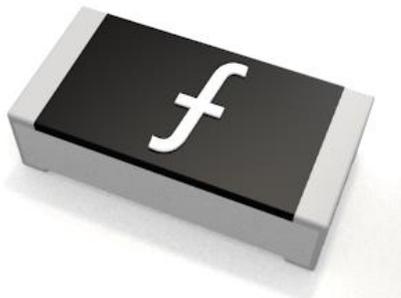


## FRT series / Fine Sound \_ Thick Film Chip Resistor



### 特徴 / Features

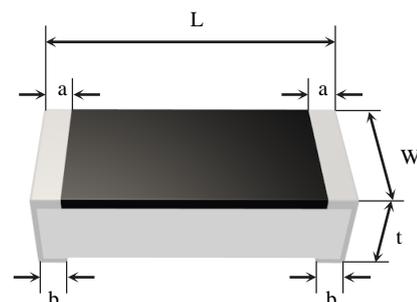
- 量産性に優れた厚膜抵抗器をベースに非磁性構造をデザイン。
- 1005サイズで10MΩ, 1608サイズで22MΩという厚膜抵抗固有の広範な抵抗値範囲を実現
- 高解像度の音響機器、医療機器において電子回路の低ノイズ化が可能です。
- AEC-Q200対応。
- Fine sound structure designed for high volume Mass production utilizing Thick Film chip Resistor.
- Wide Resistance Ranged 1005 (0402inch)=10MΩ max, 1608 (0603inch)=22MΩ max
- Excellent low noise performance suitable for high resolution Audio or Medical Equipment
- Supports for AEC-Q200 is available.

### 品番構成 / Ordering Code

F	R	T	2	0	1	2	W	1	0	3	F	_	T	5	X	X	X
品目記号 Product Code	形状、特性 Size, Rating		端子形状 Terminal		抵抗値 Nominal Resistance		抵抗値許容差 R-Tolerance	抵抗温度係数 T.C.R.	包装 Packing	端子メッキ Terminal Plating	性能グレード Performance						
FRT 音響用 厚膜チップ 抵抗器	1005	0.063W	W コの字電極 Wrap Around		(E-24) 10Ω→100 100Ω→101 10KΩ→103 (E-96) 10.2KΩ→1022	D=±0.5% F=±1% G=±2% J=±5%	— (Under bar) 標準	T5=5Kpcs/reel T10=10Kpcs/reel	X = 錫 X = Sn	XX = Normal	サーミスタシリーズ全体での特性パラメータ						

### 寸法 / Dimensions

形状 Type	Inch size	L	W	t	a	b	包装数量 Q'ty
FRT1005	0402	1.00 ± 0.05	0.50 ± 0.05	0.35 ± 0.05	0.20 ± 0.10	0.25 +0.05 0.25 -0.10	10,000pcs
FRT1608	0603	1.60 ± 0.15	0.80 ± 0.15	0.45 ± 0.10	0.30 ± 0.20	0.30 ± 0.20	5,000pcs
FRT2012	0805	2.00 ± 0.20	1.25 ± 0.10	0.50 ± 0.10	0.40 ± 0.20	0.40 ± 0.20	
FRT3216	1206	3.20 +0.05 0.25 -0.20	1.60 +0.05 0.25 -0.15	0.60 ± 0.10	0.50 ± 0.25	0.50 ± 0.20	



