

Device Modeling Report

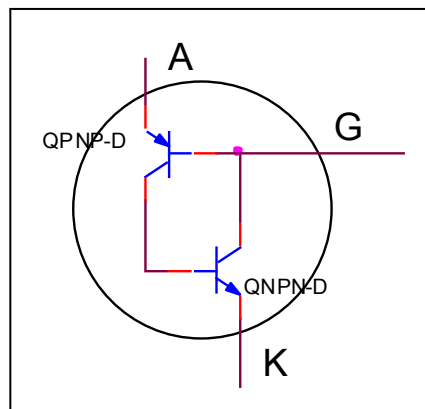
COMPONENTS: Programmable Unijunction Transistor
PART NUMBER: U71
MANUFACTURER: NEC



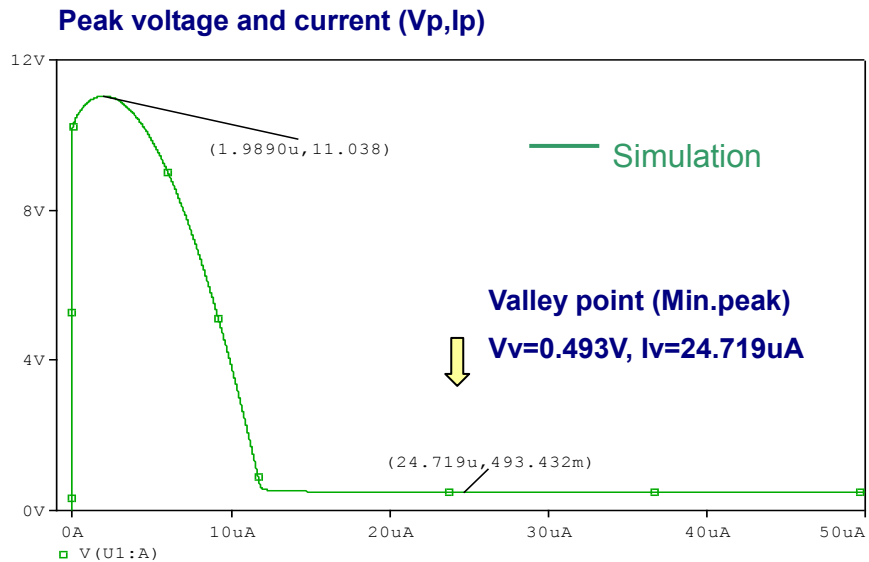
Bee Technologies Inc.

Pspice model parameter	Model description
IS	Saturation Current
ISE	Non-ideal Base-Emitter Diode Saturation Current
RC	Series Collector Resistance
TR	Reverse transit time
TF	Forward Transit Time

Equivalent circuit



Peak Voltage (Vp) and Peak Current (Ip) Characteristics

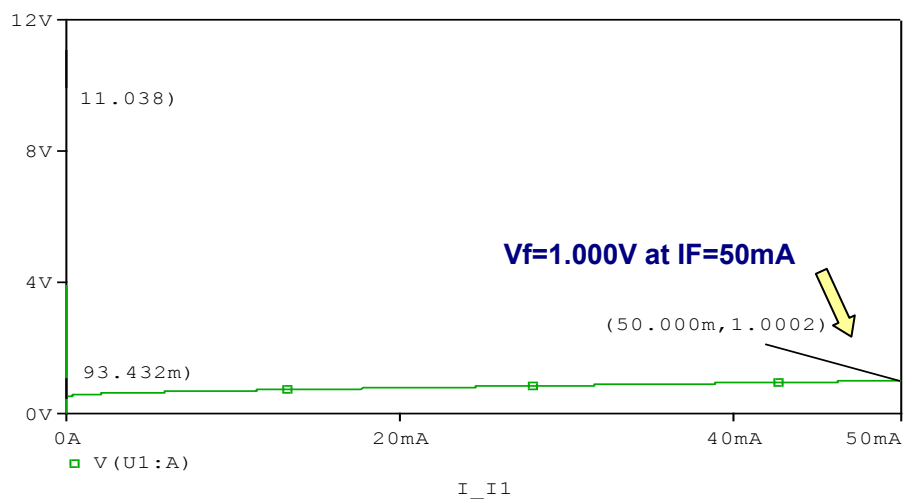


Simulation Result

Vp=11.038(V) at Ip=1.989u(A)

SPEC: Vp=10.2(V) to 11.6(V) at Ip(max.)=2u(A)

