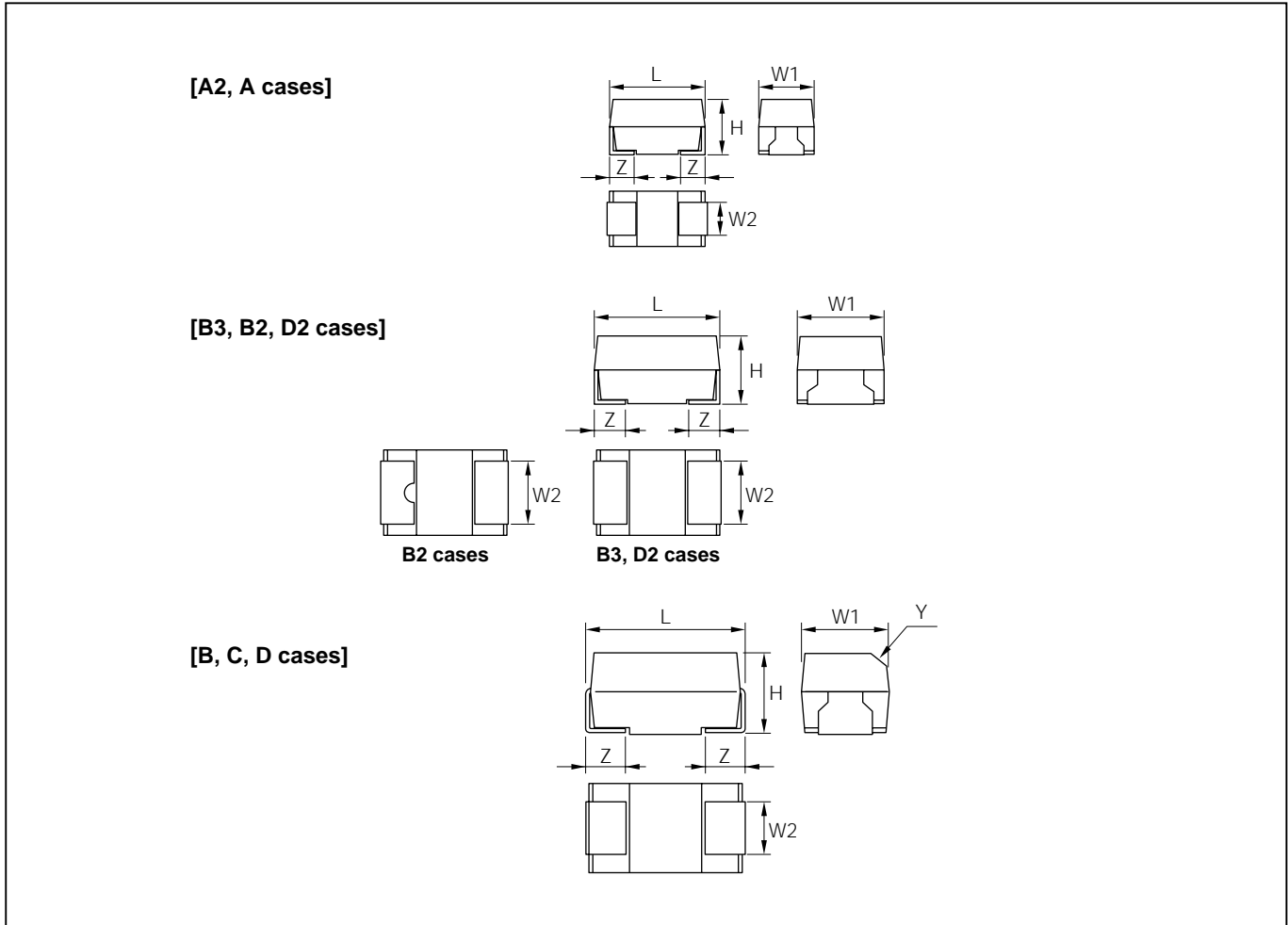


R Series Tantalum Chip Capacitors

■ FEATURES

- Standard Type.
- This series are changing the Lead-free Type Series (E/SV Series) gradually, keeping the performance characteristics. So please use the E/SV Series next time.

■ DIMENSIONS [mm]



(Unit: mm)

Case Code	EIA code	L	W ₁	W ₂	H	Z	Y
A2 (U)	3216L	3.2 ± 0.2	1.6 ± 0.2	1.2 ± 0.1	1.1 ± 0.1	0.8 ± 0.2	–
A	3216	3.2 ± 0.2	1.6 ± 0.2	1.2 ± 0.1	1.6 ± 0.2	0.8 ± 0.2	–
B3 (W)	3528L	3.5 ± 0.2	2.8 ± 0.2	2.2 ± 0.1	1.1 ± 0.1	0.8 ± 0.2	–
B2 (S)	3528	3.5 ± 0.2	2.8 ± 0.2	2.2 ± 0.1	1.9 ± 0.2	0.8 ± 0.2	–
B	–	4.7 ± 0.2	2.6 ± 0.2	1.4 ± 0.1	2.1 ± 0.2	0.8 ± 0.2	0.4 C
C	6032	6.0 ± 0.2	3.2 ± 0.2	2.2 ± 0.1	2.5 ± 0.2	1.3 ± 0.2	0.4 C
D2 (T)	5846	5.8 ± 0.2	4.6 ± 0.2	2.4 ± 0.1	3.2 ± 0.2	1.3 ± 0.2	–
D	7343	7.3 ± 0.2	4.3 ± 0.2	2.4 ± 0.1	2.8 ± 0.2	1.3 ± 0.2	0.4 C