### 印字 / Marking

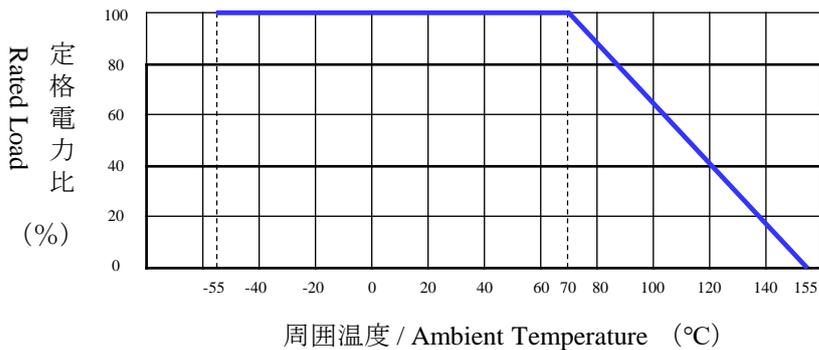
Chip size	Marking
1005	●
1608 ≦	f

## FRT series / Fine Sound \_ Thick Film Chip Resistor

### 定格 / Derating

形状 Type	定格電力 Rated Power	最高使用電圧 Max. Working Voltage	最高過負荷電圧 Max. Overload Voltage	使用温度範囲 Operating Temperature Range	抵抗温度係数 T.C.R	抵抗値範囲 Resistance Range			
						±0.5% E96, E24	±1.0% E96, E24	±2.0% E24	±0.5% E24
FRT1005	0.063W	50V	100V	-55 ~ +155 °C	±100ppm/°C	200~1MΩ	200~1MΩ	-----	-----
					±200ppm/°C	10 ~ 196 Ω	10 ~ 196 Ω	10 ~ 1M Ω	10 ~ 1M Ω
					±350ppm/°C	-----	3.9~9.1Ω	3.9~9.1Ω	3.9~9.1Ω
							1.1M ~ 10M Ω	1.1M ~ 10M Ω	1.1M ~ 10M Ω
±400ppm/°C	-----	1.0~3.6Ω	1.0~3.6Ω		1.0~3.6Ω				
FRT1608	0.1W	50V	100V		±100ppm/°C	10~1MΩ	10~1MΩ	-----	-----
					±200ppm/°C	-----	-----	10~1MΩ	10~1MΩ
					±350ppm/°C	-----	1.0 ~ 9.1 Ω	1.0 ~ 9.1 Ω	1.0 ~ 9.1 Ω
1.1M ~ 10M Ω	1.1M ~ 10M Ω	1.1M ~ 22M Ω							
FRT2012	0.125W	150V	300V		±100ppm/°C	10~1MΩ	10~1MΩ	-----	-----
					±200ppm/°C	-----	-----	10~1MΩ	10~1MΩ
					±250ppm/°C	-----	3.9~9.1Ω	3.9~9.1Ω	3.9~9.1Ω
				1.1M ~ 5.1M Ω			1.1M ~ 5.1M Ω	1.1M ~ 5.1M Ω	
				±350ppm/°C	-----	1.0~3.6Ω	1.0~3.6Ω	1.0~3.6Ω	
						5.6M ~ 10M Ω	5.6M ~ 10M Ω	5.6M ~ 22M Ω	
FRT3216	0.25W	200V	400V	±100ppm/°C	10~1MΩ	10~1MΩ	-----	-----	
				±200ppm/°C	-----	-----	10~1MΩ	10~1MΩ	
				±250ppm/°C	-----	3.9~9.1Ω	3.9~9.1Ω	3.9~9.1Ω	
						1.1M ~ 5.1M Ω	1.1M ~ 5.1M Ω	1.1M ~ 5.1M Ω	
±350ppm/°C	-----	1.0~3.6Ω	1.0~3.6Ω	1.0~3.6Ω					
		5.6M ~ 10M Ω	5.6M ~ 10M Ω	5.6M ~ 22M Ω					

### 負荷軽減曲線 Derating Curve



定格電力は、周囲70°C以下において連続使用に適する負荷電力を指します。周囲温度が70°Cを超える場合は、図の軽減曲線に従って定格電力を軽減して下さい。

Rated power is defined as load power suitable to continuous use only in ambient temperature of less than 70°C. You shall decrease rated power in accordance with above Power Derating curb-chart in case of ambient temperature of more than 70°C.