

# TF Series

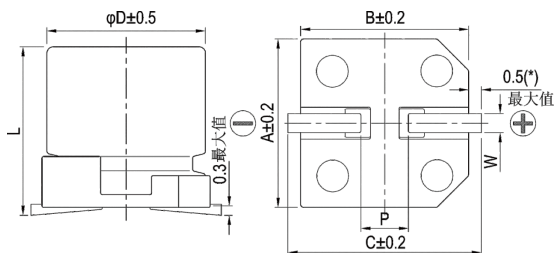
- Designed for surface mounting on high density PC board
- Load life 6,000 hours at 105°C
- RoHS Compliant



## SPECIFICATIONS

Item	Performance Characteristics												
Category Temperature Range	-40 ~ +105°C												
Working Voltage Range	6.3 ~ 450Vdc												
Capacitance Range	2.2 ~ 1000 μF												
Capacitance Tolerance	±20% (at 20°C and 120Hz)												
Dissipation Factor (tanδ) (at 20°C, 120Hz)	Rated Voltage (V)	6.3	10	16	25	35	50	63	80	100	160 ~ 250	400 ~ 450	
	Tanδ(Max)	0.32	0.28	0.26	0.16	0.14	0.14	0.12	0.12	0.10	0.20	0.24	
Leakage Current	6.3~100Vdc						160~450Vdc						
	I ≤ 0.01CV or 4μA, Which is greater(2minutes)						I ≤ 0.04CV + 100μA (1minutes)						
I : Leakage current (μA) C : Rated capacitance (μF) V : Rated voltage (V)													
Low Temperature Characteristics Impedance Ratio(MAX)	Rated Voltage (V)	6.3	10	16	25	35	50	63	80	100	160 ~ 250	400 ~ 450	(at 120Hz)
	Z(-25°C)/Z(+20°C)	4	3	2	2	2	2	2	2	2	6	6	
	Z(-40°C)/Z(+20°C)	6	4	3	3	3	3	3	3	3	10	18	
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied for 6,000 hours at 105°C.												
	Capacitance change	≅ ±20% of the initial value											
	Dissipation factor(tanδ)	≅ 200% of the specified value											
	Leakage current	≅ specified value											
Shelf Life	The following requirements shall be satisfied when the capacitor are restored to 20°C after the rated voltage applied for 1,000 hours at 105°C without voltage applied.												
	Capacitance change	≅ ±20% of the initial value											
	Dissipation factor(tanδ)	≅ 200% of the specified value											
	Leakage current	≅ 200% of the specified value											

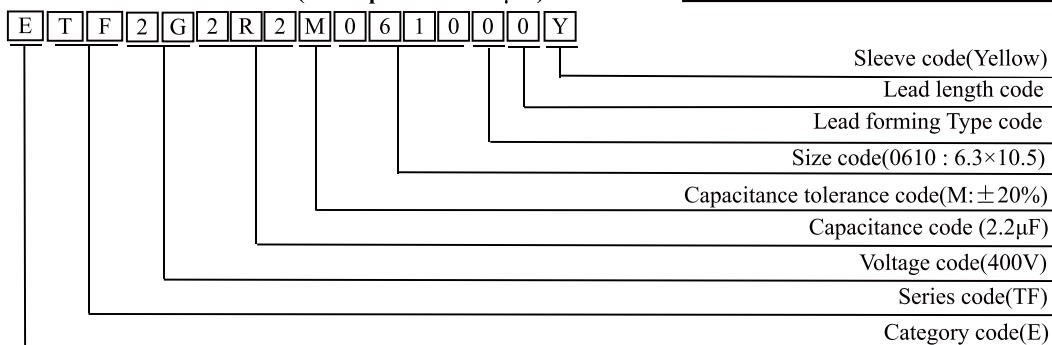
## DIMENSIONS (mm)