Forward Voltage Characteristics



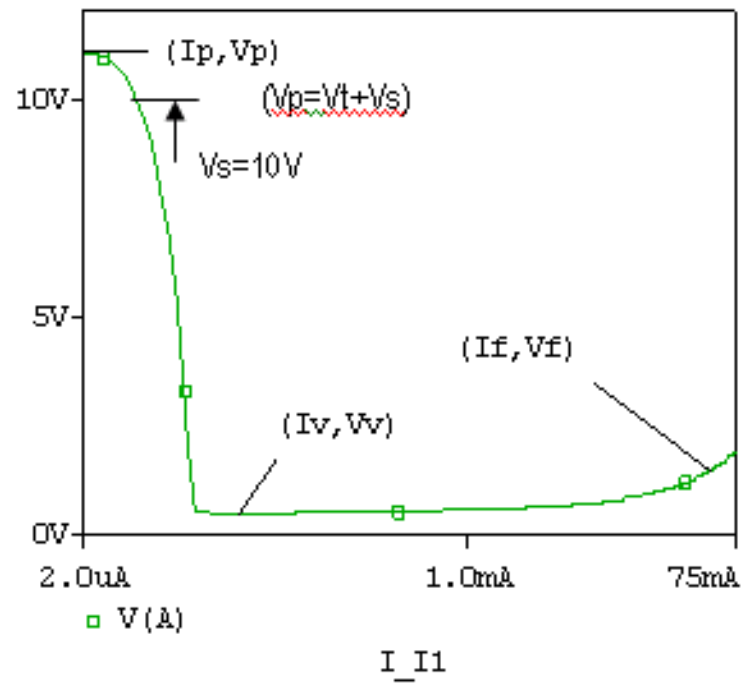
Simulation Result

Vf=1.000(V) at If=50m(A)

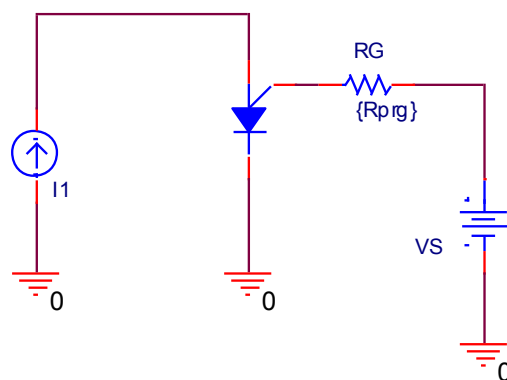
SPEC: Vf=1.0(V)Typ. at If=50m(A)

Voltage and Current Characteristics

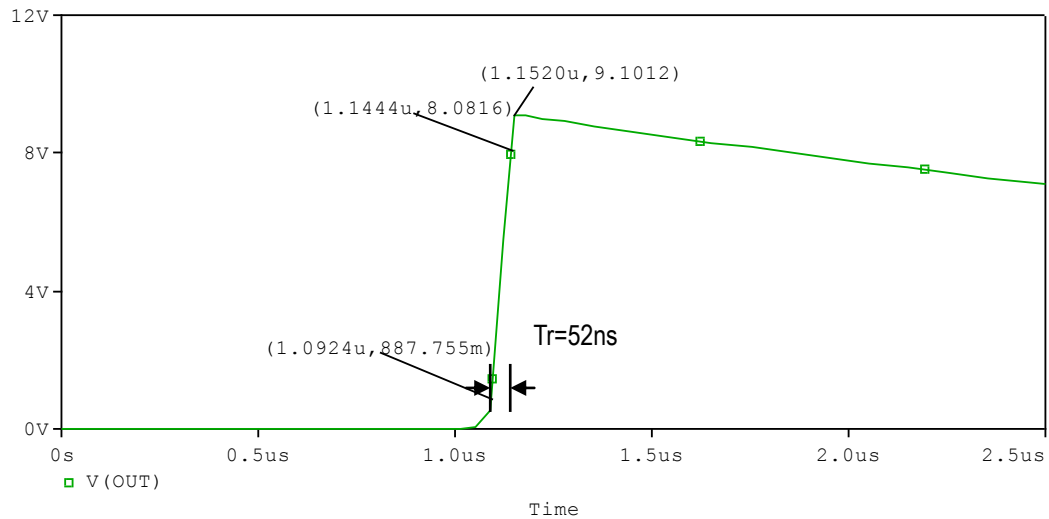
Reference



Evaluation Circuit



Pulse Output Voltage and Pulse Output Rise Time



$V_o = 9.1012(V)$ at $V_i = 20(V)$, $C_t = 0.2\mu(F)$

SPEC: $V_o = 6(V)[min.]$ to $10(V)[typ.]$ at $V_i = 20(V)$, $C_t = 0.2\mu(F)$

$tr = 52(ns)$ at $V_i = 20(V)$, $C_t = 0.2\mu(F)$

SPEC: $tr = 50(ns)[typ.]$ to $80(ns)[max.]$ at $V_i = 20(V)$, $C_t = 0.2\mu(F)$

Evaluation circuit