■ STANDARD C-V VALUE REFERENCE BY CASE CODE

[STANDARD]

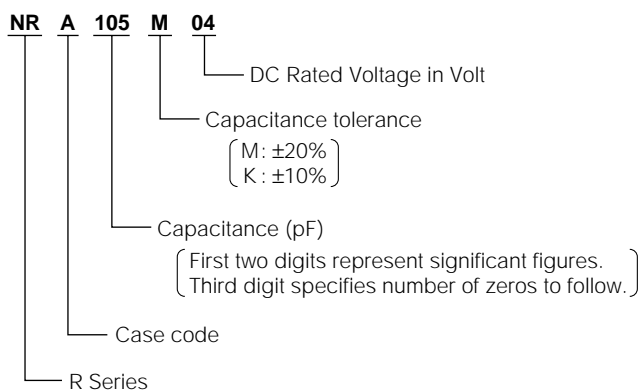
μF \ U _R	4 V	6.3 V	10 V	16 V	20 V	25 V	35 V	50 V
0.47						A	B2, B	B2
0.68					A		B2, B	C
1.0				A			B2, B	C
1.5			A	A		B2, B	C	C
2.2		A	A		B2, B		C	D
3.3	A	A		B2, B		C	C, D	D2, D
4.7	A		B2, B		C	C	D2, D	D
6.8		B2, B		C	C	D2, D	D2, D	
10	B2, B		C	C	D2, D	D2, D		
15		C	C	D2, D	D2, D			
22	C	C	D2, D	D2, D				
33	C	D2, D	D2, D					
47	D2, D	D2, D						
68	D2, D							

[EXTENDED]

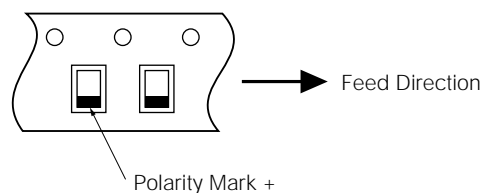
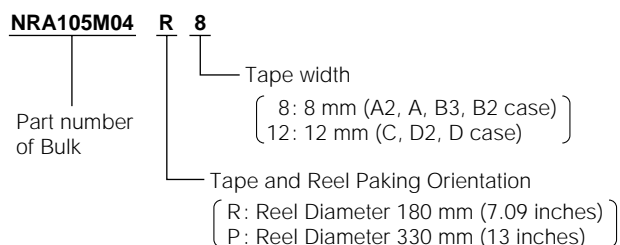
μF \ U _R	2.5 V	4 V	6.3 V	10 V	16 V	20 V	25 V	35 V
0.47						A2		A
0.68					A2	A2	A	A
1.0				A2	A2	A2, A	A	A
1.5			A2	A2	A2	A2, A	A	A, B2, B
2.2		A2	A2	A2	A2, A	A	A, B2	B2, B
3.3		A2	A2	A2, A	A	A, B2	B2, B	B2
4.7	A2	A2	A2, A	A2, A	A, B2	A, B2, B	B2	C
6.8	A2	A2, A	A2, A	A, B2	A, B3, B2, B	B2	C	C
10	A2	A2, A	A2, A, B2	A2, A, B3, B2, B	A, B3, B2	B2, C	C	D2, D
15	A2, A	A2, A, B3	A2, A, B3, B2, B	B3, B2	B2, C	C	D2, D	D
22	A2, A	A2, A, B3, B2, B	A, B3, B2	B3, B2, C	B2, C	C, D2, D	D	
33	A, B3, B2	A, B3, B2	A, B3, B2, C	B2, C	C, D2, D	D2, D		
47	A, B3, B2	A, B3, B2, C	B3, B2, C	B2, C, D2, D	C, D2, D	D		
68	A, B3, B2	B3, B2, C	B2, C, D2, D	C, D2, D	D			
100	B3, B2	B3, B2, C, D2, D	C, D2, D	C, D2, D	D			
150	B2	B2, C, D2, D	C, D2, D	D				
220	B2, C	C, D2, D	C, D	D				
330	D2	C, D	D					
470	C, D	D	D					

■ PART NUMBER SYSTEM

[Bulk]



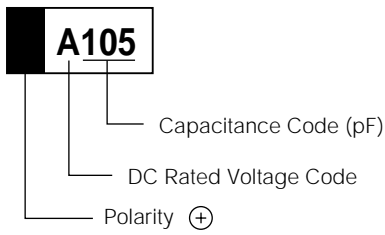
[Tape and Reel]



MARKINGS

The standard marking shows capacitance, DC rated voltage, and polarity.