Note:(\*):5~6.3 Φ 0.4Max

Size	D	L	A	B	C	W	P
05×08	5	7.7±0.5	5.3	5.3	5.9	0.5~0.8	1.4
06×08	6.3	7.7±0.5	6.6	6.6	7.2	0.5~0.8	1.9
06×10	6.3	10.5±0.5	6.6	6.6	7.2	0.5~0.8	1.9
08×10	8	10.5±0.5	8.3	8.3	9.0	0.7~1.1	3.1
08×12	8	12.5±0.5	8.3	8.3	9.0	0.7~1.1	3.1
08×14	8	13.5±0.5	8.3	8.3	9.0	0.7~1.1	3.1
08×16	8	15.5±0.5	8.3	8.3	9.0	0.7~1.1	3.1
10×10	10	10.5±0.5	10.3	10.3	11.0	0.7~1.1	4.5
10×12	10	12.5±0.5	10.3	10.3	11.0	0.7~1.1	4.5
10×14	10	13.5±0.5	10.3	10.3	11.0	0.7~1.1	4.5
10×16	10	16.5±0.5	10.3	10.3	11.0	0.7~1.1	4.5
12×14	12.5	13.5±1.0	13.0	13.0	13.7	1.0~1.3	4.5
12×16	12.5	16.0±1.0	13.0	13.0	13.7	1.0~1.3	4.5
12×21	12.5	21.0±1.0	13.0	13.0	13.7	1.0~1.3	4.5

## PART NUMBER SYSTEM( Example : 400V 2.2μF)



# TF Series

## ◆ Standard Ratings

WV (Vdc)	Cap (μF)	Size	Max.Rated ripple current @105°C 100KHz
6.3	47	06×08	90
	100	06×08	145
	220	06×08	180
	330	08×10	280
	470	08×10	360
	1000	10×10	600
10	33	05×08	71
	150	06×08	105
	220	08×10	280
	330	10×10	400
	470	10×10	545
	680	10×12	600
	1000	10×16	800
16	47	05×08	90
	100	06×08	145
	220	08×10	475
	330	08×12	510
	470	10×10	720
	1000	10×16	1050
25	33	05×08	90
	47	06×08	165
	100	06×08	175
	220	08×10	535
	330	10×10	750
	470	10×12	840
35	10	05×08	90
	22	06×08	160
	33	06×08	175
	47	06×08	190
	100	08×10	560
	220	10×10	800
50	10	06×08	95
	22	06×08	145
	47	08×10	520
	100	08×10	650
	100	10×10	680
	220	10×12	760
	220	12×14	875
	330	12×16	1020
	470	12×16	1020
63	22	06×08	140
	33	06×10	260
	47	08×10	380
	100	10×10	530
	220	12×14	840
80	10	06×08	130
	22	08×10	360
	33	08×10	410
	47	10×10	490
	100	10×12	530
220	12×16	1020	

WV (Vdc)	Cap (μF)	Size	Max.Rated ripple current @105°C 100KHz
100	10	06×08	140
	22	08×10	350
	33	10×10	570
	47	10×10	590
	100	12×14	700
	1000	12×14	700
160	10	08×10	156
	15	08×12	204
	22	10×12	260
	33	10×14	340
	47	10×16	420
	68	12×21	650
	100	12×21	720
200	8.2	08×12	130
	10	10×10	185
	15	08×14	210
	22	10×14	272
	33	10×16	340
	47	12×21	480
	68	12×21	660
250	3.3	06×10	56
	5.6	08×10	68
	8.2	08×12	130
	10	08×12	166
	15	10×12	220
	22	10×16	310
	33	12×21	440
	47	12×21	510
	68	12×21	510
	100	12×21	510
400	2.2	08×10	48
	3.3	08×10	72
	4.7	10×10	100
	5.6	08×12	108
	6.8	08×14	126
	8.2	10×14	168
	10	10×14	194
	12	10×16	225
	15	10×16	235
	22	12×21	350
450	2.2	10×10	60
	3.3	10×10	75
	4.7	10×14	98
	5.6	10×16	100
	10	10×16	192
	15	12×21	240
22	12×21	320	

## ◆ RIRIPPLE CURRENT MULTIPLIERS Frequency Multipliers

Vdc	Frequency (Hz)			
	120	1K	10K	100K
6.3 ~ 450	0.50	0.80	0.90	1.00