

# TUNING VARACTOR DIODE

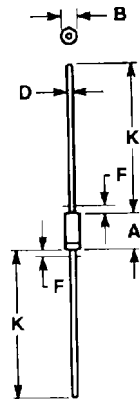
**DESCRIPTION:**

The **1N5142** is a Silicon Hyper-Abrupt Junction Microwave Tuning Varactor Diode.

**MAXIMUM RATINGS**

$I_F$	250 mA
$V_R$	60 V
$P_{DISS}$	400 mW @ $T_A = 25^\circ\text{C}$
$T_J$	$-65^\circ\text{C}$ to $+175^\circ\text{C}$
$T_{STG}$	$-65^\circ\text{C}$ to $+200^\circ\text{C}$

PACKAGE STYLE D0-204AA				
Dim:	Millimeters		Inches	
	Min	Max	Min	Max
A	5.84	7.62	0.230	0.300
B	2.16	2.72	0.085	0.107
D	0.46	0.56	0.018	0.022
F	---	1.27	---	0.050
K	25.40	38.10	1.000	1.500


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

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
$V_{BR}$	$I_R = 10 \mu\text{A}$	60			V
$I_R$	$V_R = 55 \text{ V}$ $T_A = 150^\circ\text{C}$			20	$\mu\text{A}$
$C_{T4}$	$V_R = 4.0 \text{ V}$ $f = 1.0 \text{ MHz}$	13.5	15	16.5	pF
$\alpha$	$V_R = 4.0 \text{ V}$ $f = 1.0 \text{ MHz}$	0.38	0.41		---
Q	$V_R = 4.0 \text{ V}$ $f = 50 \text{ MHz}$	200			---
$L_S$	$f = 250 \text{ MHz}$		5.0		nH
$C_C$	$f = 1.0 \text{ MHz}$		0.25		pF
$C_{T4}/C_{T60}$	$V_R = 4 \text{ \& } 60 \text{ V}$ $f = 1.0 \text{ MHz}$	2.8	3.0		---