# Resistors

# TaNFilm<sup>®</sup> Precision Chip Voltage Divider

#### **PFC Divider Series**

- Popular 1206 Chip Size
- 10Ω to 150KΩ per resistor
- Tested for COTS applications
- Superior alternative to matched sets
- Standard Sn/Pb and 100% tin (Pb-free) terminations available





All Pb-free parts comply with EU Directive 2011/65/EU amended by (EU) 2015/863 (RoHS3)

This dual element, monolithic package offers the advantages of reducing component quantities and board space while increasing quality and reliability. The ratio tolerance can be specified down to 0.01%, which is much tighter than the 0.1% achievable from two individual 0.05% chip resistors. Similarly, the TCR tracking of 5 ppm/°C is far superior to the 50ppm/°C tracking obtainable from two individual 25 ppm/°C chip resistors. The TaNFilm® Tantalum Nitride film system provides superior environmental performance while ensuring long term stability.

### **Electrical Data**

Characteristic	Each Total Resistance			
Resistance Range	10 - 150KΩ	200ΚΩ		
Power Rating	125mW	250mW		
Absolute TCR	to ±25ppm/°C*			
Tracking TCR	to ±5ppm/°C*			
Maximum Voltage Rating	100 volts			
Operating Temperature Range	-65°C to +150°C			
Noise	Less than -25 db			
Termination	60/40 Sn/Pb or 100% tin (Pb-free)			

<sup>\*</sup>Tighter Tolerance and Higher Resistance value available. Contact factory for more information

## Manufacturing Capability

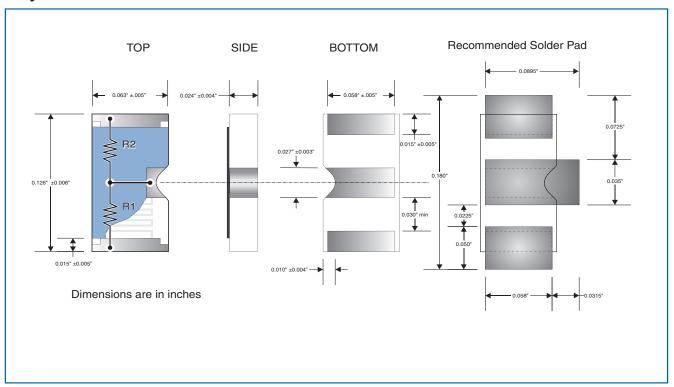
Range of Lowest Resistor	Available Absolute Tolerances	Available Ratio Tolerances	Best Absolute TCR	Best Tracking TCR
10Ω - 24Ω	F	FD	±100ppm/°C	±50ppm/°C
25Ω - 50Ω	FDB	FDB	±50ppm/°C	±20ppm/°C
51Ω - 75Ω	FDB	FDB	±25ppm/°C	±10ppm/°C
76Ω - 999Ω	FDB	FDBA	±25ppm/°C	±5ppm/°C
1.0ΚΩ - 100ΚΩ	FDBA	FDBAQT	±25ppm/°C	±5ppm/°C

#### General Note

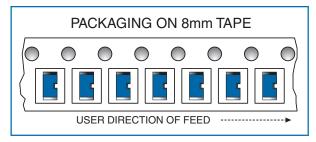
**PFC Divider Series** 



# Physical Data



# Packaging Data



### **Environmental Data**

Test	Method	∆ <b>R/R</b>	∆Ratio	
Thermal Shock	MIL-STD-202 -65 to +125°C, 5 Cycles	±.02%	±.005%	
Short Time Overload	MIL-PRF-55342	±.02%	±.005%	
High Temperature Exposure	MIL-PRF-55342	±.03%	±.01%	
Resistance to Bond Exposure	MIL-PRF-55342	±.01%	±.01%	
Moisture Resistance	MIL-STD-202 10 Cycles, 240 hours 10% Rated Power	±.03%	±.02%	
Load Life (Rated Power)	MIL-PRF-55342 70°C, 1000 hours ±.03%		±.01%	
Low Temperature Operation	MIL-PRF-55342	±.01%	±.005%	

#### General Note

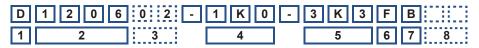
**PFC Divider Series** 



# **Ordering Procedure**

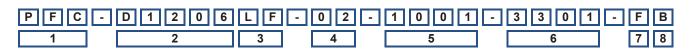
This product has two valid part numbers:

**European (Welwyn) Part Number: D120602-1K0-3K3FB** (50ppm/°C, R1=1 kilohm, R2=3.3 kilohms, absolute tolerance ±1%, ratio tolerance ±0.1%, Pb-free)



