

# SILICON ABRUPT VARACTOR DIODE

**DESCRIPTION:**

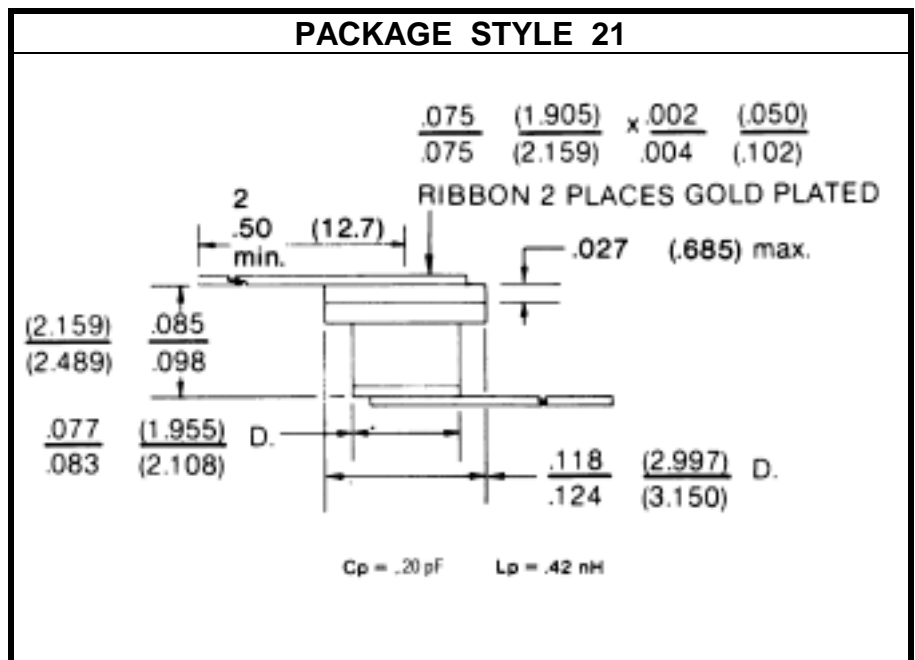
The **AT12015-21** is Designed for High Performance RF and Microwave Applications Requiring an Abrupt Variable Capacitance Characteristic.

**FEATURES INCLUDE:**

- High Tuning Ratio,  $\Delta C_T = 8.5 \text{ MIN.}$
- High Quality Factor,  $Q = 300 \text{ MIN.}$
- Hermetic Pkg,  $C_p = .20 \text{ pF}$   
 $L_s = .42 \text{ nH}$

**MAXIMUM RATINGS**

$I_F$	200 mA
$V_R$	120 V
$P_{DISS}$	1.75W @ $T_C 25^\circ\text{C}$
$T_J$	$-55^\circ\text{C}$ to $+150^\circ\text{C}$
$T_{STG}$	$-55^\circ\text{C}$ to $+150^\circ\text{C}$
$\theta_{JC}$	$70^\circ\text{C/W}$


**CHARACTERISTICS**  $T_C = 25^\circ\text{C}$ 

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
$V_R$	$I_R = 10 \mu\text{A}$	120			V
$V_F$	$I_F = 1 \text{ mA}$			1.0	V
$I_R$	$V_R = 100 \text{ V}$			100	nA
$C_T$	$V_R = 4 \text{ V}$ $f = 1.0 \text{ MHz}$	12	14	16	pF
$\Delta C_T$	$C_{T0} / C_{T120}$ $f = 1.0 \text{ MHz}$	8.5			---
$Q$	$V_R = 4 \text{ V}$ $f = 50 \text{ MHz}$	300			---
$R_S$	$I_F = 10 \text{ mA}$ $f = 2400 \text{ MHz}$			0.9	$\Omega$