



Attenuator 5 to 1000 MHz

Technical Data

UTF-015

Features

- < 1.6:1 VSWR
- 20 dB of Attenuation
- Negative Control Voltage

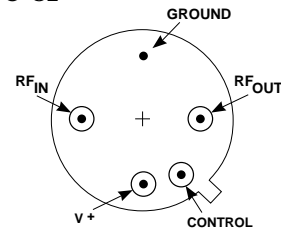
Applications

- Open and Closed Loop Gain Control
- AGC Circuits

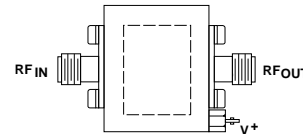
Description

The UTF-015 is a thin-film voltage-controlled RF attenuator that offers a continuously-variable attenuation of up to 20 dB from 5 to 1000 MHz. Utilizing PIN diodes, attenuation over frequency is typically ± 0.5 dB flat over the complete control voltage range. On the average, the attenuation will change roughly 5 dB per 2-volt increment. The UTF-015 is available in either the TO-8 hermetic case or connectorized TC-1 package.

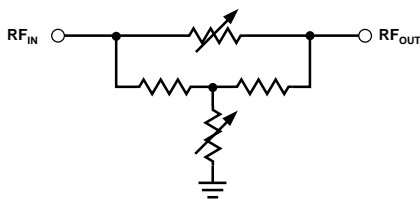
Pin Configuration TO-8F



TC-1



Schematic



Maximum Ratings

Parameter	Maximum
DC Voltage	+17/-15 Volts
Continuous RF Input Power	+23.0 dBm
Operating Case Temperature	-55 to +125°C
Storage Temperature	-62 to +150°C
"R" Series Burn-In Temperature	+125°C

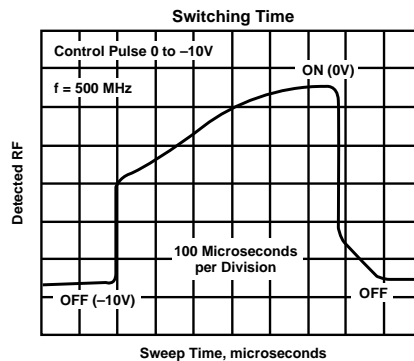
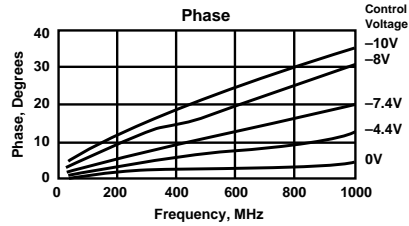
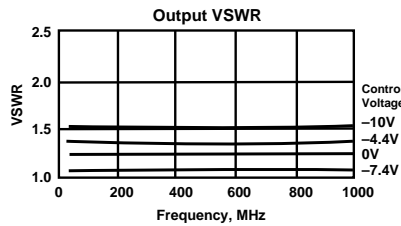
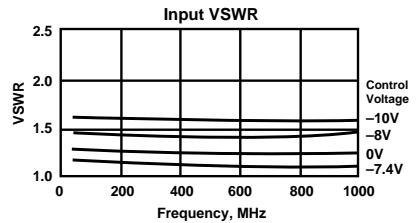
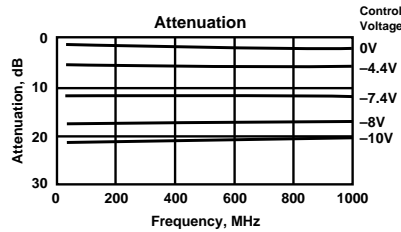
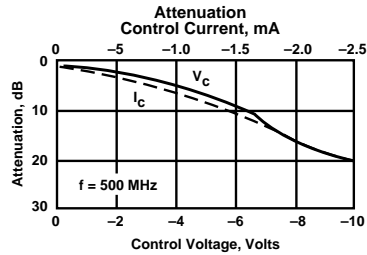
Weight: (typical) 2.1 grams

