6.3D2TRF	NSP680M6.3D2ATRF	68		17.1	42.8	0.06	2,500	0.018	1.8±0.1	
NSP680M6.3D2XTRF	NSP680M6.3D2XATRF	68		17.1	42.8	0.06	2,700	0.015	1.8±0.1	
NSP680M6.3D6ZTRF	N/A	68		17.1	-	0.06	3,000	0.009	1.9±0.2	
N/A	NSP101M6.3D6ATRF	68		-	63.0	0.06	2,700	0.015	1.9±0.2	
NSP101M6.3D3TRF	NSP101M6.3D3ATRF	100		25.2	63.0	0.10	3,000	0.015	2.8±0.2	
NSP101M6.3D3XTRF	NSP101M6.3D3XATRF	100		25.2	63.0	0.10	3,300	0.012	2.8±0.2	
NSP121M6.3D3TRF	NSP121M6.3D3ATRF	120		30.2	75.6	0.10	3,000	0.015	2.8±0.2	
NSP121M6.3D3XTRF	NSP121M6.3D3XATRF	120		30.2	75.6	0.10	3,300	0.012	2.8±0.2	
NSP121M6.3D3ZTRF	N/A	120		30.2	-	0.10	3,500	0.007	2.8±0.2	
NSP151M6.3D3TRF	NSP151M6.3D3ATRF	150		37.8	94.5	0.10	2,500	0.018	2.8±0.2	
NSP151M6.3D4TRF	NSP151M6.3D4ATRF	150		37.8	94.5	0.10	3,300	0.012	4.2±0.1	
NSP151M6.3D4XTRF	NSP151M6.3D4XATRF	150		37.8	94.5	0.10	3,500	0.010	4.2±0.1	
NSP181M6.3D4TRF	NSP181M6.3D4ATRF	180		45.4	113.4	0.10	3,300	0.012	4.2±0.1	
NSP181M6.3D4XTRF	NSP181M6.3D4XATRF	180		45.4	113.4	0.10	3,500	0.010	4.2±0.1	
NSP181M6.3D4ZTRF	N/A	180		45.4	-	0.10	4,000	0.005	4.2±0.1	
NSP221M6.3D4TRF	NSP221M6.3D4ATRF	220		55.4	138.6	0.10	3,000	0.015	4.2±0.1	
NSP8R2M8D2TRF	NSP8R2M8D2ATRF	8.0		8.2	3.0	6.3	0.06	1,400	0.055	1.8±0.1
NSP150M8D2TRF	NSP150M8D2ATRF			15	4.8	12.0	0.06	1,600	0.040	1.8±0.1
NSP220M8D5TRF	N/A			22	7.0	-	0.06	2,000	0.028	1.1±0.1
NSP220M8D2TRF	NSP220M8D2ATRF			22	7.0	17.6	0.06	2,000	0.028	1.8±0.1
NSP330M8D2TRF	NSP330M8D2ATRF		33	10.5	26.4	0.06	2,500	0.018	1.8±0.1	
NSP470M8D2TRF	NSP470M8D2ATRF		47	15.0	37.6	0.06	1,800	0.025	1.8±0.1	
NSP680M8D3TRF	NSP680M8D3ATRF		68	21.7	54.4	0.10	3,000	0.015	2.8±0.2	
NSP101M8D3TRF	NSP101M8D3ATRF		100	32.0	80.0	0.10	2,500	0.018	2.8±0.2	
NSP101M8D4TRF	NSP101M8D4ATRF		100	32.0	80.0	0.10	3,300	0.012	4.2±0.1	
NSP151M8D4TRF	NSP151M8D4ATRF		150	48.0	120.0	0.10	3,000	0.015	4.2±0.1	