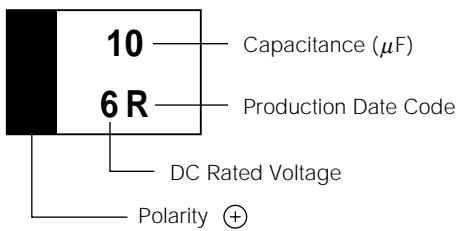
[A2, A cases] (ex. 1 μ F / 10 V)



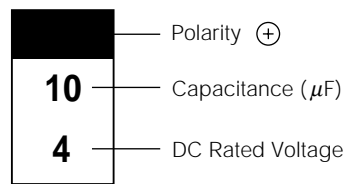
[DC Rated Voltage code]

Code	e	G	J	A	C	D	E	V	H
Rated Voltage	2.5 V	4 V	6.3 V	10 V	16 V	20 V	25 V	35V	50V

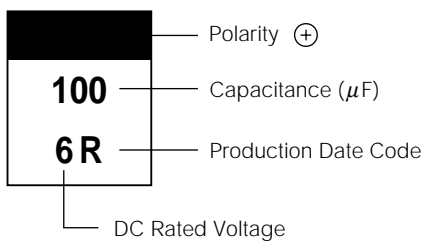
[B3, B2, and D2 cases] (ex. 10 μ F / 6.3 V)



[B case] (ex. 10 μ F / 4 V)



[C, D cases] (ex. 100 μ F / 6.3 V)



[B3, B2, C, D cases production date code]

Y \ M	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2001	A	B	C	D	E	F	G	H	J	K	L	M
2002	N	P	Q	R	S	T	U	V	W	X	Y	Z
2003	a	b	c	d	e	f	g	h	j	k	l	m
2004	n	p	q	r	s	t	u	v	w	x	y	z

Note: Production date code will repeat beginning in 2005.

■ PERFORMANCE CHARACTERISTICS

ITEM	SPECIFICATIONS								
Operating Temperature	-55 to +125°C								
Rated Voltage	2.5V	4 V	6.3 V	10 V	16 V	20 V	25 V	35 V	50 V
Working Voltage at 125°C	1.6 V	2.5 V	4 V	6.3 V	10 V	13 V	16 V	22 V	32 V
Surge Voltage at 85°C	3.3 V	5.2 V	8 V	13 V	20 V	26 V	33 V	46 V	65 V
Capacitance (at 20°C, 120 Hz)	Range : 0.47 μ F to 680 μ F Tolerance : \pm 20% (\pm 10%)								
Capacitance Change with Temperature	Not to exceed -12% at -55°C, +12% at 85°C, +15% at 125°C								
DC Leakage Current	0.01C • V (μ A) or 0.5 μ A, Whichever is Greater								
Tangent of Loss Angle	Refer to Standard Ratings								
Damp Heat (90 to 95%RH at 40°C, 56 days (1344hrs.))	Capacitance Change : \pm 5% to \pm 15% Tangent of Loss Angle : 150% of Initial Requirements DC Leakage Current : Initial Requirements								
Endurance (at 85°C, DC Rated Voltage, 2000hrs.)	Capacitance Change : \pm 10% to \pm 15% Tangent of Loss Angle : Initial Requirements DC Leakage Current : 125% of Initial Requirements								
Resistance to Soldering Heat (solder reflow at 260°C, 10 s or solder dip at 260°C, 5 s)	Capacitance Change : \pm 5% to \pm 15% Tangent of Loss Angle : Initial Requirements DC Leakage Current : Initial Requirements								

We obtained IEC Qualification Approval on R Series Standard Ratings in September 1987.

■ STANDARD RATINGS

Rating (V)	Part Number	Capacitance (μF)	Case Code	DC Leakage Current (μA)	Tangent of Loss Angle	Capacitance Change	
						at Damp Heat at Resistance to Soldering Heat	at Enduar
4	NRA335M04	3.3	A	0.5	0.04	± 5%	±10%
	NRA475M04	4.7	A	0.5	0.04	± 5%	±10%
	NRS106M04	10	B2	0.5	0.06	± 5%	±10%
	NRB106M04	10	B	0.5	0.06	± 5%	±10%
	NRC226M04	22	C	0.9	0.06	± 5%	±10%
	NRC336M04	33	C	1.3	0.06	± 5%	±10%
	NRT476M04	47	D2	1.9	0.06	± 5%	±10%
	NRD476M04	47	D	1.9	0.06	± 5%	±10%
	NRT686M04	68	D2	2.7	0.06	± 5%	±10%
NRD686M04	68	D	2.7	0.06	± 5%	±10%	
6.3	NRA225M06	2.2	A	0.5	0.04	± 5%	±10%
	NRA335M06	3.3	A	0.5	0.04	± 5%	±10%
	NRS685M06	6.8	B2	0.5	0.06	± 5%	±10%
	NRB685M06	6.8	B	0.5	0.06	± 5%	±10%
	NRC156M06	15	C	0.9	0.06	± 5%	±10%
	NRC226M06	22	C	1.4	0.06	± 5%	±10%
	NRT336M06	33	D2	2.1	0.06	± 5%	±10%
	NRD336M06	33	D	2.1	0.06	± 5%	±10%
10	NRA155M10	1.5	A	0.5	0.04	± 5%	±10%
	NRA225M10	2.2	A	0.5	0.04	± 5%	±10%
	NRS475M10	4.7	B2	0.5	0.04	± 5%	±10%
	NRB475M10	4.7	B	0.5	0.04	± 5%	±10%
	NRC106M10	10	C	1.0	0.06	± 5%	±10%
	NRC156M10	15	C	1.5	0.06	± 5%	±10%
	NRT226M10	22	D2	2.2	0.06	± 5%	±10%
	NRD226M10	22	D	2.2	0.06	± 5%	±10%
16	NRA105M16	1.0	A	0.5	0.04	± 5%	±10%
	NRA155M16	1.5	A	0.5	0.04	± 5%	±10%
	NRS335M16	3.3	B2	0.5	0.04	± 5%	±10%
	NRB335M16	3.3	B	0.5	0.04	± 5%	±10%
	NRC685M16	6.8	C	1.1	0.06	± 5%	±10%
	NRC106M16	10	C	1.6	0.06	± 5%	±10%
	NRT156M16	15	D2	2.4	0.06	± 5%	±10%
	NRD156M16	15	D	2.4	0.06	± 5%	±10%
	NRT226M16	22	D2	3.5	0.06	± 5%	±10%
NRD226M16	22	D	3.5	0.06	± 5%	±10%	