Electrical Specifications

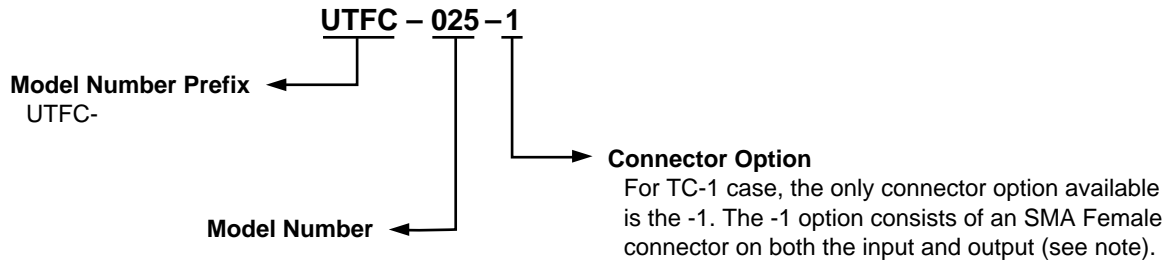
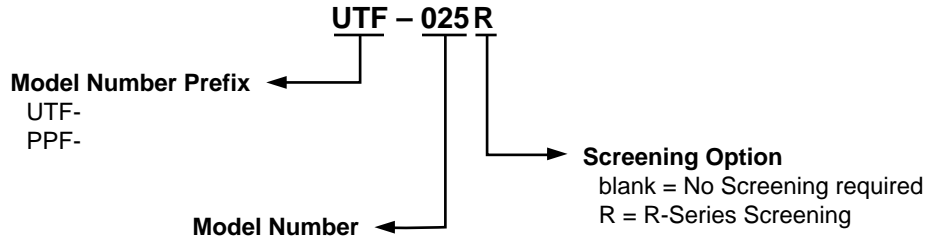
(Measured in 50 Ω system @ +15 VDC nominal unless otherwise noted)

Symbol	Characteristic	Typical $T_C = 25^\circ\text{C}$	Guaranteed Specifications		Unit
			$T_C = 0 \text{ to } 50^\circ\text{C}$	$T_C = -55 \text{ to } +85^\circ\text{C}$	
BW	Frequency Range	5-1000	5-1000	5-1000	MHz
—	Attenuation, Min. ($V_C = -10 \text{ V}$)	20.0	15.0	—	dB
—	Insertion Loss, Max. ($V_C = 0 \text{ V}$)				
	5-500 MHz	1.5	2.0	—	dB
	500-1000 MHz	2.0	2.5	—	dB
—	VSWR (Worst Case In Attenuation Range)	1.5:1	2.0:1	—	—
—	Flatness Over Frequency	$\pm .5$	—	—	dB
—	Switching Speed (10% to 90%)	.5	—	—	ms
—	Bias Current	7	—	—	mA
—	Control Voltage	0 to -10	0 to -10	—	VDC
—	Control Current	0 to 7	—	—	mA

Typical Performance At 25°C

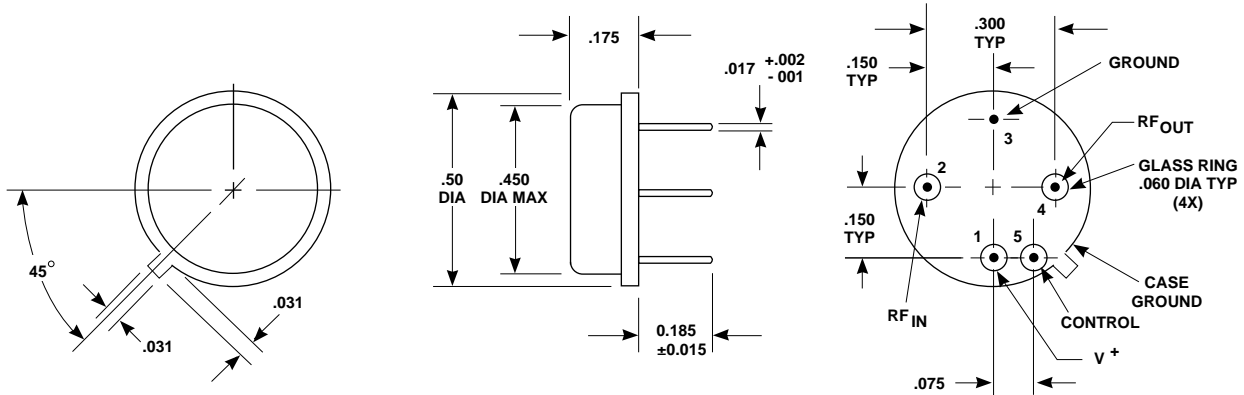


Product Options



Note: No R-Series screening is available in the TC-1 case as the case is non-hermetic.

Case Drawings TO-8F



APPROXIMATE WEIGHT 2.1 GRAMS

NOTES (UNLESS OTHERWISE SPECIFIED):
 1. DIMENSIONS ARE SPECIFIED IN INCHES
 2. TOLERANCES: xx ± .02
 xxx ± .010

