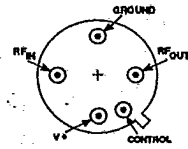


**FEATURES**

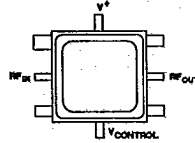
- 40 dB Attenuation Range
- 1 Microsecond Response Time
- Wideband Frequency Response
- Surface Mount Package

**APPLICATIONS**

- Open and Closed Loop Gain Compensation



UTF-030—TO-8F, p. 16-47



PPF-030—PP-25F, p. 16-34

**DESCRIPTION**

The UTF-030 is a thin-film voltage controlled RF attenuator that offers a continuously-variable attenuation of up to 30 to 45 dB from 100 to 2000 MHz. Utilizing PIN diodes, attenuation over frequency is

typically  $\pm 0.5$  to  $\pm 1.0$  dB flat over the complete control voltage range. The UTF-030 comes hermetically sealed in a TO-8 case or in a surface mount PlanarPak.

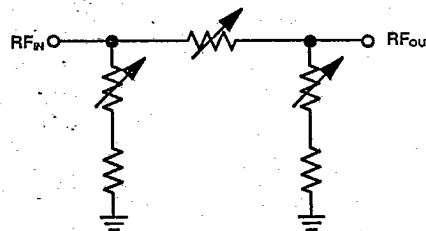
**ELECTRICAL SPECIFICATIONS** (Measured in a 50-ohm system @ +15 VDC nominal)

Symbol	Characteristic	Typical $T_c = 25^\circ\text{C}$	Guaranteed Specifications		Unit
			$T_c = 0^\circ$ to $50^\circ\text{C}$	$T_c = -55^\circ$ to $+85^\circ\text{C}$	
BW	Frequency Range	100-2300	100-2000	100-2000	MHz
—	Attenuation, Min. ( $V_c = 0$ V)				
	100-500 MHz	45	40	30.0	dB
	500-1000 MHz	40	35	25.0	dB
	1000-2000 MHz	30	25	20.0	dB
—	Insertion Loss, Max ( $V_c = +15$ V)				
	100-500 MHz	2.0	2.5	3.0	dB
	500-1000 MHz	2.5	3.0	3.5	dB
	1000-2000 MHz	3.0	3.5	4.0	dB
—	VSWR 100-2000 MHz (Worst Case in Attenuation Range)	1.7:1	2.0:1	2.0:1	—
—	Flatness Over Frequency (to 25 dB)				
	100-1000 MHz	$\pm 0.5$	$\pm 1.0$	$\pm 1.0$	dB
	1000-2000 MHz	$\pm 1.0$	$\pm 1.5$	$\pm 1.5$	dB
—	Switching Speed (10% to 90%) (ON to OFF or OFF to ON)	.5	1	1	$\mu\text{s}$
—	Bias Current	8.0	—	—	mA
—	Control Voltage	0 to +15	—	—	VDC
—	Control Current	0 to 10	—	—	mA

**MAXIMUM RATINGS**

DC Voltage	+17 Volts
Continuous RF Input Power	+23.0 dBm
Operating Case Temperature	-55°C to +125°C
Storage Temperature	-62°C to +150°C
"R" Series Burn-In Temperature	+125°C

**SCHEMATIC**



**WEIGHT:** (typical) PPF—0.15 grams; UTF—2.1 grams

Avantek, Inc. • 481 Cottonwood Drive, Milpitas, CA 95035 • Contact your local representative, distributor or field sales office for further information. Listings are in the back of this Data Book.

TYPICAL PERFORMANCE AT 25°C TEMPERATURE (at +15 VDC unless otherwise noted)

