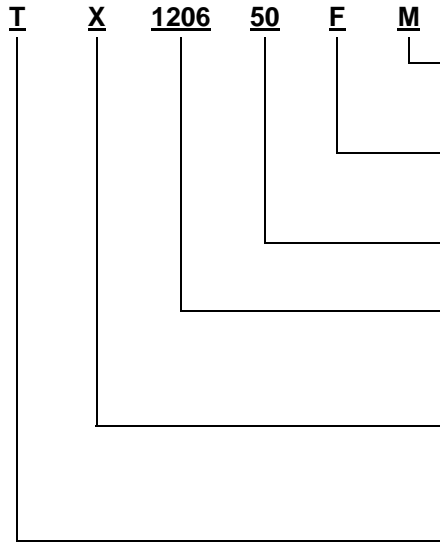


The content of this specification may change without notification 11/18/05

Custom solutions are available.

## HOW TO ORDER



### Packaging

M = tape/reel 5,000 pcs  
O = tape/reel 1,000 pcs

### Tolerance (%)

F =  $\pm 1\%$   
Blank for TF or TP Series

### Impedance

50 $\Omega$  or 75 $\Omega$

### Size (SMT) or Max W (Lead Wire)

1206	05	30
1612	12	80
1612A		

### Type

F = Fixed Chip Terminator  
P = High Power Terminator  
X = PECL Chip Terminator

### Series

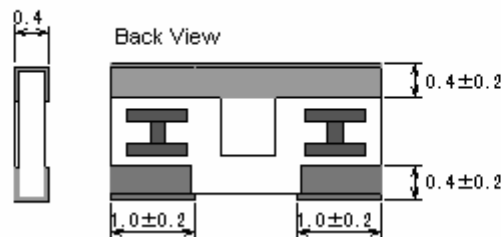
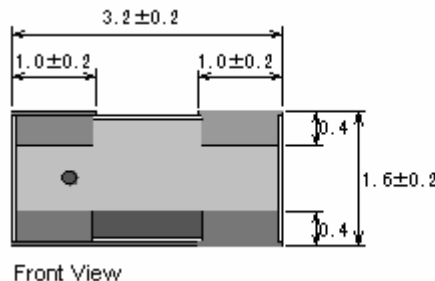
Chip Terminator Network

## PECL Chip Terminator

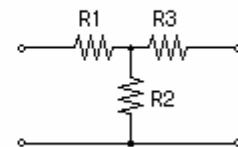
### ELECTRICAL CHARACTERISTICS

Series	<b>TX1206</b>
Size	1206
Typical Resistance Value	R1 : 50 $\Omega$ , R2 : 46.4 $\Omega$ , R3 : 50 $\Omega$
Resistance Tolerance	$\pm 1.0\%$
TCR	$\pm 50\text{ppm}/^\circ\text{C}$
Power Rating per Element	42mW
Power Rating per Package	125mW
Max Rated Operating Temp	70 $^\circ\text{C}$
Operating Temperature	-55 $^\circ\text{C}$ ~ +125 $^\circ\text{C}$
Storage Temperature	-55 $^\circ\text{C}$ ~ +125 $^\circ\text{C}$

### MECHANICAL DIAGRAM



### TX1206 Series



Unit Measurement = mm

### PECL Chip Terminator

- This surface mount chip resistor network is for termination of Positive Emitter Coupled Logic (PECL) circuits
- EMI/RFI attenuation
- Reduced board space
- Better tracking of electrical parameters

### Fixed Chip Terminator

- Exhibits high frequency characteristics
- The surface mount package is ideal for low noise, and parasitic capacitance applications
- The thin film metallization also offer very stable characteristics over temperature and time
- High-Precision, high-frequency chip resistors