1	2	3	4	5	6	7	8
Туре	Size	Absolute TCR	Value R1	Value R2	Absolute Tolerance	Ratio Tolerance	Termination & Packing
D=PFC-	1206	Omit for ±25ppm/°C	E24 = 3/4	characters	A = 0.05%	T = +0.01%	Omit for Pb-free,
Divider		02 = ±50ppm/°C	E96 = 3/4	characters	$B = \pm 0.1\%$	$Q = \pm 0.02\%$	Standard pack
		01 = ±100ppm/°C	R = ohms		$D = \pm 0.5\%$	$A = \pm 0.05\%$	PB = SnPb finish,
			K = ki	lohms	F = ±1%	$B = \pm 0.1\%$	Standard pack
			·	·		$D = \pm 0.5\%$	1000/reel
						F = ±1%	

**USA (IRC) Part Number: PFC-D1206LF-02-1001-3301-FB** (50ppm/°C, R1=1 kilohm, R2=3.3 kilohms, absolute tolerance ±1%, ratio tolerance ±0.1%, Pb-free)



1	2	3	4	5	6	7	8	
Family	Model	Termination	Absolute TCR	Value R1	Value R2	Absolute Tolerance	Ratio Tolerance	Packing
PFC	D1206	Omit for SnPb (60/40) LF = Pb-free	$03 = \pm 25 \text{ppm/°C}$	3 digits + multiplier R = ohms for values <100 ohms		$A = \pm 0.05\%$	T = +0.01%	1000/reel
			$02 = \pm 50 \text{ppm/}^{\circ}\text{C}$			$B = \pm 0.1\%$	$Q = \pm 0.02\%$	
			01 = ±100ppm/°C			$D = \pm 0.5\%$	$A = \pm 0.05\%$	
		(100%Sn)				F = ±1%	$B = \pm 0.1\%$	
			•				$D = \pm 0.5\%$	
							F = ±1%	

### **Mouser Electronics**

**Authorized Distributor** 

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

### TT Electronics:

PFCD12060325021003BQ PFC-D1206-03-1001-1003-FB PFC-D1206LF-02-3301-1102-BT PFC-D1206LF-02-1101-1001-BT PFC-D1206LF-02-1601-1102-BT PFC-D1206LF-02-1801-2202-BT PFC-D1206LF-02-1801-2402-BT PFC-D1206LF-02-1801-5102-BT PFC-D1206LF-02-3001-3601-BT PFC-D1206LF-02-3001-3901-BT PFC-D1206LF-02-4301-3601-BT PFC-D1206LF-02-4301-1502-BT PFC-D1206LF-02-5601-1601-BT PFC-D1206LF-02-1003-1101-BT PFC-D1206LF-02-1003-1102-BT PFC-D1206LF-02-1103-2401-BT PFC-D1206LF-02-1203-6802-BT PFC-D1206LF-02-51R0-2000-BB PFC-D1206LF-02-1500-3300-BB PFC-D1206LF-02-1600-5101-BB PFC-D1206LF-02-1800-3602-BB PFC-D1206LF-02-2700-1500-BB PFC-D1206LF-02-2700-1203-BB PFC-D1206LF-02-2200-2001-BB PFC-D1206LF-02-3600-1503-BB PFC-D1206LF-02-3900-7500-BB PFC-D1206LF-02-3900-6801-BB PFC-D1206LF-02-4300-4300-BB PFC-D1206LF-02-6200-3600-BB PFC-D1206LF-02-6800-1202-BB PFC-D1206LF-02-7500-6200-BB PFC-D1206LF-02-1801-75R0-BB PFC-D1206LF-02-1801-2200-BB PFC-D1206LF-02-2701-6800-BB PFC-D1206LF-02-3001-27R0-BB PFC-D1206LF-02-3001-1000-BB PFC-D1206LF-02-3301-2400-BB PFC-D1206LF-02-4301-3600-BB PFC-D1206LF-02-6801-2000-BB PFC-D1206LF-02-1802-1500-BB PFC-D1206LF-02-2002-1200-BB PFC-D1206LF-02-3302-2000-BB PFC-D1206LF-02-3302-5600-BB PFC-D1206LF-02-1003-1100-BB PFC-D1206LF-03-1500-1101-DD PFC-D1206LF-03-1500-8201-DD PFC-D1206LF-03-3900-1000-DD PFC-D1206LF-03-4700-1200-DD PFC-D1206LF-03-2202-2200-DD PFC-D1206LF-03-3302-1800-DD PFC-D1206LF-01-4701-9102-DT PFC-D1206LF-01-1501-6200-DD PFC-D1206LF-01-3901-2200-DD PFC-D1206LF-01-3602-9100-DD PFC-D1206LF-01-6202-1100-DD PFC-D1206LF-02-27R0-2002-BB