Rating (V)	Part Number	Capacitance (μF)	Case Code	DC Leakage Current (μA)	Tangent of Loss Angle	Capacitance Change	
						at Damp Heat at Resistance to Soldering Heat	at Enduar
20	NRA684M20	0.68	A	0.5	0.04	$\pm 5\%$	$\pm 10\%$
	NRS225M20	2.2	B2	0.5	0.04	$\pm 5\%$	$\pm 10\%$
	NRB225M20	2.2	B	0.5	0.04	$\pm 5\%$	$\pm 10\%$
	NRC475M20	4.7	C	0.9	0.04	$\pm 5\%$	$\pm 10\%$
	NRC685M20	6.8	C	1.4	0.06	$\pm 5\%$	$\pm 10\%$
	NRT106M20	10	D2	2.0	0.06	$\pm 5\%$	$\pm 10\%$
	NRD106M20	10	D	2.0	0.06	$\pm 5\%$	$\pm 10\%$
	NRT156M20	15	D2	3.0	0.06	$\pm 5\%$	$\pm 10\%$
NRD156M20	15	D	3.0	0.06	$\pm 5\%$	$\pm 10\%$	
25	NRA474M25	0.47	A	0.5	0.04	$\pm 5\%$	$\pm 10\%$
	NRS155M25	1.5	B2	0.5	0.04	$\pm 5\%$	$\pm 10\%$
	NRB155M25	1.5	B	0.5	0.04	$\pm 5\%$	$\pm 10\%$
	NRC335M25	3.3	C	0.8	0.04	$\pm 5\%$	$\pm 10\%$
	NRC475M25	4.7	C	1.2	0.04	$\pm 5\%$	$\pm 10\%$
	NRT685M25	6.8	D2	1.7	0.06	$\pm 5\%$	$\pm 10\%$
	NRD685M25	6.8	D	1.7	0.06	$\pm 5\%$	$\pm 10\%$
	NRT106M25	10	D2	2.5	0.06	$\pm 5\%$	$\pm 10\%$
NRD106M25	10	D	2.5	0.06	$\pm 5\%$	$\pm 10\%$	
35	NRS474M35	0.47	B2	0.5	0.04	$\pm 5\%$	$\pm 10\%$
	NRB474M35	0.47	B	0.5	0.04	$\pm 5\%$	$\pm 10\%$
	NRS684M35	0.68	B2	0.5	0.04	$\pm 5\%$	$\pm 10\%$
	NRB684M35	0.68	B	0.5	0.04	$\pm 5\%$	$\pm 10\%$
	NRS105M35	1.0	B2	0.5	0.04	$\pm 5\%$	$\pm 10\%$
	NRB105M35	1.0	B	0.5	0.04	$\pm 5\%$	$\pm 10\%$
	NRC155M35	1.5	C	0.5	0.04	$\pm 5\%$	$\pm 10\%$
	NRC225M35	2.2	C	0.8	0.04	$\pm 5\%$	$\pm 10\%$
	NRC335M35	3.3	C	1.2	0.04	$\pm 5\%$	$\pm 10\%$
	NRD335M35	3.3	D	1.2	0.04	$\pm 5\%$	$\pm 10\%$
	NRT475M35	4.7	D2	1.6	0.04	$\pm 5\%$	$\pm 10\%$
	NRD475M35	4.7	D	1.6	0.04	$\pm 5\%$	$\pm 10\%$
NRT685M35	6.8	D2	2.4	0.06	$\pm 5\%$	$\pm 10\%$	
NRD685M35	6.8	D	2.4	0.06	$\pm 5\%$	$\pm 10\%$	
50	NRS474M50	0.47	B2	0.5	0.04	$\pm 5\%$	$\pm 10\%$
	NRC684M50	0.68	C	0.5	0.04	$\pm 5\%$	$\pm 10\%$
	NRC105M50	1.0	C	0.5	0.04	$\pm 5\%$	$\pm 10\%$
	NRC155M50	1.5	C	0.8	0.04	$\pm 5\%$	$\pm 10\%$
	NRD225M50	2.2	D	1.1	0.04	$\pm 5\%$	$\pm 10\%$
	NRT335M50	3.3	D2	1.7	0.04	$\pm 5\%$	$\pm 10\%$
	NRD335M50	3.3	D	1.7	0.04	$\pm 5\%$	$\pm 10\%$
NRD475M50	4.7	D	2.4	0.04	$\pm 5\%$	$\pm 10\%$	