### Power Chip Terminator

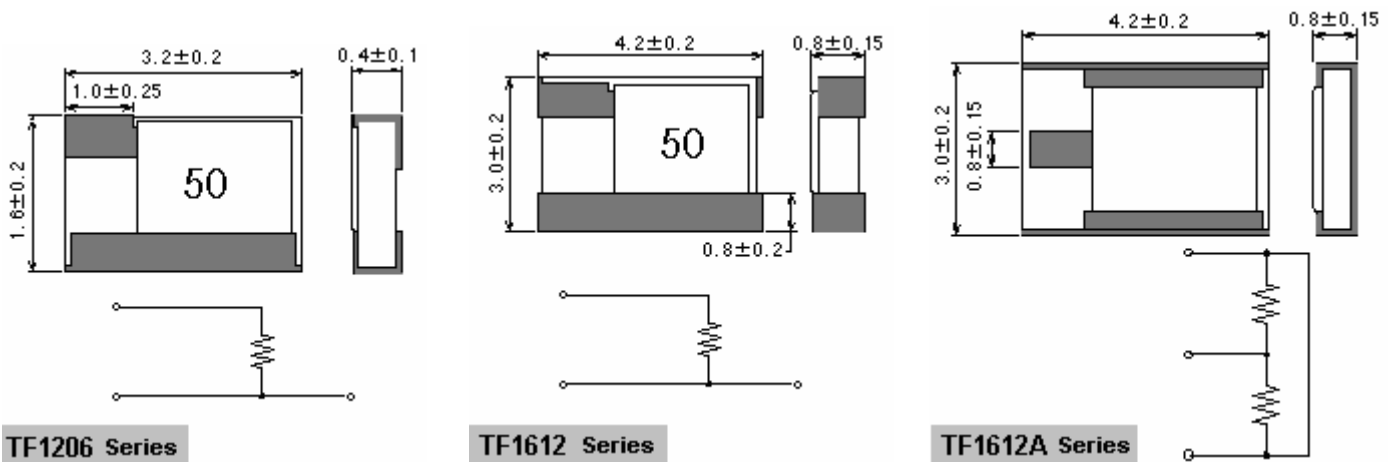
- The high power thin film terminators exhibit excellent high frequency characteristics
- Installing on heat sink will allow for operation with her power ratings
- From 1W to 80W power rating

## ■ Fixed Chip Terminator

### ELECTRICAL CHARACTERISTICS

Series	TF18		TF28		TF28A	
Size	1206		1612		1612	
Characteristic Impedance	50 Ω	75 Ω	50 Ω	75 Ω	50 Ω	75 Ω
VSWR	1.1	1.2	1.1	1.2	1.1 DC~3GHz	1.3 DC~10GHz
Frequency Range	DC~3GHz	DC~2GHz	DC~3GHz	DC~2GHz	DC~10GHz	
TCR	±50ppm/°C		±50ppm/°C		±50ppm/°C	
Max Rated Operating Temp	70°C		70°C		70°C	
Operating Temperature	-55°C ~ +125°C		-55°C ~ +125°C		-55°C ~ +125°C	

### MECHANICAL DIAGRAM (mm)



### ENVIRONMENTAL PERFORMANCE

Item	Test Condition	Requirements
Short-time Overload	Rated Voltage × 2.5, 5sec.	+/- ( 0.2% + 0.05 ohm )
Resistance to Soldering Heat	260 +/- 5°C, 10 +/- 1sec.	+/- ( 0.2% + 0.05 ohm )
Temperature Cycle	-55°C ⇄ +125°C, 5 cycles	+/- ( 0.2% + 0.05 ohm )
Moisture Load Life	40 +/- 2°C 90 ~ 95%, 1000H	+/- ( 0.2% + 0.05 ohm )
Load Life	70 +/- 3°C, 1000H	+/- ( 0.2% + 0.05 ohm )
Insulation Resistance	DC 500V, 1 min.	> 1,000 M ohm

### DERATING CURVE – TX & TF Series

For resistors operated at ambient temperature over 70°C, power rating shall be derated in accordance with figure 1.

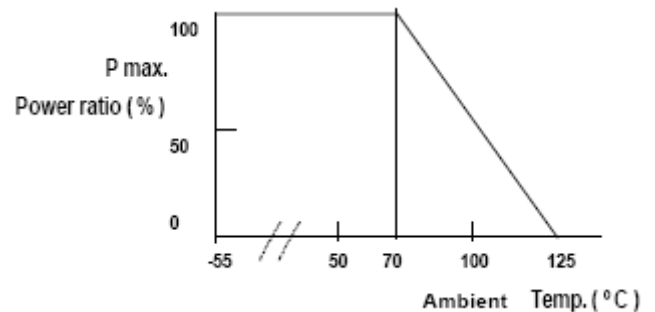
The rated voltage is calculated by the following formula:

$$E = \sqrt{P \cdot R}$$

E=Rated Voltage(V)

