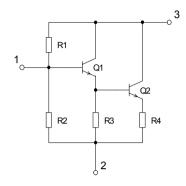


## **Preliminary**

# **SPICE Model BG616**

## BG616-Chip



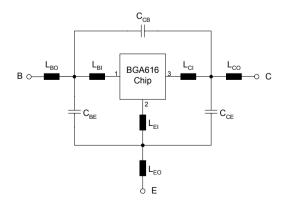
Q1	T1
Q2	T1 (area factor: 0.5)
R1	$625\Omega$
R2	625Ω
R3	80Ω
R4	4Ω
	Q2 R1 R2 R3

## Transistor Chip Data T1 (Berkley-SPICE 2G.6 Syntax)

#### .MODEL T1 NPN(

+ IS = 2.6e-015	BF = 105	NF = 1.021	VAF = 1000
+ IKF = 2.262	ISE = 2.978E-12	NE = 3.355	BR = 100
+ NR = 1	VAR = 1.2	IKR = 0.00631	ISC = 1.923E-14
+ NC = 2.179	RB = 2.674	IRB = 1.8E-05	RBM = 2.506
+ RE = 0.472	RC = 2.105	XTB = -0.9	EG = 1.114
+ XTI = 3.43	CJE = 3.716E-13	VJE = 0.8986	MJE = 0.3152
+ TF = 1.306E-12	XTF = 2.71	VTF = 0.492	ITF = 2.444
+ PTF = 0	CJC = 2.256E-13	VJC = 0.7395	MJC = 0.3926
+ XCJC = 1	TR = 3.884E-10	CJS = 6E-14	VJS = 0.5
+ MJS = 0.5	FC = 0.8215)		

#### **Package Equivalent Circuit**



L <sub>BI</sub>	0.47	nΗ
L <sub>B0</sub>	0.53	nΗ
L <sub>EI</sub>	0.23	nΗ
L <sub>EO</sub>	0.05	nΗ
L <sub>CI</sub>	0.56	nΗ
L <sub>co</sub>	0.58	nΗ
C <sub>BE</sub>	136	fF
C <sub>CB</sub>	6.9	fF
C <sub>CE</sub>	134	fF

Valid up to 3GHz