■ EXTENDED CHIPS STANDARD RATINGS

Rating (V)	Part Number	Capacitance (μF)	Case Code	DC Leakage Current (μA)	Tangent of Loss Angle	Capacitance Change	
						at Damp Heat at Resistance to Soldering Heat	at Enduar
2.5	NRU475M02	4.7	A2	0.5	0.08	±12%	±12%
	NRU685M02	6.8	A2	0.5	0.08	±12%	±12%
	NRU106M02	10	A2	0.5	0.08	±12%	±12%
	NRU156M02	15	A2	0.5	0.12	±12%	±12%
	NRA156M02	15	A	0.5	0.08	±12%	±12%
	NRU226M02	22	A2	0.6	0.12	±12%	±12%
	NRA226M02	22	A	0.6	0.08	±12%	±12%
	NRA336M02	33	A	0.8	0.08	±12%	±12%
	NRW336M02	33	B3	0.8	0.08	±15%	±15%
	NRS336M02	33	B2	0.8	0.08	±12%	±12%
	NRA476M02	47	A	1.2	0.12	±12%	±12%
	NRW476M02	47	B3	1.2	0.12	±15%	±15%
	NRS476M02	47	B2	1.2	0.08	±12%	±12%
	NRA686M02	68	A	1.7	0.18	±12%	±12%
	NRW686M02	68	B3	1.7	0.20	±15%	±15%
	NRS686M02	68	B2	1.7	0.08	±12%	±12%
	NRW107M02	100	B3	2.5	0.18	±15%	±15%
	NRS107M02	100	B2	2.5	0.08	±12%	±12%
	NRS157M02	150	B2	3.8	0.16	±12%	±12%
	NRS227M02	220	B2	5.5	0.18	±12%	±12%
NRC227M02	220	C	5.5	0.12	±12%	±12%	
NRT337M02	330	D2	8.3	0.14	±12%	±12%	
NRC477M02	470	C	11.8	0.18	±12%	±12%	
NRD477M02	470	D	11.8	0.14	±12%	±12%	
4	NRU225M04	2.2	A2	0.5	0.08	± 5%	±10%
	NRU335M04	3.3	A2	0.5	0.08	± 5%	±10%
	NRU475M04	4.7	A2	0.5	0.08	±12%	±12%
	NRU685M04	6.8	A2	0.5	0.08	±12%	±12%
	NRA685M04	6.8	A	0.5	0.08	± 5%	±10%
	NRU106M04	10	A2	0.5	0.12	±12%	±12%
	NRA106M04	10	A	0.5	0.08	±12%	±12%
	NRU156M04	15	A2	0.6	0.12	±12%	±12%
	NRA156M04	15	A	0.6	0.08	±12%	±12%
	NRS156M04	15	B2	0.6	0.08	± 5%	±10%
	NRU226M04	22	A2	0.9	0.12	±12%	±12%
	NRA226M04	22	A	0.9	0.08	±12%	±12%
	NRW226M04	22	B3	0.9	0.08	±15%	±15%
	NRS226M04	22	B2	0.9	0.08	± 5%	±10%
	NRB226M04	22	B	0.9	0.08	± 5%	±10%
	NRA336M04	33	A	1.3	0.10	±12%	±12%
	NRW336M04	33	B3	1.3	0.12	±15%	±15%
	NRS336M04	33	B2	1.3	0.08	± 5%	±10%
	NRA476M04	47	A	1.9	0.12	±12%	±12%
	NRW476M04	47	B3	1.9	0.12	±15%	±15%
NRS476M04	47	B2	1.9	0.08	± 5%	±10%	
NRC476M04	47	C	1.9	0.08	± 5%	±10%	
NRW686M04	68	B3	2.7	0.15	±15%	±15%	
NRS686M04	68	B2	2.7	0.08	± 5%	±10%	
NRC686M04	68	C	2.7	0.08	± 5%	±10%	