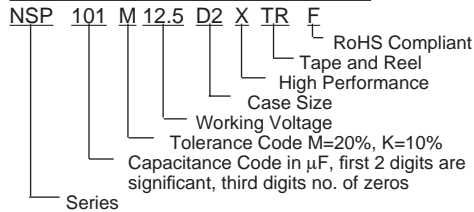


Surface Mount Specialty Polymer Solid Aluminum Electrolytic Capacitors

NSP Series

NIC Part Number (Reflow 240°C)	NIC Part Number (Reflow 260°C)	WV (Vdc)	Cap. (μF)	Max. LC (μA)		Tan δ	Max. Ripple Current +105°C & 100KHz (mA)	Max. ESR +20°C & 100KHz (Ω)	Height H
				240°C	260°C				
NSP4R7M12.5D2TRF	N/A	12.5	4.7	3.0	-	0.06	1,000	0.080	1.8±0.1
NSP100M12.5D2TRF	N/A		10	5.0	-	0.06	1,000	0.060	1.8±0.1
NSP150M12.5D5TRF	N/A		15	7.5	-	0.06	1,400	0.040	1.1±0.1
NSP150M12.5D2TRF	N/A		15	7.5	-	0.06	1,300	0.050	1.8±0.1
NSP220M12.5D2TRF	N/A		22	11.0	-	0.06	1,600	0.030	1.8±0.1
NSP2R2M16D2TRF	N/A	16	2.2	3.0	-	0.06	1,000	0.110	1.8±0.1
NSP4R7M16D2TRF	N/A		4.7	3.0	-	0.06	1,000	0.080	1.8±0.1
NSP6R8M16D2TRF	N/A		6.8	4.4	-	0.06	1,000	0.070	1.8±0.1
NSP8R2M16D2TRF	N/A		8.2	5.2	-	0.06	1,300	0.045	1.8±0.1

PART NUMBERING SYSTEM

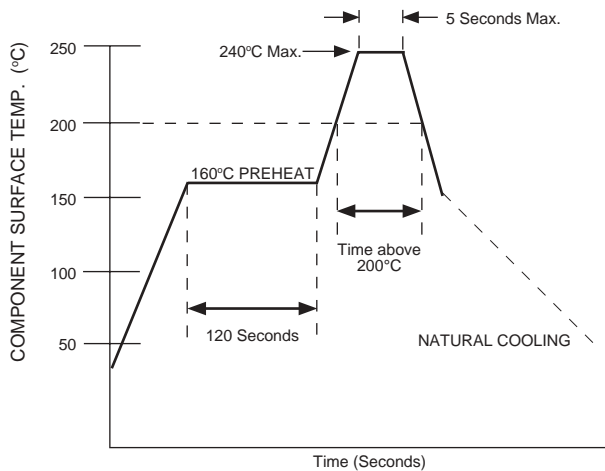


TERMINATION MATERIAL:

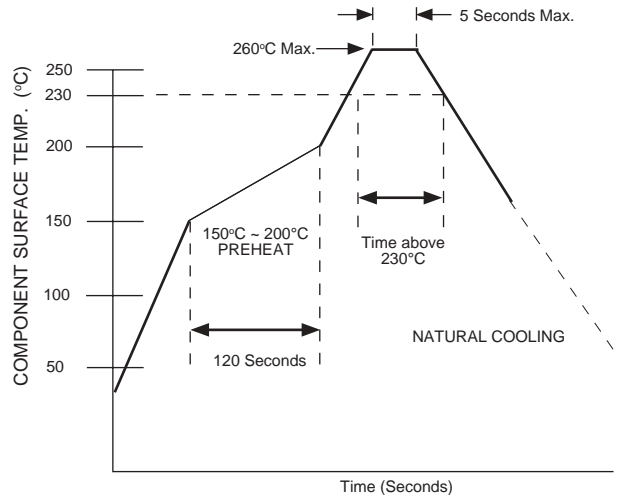
D2 - D5 and D2X - D5X Sizes
 Base: Fe (~ 100μm)
 Under Plating: Cu (~ 5μm)
 Finish Plating: Sn (5 ~ 9μm)

D2Z - D6Z Sizes
 Base: Cu (~ 105μm)
 Finish Plating: Sn (5 ~ 9μm)

RECOMMENDED 240°C REFLOW SOLDERING PROFILE (D2, D2Z, D3, D3X, D3Z, D4, D4X, D4Z, D5, D6Z)



RECOMMENDED 260°C REFLOW SOLDERING PROFILE (D2A, D2XA, D2ZA, D3A, D3XA, D3YA, D4A, D4XA, D4YA, D6A, D6ZA)



DURATION ABOVE 200°C (FOR 240°C REFLOW PARTS)

If Peak Soldering Temperature is	Maximum Time Above +200°C is
240°C	30 seconds
230°C	40 seconds
220°C	50 seconds

DURATION ABOVE 230°C (FOR 260°C REFLOW PARTS)

If Peak Soldering Temperature is	Maximum Time Above +230°C is
260°C	40 seconds
255°C	50 seconds
250°C	60 seconds

Notes:

- SAC alloy (+217°C) reflow soldering compatible
- Soldering heat limits apply to the top surface of component
- If you have concerns about your reflow soldering profile review them with NIC to insure compatible [tpmg@niccomp.com]
- Two passes through the reflow process are allowed (cooling down period between process).