P=Rated Power(W)

R=Resistance Value(Ω)

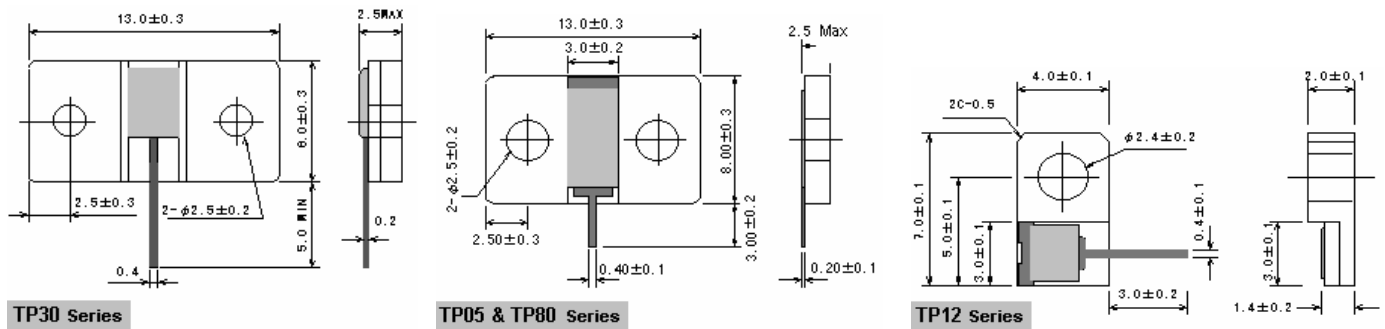


## High Power Terminator

### ELECTRICAL CHARACTERISTICS

Series	TP05	TP12	TP30	TP80
Circuit Schematic				
Characteristic Impedance	50 Ω	50 Ω	50 Ω	50 Ω
VSWR	1.1 DC ~ 3GHz 1.3 3GHz ~ 10GHz	1.1 Max	1.1 DC ~ 3GHz 1.3 3GHz ~ 10GHz	1.2 Max
Frequency Range	DC ~ 10GHz	DC ~ 2.1GHz	DC ~ 10GHz	DC ~ 1.5GHz
Typical Power Rating	1W	1W	1.5W	1.5W
Max Power Rating	5W	12.5W	30W	80W
TCR	±50ppm/°C	±50ppm/°C	±50ppm/°C	±50ppm/°C
Max Heat Sink Temp at Max Rated Power	70°C	80°C	70°C	65°C
Operating Temperature	-55°C ~ +125°C	-55°C ~ +80°C	-55°C ~ +125°C	-55°C ~ +125°C

### MECHANICAL DIAGRAM (mm)



### ENVIRONMENTAL PERFORMANCE

Item	Power Terminator Series	Test Condition	Requirements
Short Time Overload	TP12.5, TP80	Rated Voltage x 2.5, 5 seconds	± (0.5% + 0.05Ω)
	TP05, TP30		± (0.2% + 0.05Ω)
Resistance to Soldering Heat	TP12.5, TP80	250°C ± 5°C, 10 ± 1 second	± (0.5% + 0.05Ω)
	TP05, TP30	350°C ± 5°C, 3 ± 0.5 second	± (0.2% + 0.05Ω)
Solderability	TP12.5, TP80	235°C ± 5°C, 3 ± 0.5 second	>95%
	TP05, TP30		
Temperature Cycle	TP12.5, TP80	-10°C 30 min, R.T. 3 min 70°C 30 min R.T. 3 min, 5 cycles	± (0.5% + 0.05Ω)
	TP05, TP30	-55°C ~ +125°C, 5 cycles	± (0.2% + 0.05Ω)
Moisture Load Life	TP12.5, TP80	40°C ± 5°C, 90~95%, Rated Voltage 90 min on, 30 min off for 1000 hours	± (1.0% + 0.05Ω)
	TP05, TP30		± (0.2% + 0.05Ω)
Load Life	TP12.5, TP80	40°C ± 2°C, Rated Voltage. 90 min on, 30 min off for 1000 hours	± (1.0% + 0.05Ω)
	TP05, TP30	70°C ± 3°C, for 1000 hours	± (0.2% + 0.05Ω)
Insulation Resistance	TP12.5, TP80, TP05, TP30	DC 500V, 1 minute	> 1,000 M Ω