Rating (V)	Part Number	Capacitance (μ F)	Case Code	DC Leakage Current (μ A)	Tangent of Loss Angle	Capacitance Change	
						at Damp Heat at Resistance to Soldering Heat	at Enduar
4	NRW107M04	100	B3	4.0	0.20	$\pm 15\%$	$\pm 15\%$
	NRS107M04	100	B2	4.0	0.12	$\pm 12\%$	$\pm 12\%$
	NRC107M04	100	C	4.0	0.08	$\pm 5\%$	$\pm 10\%$
	NRT107M04	100	D2	4.0	0.08	$\pm 5\%$	$\pm 10\%$
	NRD107M04	100	D	4.0	0.08	$\pm 5\%$	$\pm 10\%$
	NRS157M04	150	B2	6.0	0.18	$\pm 12\%$	$\pm 12\%$
	NRC157M04	150	C	6.0	0.10	$\pm 12\%$	$\pm 12\%$
	NRT157M04	150	D2	6.0	0.08	$\pm 5\%$	$\pm 10\%$
	NRD157M04	150	D	6.0	0.08	$\pm 5\%$	$\pm 10\%$
	NRC227M04	220	C	8.8	0.12	$\pm 12\%$	$\pm 12\%$
	NRT227M04	220	D2	8.8	0.12	$\pm 12\%$	$\pm 12\%$
	NRD227M04	220	D	8.8	0.08	$\pm 5\%$	$\pm 10\%$
	NRC337M04	330	C	13.2	0.14	$\pm 12\%$	$\pm 12\%$
	NRD337M04	330	D	13.2	0.14	$\pm 12\%$	$\pm 12\%$
NRD477M04	470	D	18.8	0.16	$\pm 12\%$	$\pm 12\%$	
NRD687M04	680	D	27.2	0.24	$\pm 12\%$	$\pm 12\%$	
6.3	NRU155M06	1.5	A2	0.5	0.08	$\pm 5\%$	$\pm 10\%$
	NRU225M06	2.2	A2	0.5	0.08	$\pm 5\%$	$\pm 10\%$
	NRU335M06	3.3	A2	0.5	0.08	$\pm 12\%$	$\pm 12\%$
	NRU475M06	4.7	A2	0.5	0.08	$\pm 12\%$	$\pm 12\%$
	NRA475M06	4.7	A	0.5	0.08	$\pm 5\%$	$\pm 10\%$
	NRU685M06	6.8	A2	0.5	0.08	$\pm 12\%$	$\pm 12\%$
	NRA685M06	6.8	A	0.5	0.08	$\pm 12\%$	$\pm 12\%$
	NRU106M06	10	A2	0.6	0.08	$\pm 12\%$	$\pm 12\%$
	NRA106M06	10	A	0.6	0.08	$\pm 12\%$	$\pm 12\%$
	NRS106M06	10	B2	0.6	0.08	$\pm 5\%$	$\pm 10\%$
	NRU156M06	15	A2	0.9	0.12	$\pm 12\%$	$\pm 12\%$
	NRA156M06	15	A	0.9	0.08	$\pm 12\%$	$\pm 12\%$
	NRW156M06	15	B3	0.9	0.08	$\pm 15\%$	$\pm 15\%$
	NRS156M06	15	B2	0.9	0.08	$\pm 5\%$	$\pm 10\%$
	NRB156M06	15	B	0.9	0.08	$\pm 5\%$	$\pm 10\%$
	NRA226M06	22	A	1.4	0.10	$\pm 12\%$	$\pm 12\%$
	NRW226M06	22	B3	1.4	0.12	$\pm 15\%$	$\pm 15\%$
	NRS226M06	22	B2	1.4	0.08	$\pm 5\%$	$\pm 10\%$
	NRA336M06	33	A	2.1	0.12	$\pm 12\%$	$\pm 12\%$
	NRW336M06	33	B3	2.1	0.12	$\pm 15\%$	$\pm 15\%$
	NRS336M06	33	B2	2.1	0.08	$\pm 5\%$	$\pm 10\%$
	NRC336M06	33	C	2.1	0.08	$\pm 5\%$	$\pm 10\%$
	NRW476M06	47	B3	3.0	0.12	$\pm 15\%$	$\pm 15\%$
	NRS476M06	47	B2	3.0	0.08	$\pm 5\%$	$\pm 10\%$
	NRC476M06	47	C	3.0	0.08	$\pm 5\%$	$\pm 10\%$
	NRS686M06	68	B2	4.3	0.10	$\pm 12\%$	$\pm 12\%$
	NRC686M06	68	C	4.3	0.08	$\pm 5\%$	$\pm 10\%$
	NRT686M06	68	D2	4.3	0.08	$\pm 5\%$	$\pm 10\%$
	NRD686M06	68	D	4.3	0.08	$\pm 5\%$	$\pm 10\%$
	NRC107M06	100	C	6.3	0.10	$\pm 12\%$	$\pm 12\%$
	NRT107M06	100	D2	6.3	0.08	$\pm 5\%$	$\pm 10\%$
	NRD107M06	100	D	6.3	0.08	$\pm 5\%$	$\pm 10\%$
	NRC157M06	150	C	9.5	0.10	$\pm 12\%$	$\pm 12\%$
NRT157M06	150	D2	9.5	0.10	$\pm 12\%$	$\pm 12\%$	
NRD157M06	150	D	9.5	0.08	$\pm 5\%$	$\pm 10\%$	
NRC227M06	220	C	13.9	0.14	$\pm 12\%$	$\pm 12\%$	
NRD227M06	220	D	13.9	0.12	$\pm 12\%$	$\pm 12\%$	
NRD337M06	330	D	20.8	0.14	$\pm 12\%$	$\pm 12\%$	
NRD477M06	470	D	29.6	0.20	$\pm 12\%$	$\pm 12\%$	