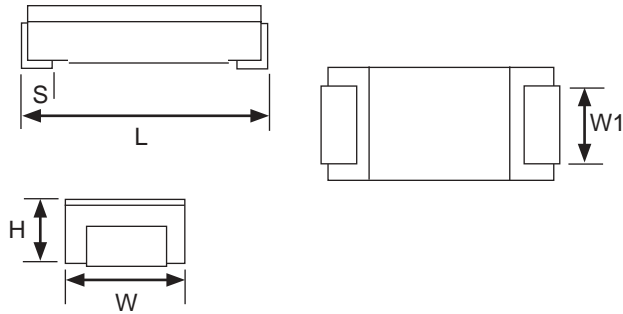


Surface Mount Specialty Polymer Solid Aluminum Electrolytic Capacitors

NSP Series

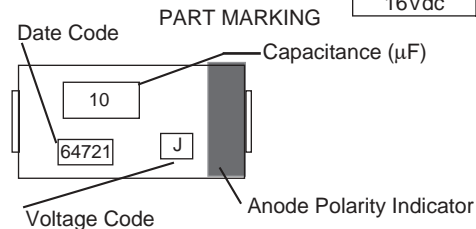
DIMENSIONS (mm)

Case Code	L ± 0.4	W ± 0.3	H	W1 ± 0.2	S ± 0.3
D2 ~ D6	7.3	4.3	see values table	2.4	1.3



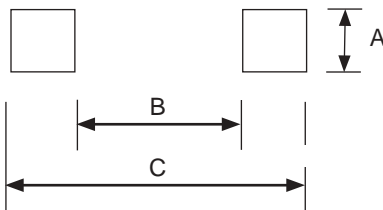
VOLTAGE CODES

Voltage	Code
2.0Vdc	D
2.5Vdc	E
6.3Vdc	J
8Vdc	K
12.5Vdc	B
16Vdc	C



RECOMMENDED LAND PATTERNS (mm)

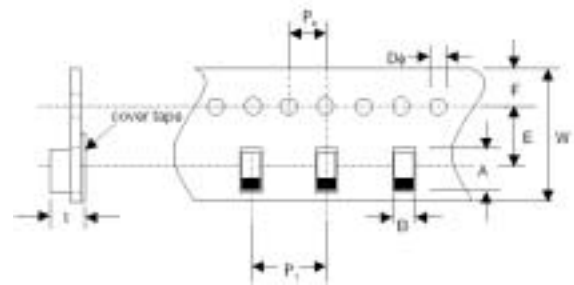
Case Code	A	B	C
D2 ~ D6	2.8	4.0	8.8



Please note the NSP series will fit on standard "D" and "E" size (7343) tantalum chip capacitor land patterns

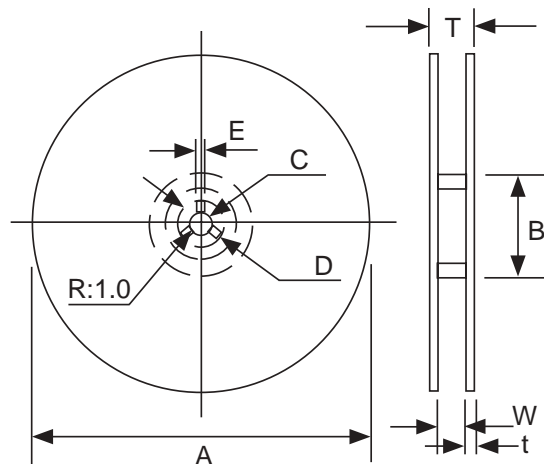
CARRIER TAPE DIMENSIONS (mm)

Case Code	A ± 0.2	B ± 0.2	D ϕ	E ± 0.1	F ± 0.1	P ₀ ± 0.1	P ₁ ± 0.1	t ± 0.2	W ± 0.3
D5	7.7	4.6	1.5 $^{+0.1}$	1.75	5.5	4.0	8.0	1.5	12.0
D2, D6								2.1	
D3								3.4	
D4								4.5	



REEL DIMENSIONS (mm)

A ± 2.0	B min.	C ± 0.5	D ± 0.8	E ± 0.5	T ± 1.0	t	W ± 1.0
330	50	13.0	21.0	2.0	20.0	3.0	14



Case Code	Reel Quantity
D5, D6, D2	3,500
D3, D4	2,000