Rating (V)	Part Number	Capacitance (μF)	Case Code	DC Leakage Current (μA)	Tangent of Loss Angle	Capacitance Change	
						at Damp Heat at Resistance to Soldering Heat	at Enduar
10	NRU105M10	1.0	A2	0.5	0.08	± 5%	±10%
	NRU155M10	1.5	A2	0.5	0.08	± 5%	±10%
	NRU225M10	2.2	A2	0.5	0.08	±12%	±12%
	NRU335M10	3.3	A2	0.5	0.08	±12%	±12%
	NRA335M10	3.3	A	0.5	0.08	± 5%	±10%
	NRU475M10	4.7	A2	0.5	0.08	±12%	±12%
	NRA475M10	4.7	A	0.5	0.08	±12%	±12%
	NRA685M10	6.8	A	0.7	0.08	±12%	±12%
	NRS685M10	6.8	B2	0.7	0.08	± 5%	±10%
	NRU106M10	10	A2	1.0	0.08	±12%	±12%
	NRA106M10	10	A	1.0	0.08	±12%	±12%
	NRW106M10	10	B3	1.0	0.08	±15%	±15%
	NRS106M10	10	B2	1.0	0.08	± 5%	±10%
	NRB106M10	10	B	1.0	0.08	± 5%	±10%
	NRW156M10	15	B3	1.5	0.12	±15%	±15%
	NRS156M10	15	B2	1.5	0.08	± 5%	±10%
	NRW226M10	22	B3	2.2	0.12	±15%	±15%
	NRS226M10	22	B2	2.2	0.08	± 5%	±10%
	NRC226M10	22	C	2.2	0.08	± 5%	±10%
	NRS336M10	33	B2	3.3	0.08	± 5%	±10%
	NRC336M10	33	C	3.3	0.08	± 5%	±10%
	NRS476M10	47	B2	4.7	0.08	±12%	±12%
	NRC476M10	47	C	4.7	0.08	± 5%	±10%
	NRT476M10	47	D2	4.7	0.08	± 5%	±10%
	NRD476M10	47	D	4.7	0.08	± 5%	±10%
	NRC686M10	68	C	6.8	0.08	±12%	±12%
	NRT686M10	68	D2	6.8	0.08	± 5%	±10%
	NRD686M10	68	D	6.8	0.08	± 5%	±10%
	NRC107M10	100	C	10.0	0.10	±12%	±12%
	NRT107M10	100	D2	10.0	0.10	±12%	±12%
NRD107M10	100	D	10.0	0.08	± 5%	±10%	
NRD157M10	150	D	15.0	0.10	±12%	±12%	
NRD227M10	220	D	22.0	0.12	±12%	±12%	
16	NRU684M16	0.68	A2	0.5	0.06	± 5%	±10%
	NRU105M16	1.0	A2	0.5	0.06	± 5%	±10%
	NRU155M16	1.5	A2	0.5	0.06	±12%	±12%
	NRU225M16	2.2	A2	0.5	0.06	±12%	±12%
	NRA225M16	2.2	A	0.5	0.06	± 5%	±10%
	NRA335M16	3.3	A	0.5	0.06	±12%	±12%
	NRA475M16	4.7	A	0.8	0.06	±12%	±12%
	NRS475M16	4.7	B2	0.8	0.06	± 5%	±10%
	NRA685M16	6.8	A	1.1	0.06	±12%	±12%
	NRW685M16	6.8	B3	1.1	0.06	±15%	±15%
	NRS685M16	6.8	B2	1.1	0.06	± 5%	±10%
	NRB685M16	6.8	B	1.1	0.06	± 5%	±10%
	NRA106M16	10	A	1.6	0.08	±12%	±12%
	NRW106M16	10	B3	1.6	0.08	±15%	±15%
	NRS106M16	10	B2	1.6	0.06	± 5%	±10%
	NRS156M16	15	B2	2.4	0.06	± 5%	±10%
	NRC156M16	15	C	2.4	0.06	± 5%	±10%
	NRS226M16	22	B2	3.5	0.06	± 5%	±10%
	NRC226M16	22	C	3.5	0.06	± 5%	±10%
	NRC336M16	33	C	5.3	0.06	± 5%	±10%
	NRT336M16	33	D2	5.3	0.06	± 5%	±10%
	NRD336M16	33	D	5.3	0.06	± 5%	±10%
	NRC476M16	47	C	7.5	0.06	±12%	±12%
	NRT476M16	47	D2	7.5	0.06	± 5%	±10%
NRD476M16	47	D	7.5	0.06	± 5%	±10%	
NRD686M16	68	D	10.9	0.06	± 5%	±10%	
NRD107M16	100	D	16.0	0.10	±12%	±12%	

Rating (V)	Part Number	Capacitance (μ F)	Case Code	DC Leakage Current (μ A)	Tangent of Loss Angle	Capacitance Change	
						at Damp Heat at Resistance to Soldering Heat	at Enduar
20	NRU474M20	0.47	A2	0.5	0.06	$\pm 5\%$	$\pm 10\%$
	NRU684M20	0.68	A2	0.5	0.06	$\pm 5\%$	$\pm 10\%$
	NRU105M20	1.0	A2	0.5	0.06	$\pm 12\%$	$\pm 12\%$
	NRA105M20	1.0	A	0.5	0.06	$\pm 5\%$	$\pm 10\%$
	NRU155M20	1.5	A2	0.5	0.06	$\pm 12\%$	$\pm 12\%$
	NRA155M20	1.5	A	0.5	0.06	$\pm 5\%$	$\pm 10\%$
	NRA225M20	2.2	A	0.5	0.06	$\pm 12\%$	$\pm 12\%$
	NRA335M20	3.3	A	0.7	0.06	$\pm 12\%$	$\pm 12\%$
	NRS335M20	3.3	B2	0.7	0.06	$\pm 5\%$	$\pm 10\%$
	NRA475M20	4.7	A	0.9	0.06	$\pm 12\%$	$\pm 12\%$
	NRS475M20	4.7	B2	0.9	0.06	$\pm 5\%$	$\pm 10\%$
	NRB475M20	4.7	B	0.9	0.06	$\pm 5\%$	$\pm 10\%$
	NRS685M20	6.8	B2	1.4	0.06	$\pm 5\%$	$\pm 10\%$
	NRS106M20	10	B2	2.0	0.06	$\pm 5\%$	$\pm 10\%$
	NRC106M20	10	C	2.0	0.06	$\pm 5\%$	$\pm 10\%$
	NRC156M20	15	C	3.0	0.06	$\pm 5\%$	$\pm 10\%$
	NRC226M20	22	C	4.4	0.06	$\pm 5\%$	$\pm 10\%$
	NRT226M20	22	D2	4.4	0.06	$\pm 5\%$	$\pm 10\%$
NRD226M20	22	D	4.4	0.06	$\pm 5\%$	$\pm 10\%$	
NRT336M20	33	D2	6.6	0.06	$\pm 5\%$	$\pm 10\%$	
NRD336M20	33	D	6.6	0.06	$\pm 5\%$	$\pm 10\%$	
NRD476M20	47	D	9.4	0.06	$\pm 5\%$	$\pm 10\%$	
25	NRA684M25	0.68	A	0.5	0.06	$\pm 5\%$	$\pm 10\%$
	NRA105M25	1.0	A	0.5	0.06	$\pm 5\%$	$\pm 10\%$
	NRA155M25	1.5	A	0.5	0.06	$\pm 12\%$	$\pm 12\%$
	NRA225M25	2.2	A	0.6	0.06	$\pm 12\%$	$\pm 12\%$
	NRS225M25	2.2	B2	0.6	0.06	$\pm 5\%$	$\pm 10\%$
	NRS335M25	3.3	B2	0.8	0.06	$\pm 5\%$	$\pm 10\%$
	NRB335M25	3.3	B	0.8	0.06	$\pm 5\%$	$\pm 10\%$
	NRS475M25	4.7	B2	1.2	0.06	$\pm 5\%$	$\pm 10\%$
	NRC685M25	6.8	C	1.7	0.06	$\pm 5\%$	$\pm 10\%$
	NRC106M25	10	C	2.5	0.06	$\pm 5\%$	$\pm 10\%$
	NRT156M25	15	D2	3.8	0.06	$\pm 5\%$	$\pm 10\%$
	NRD156M25	15	D	3.8	0.06	$\pm 5\%$	$\pm 10\%$
NRD226M25	22	D	5.5	0.06	$\pm 5\%$	$\pm 10\%$	
35	NRA474M35	0.47	A	0.5	0.06	$\pm 5\%$	$\pm 10\%$
	NRA684M35	0.68	A	0.5	0.06	$\pm 5\%$	$\pm 10\%$
	NRA105M35	1.0	A	0.5	0.06	$\pm 12\%$	$\pm 12\%$
	NRA155M35	1.5	A	0.5	0.06	$\pm 12\%$	$\pm 12\%$
	NRS155M35	1.5	B2	0.5	0.06	$\pm 5\%$	$\pm 10\%$
	NRB155M35	1.5	B	0.5	0.06	$\pm 5\%$	$\pm 10\%$
	NRS225M35	2.2	B2	0.8	0.06	$\pm 5\%$	$\pm 10\%$
	NRB225M35	2.2	B	0.8	0.06	$\pm 5\%$	$\pm 10\%$
	NRS335M35	3.3	B2	1.2	0.06	$\pm 5\%$	$\pm 10\%$
	NRC475M35	4.7	C	1.6	0.06	$\pm 5\%$	$\pm 10\%$
	NRC685M35	6.8	C	2.4	0.06	$\pm 5\%$	$\pm 10\%$
	NRT106M35	10	D2	3.5	0.06	$\pm 5\%$	$\pm 10\%$
	NRD106M35	10	D	3.5	0.06	$\pm 5\%$	$\pm 10\%$
NRD156M35	15	D	5.3	0.06	$\pm 5\%$	$\pm 10\%$	