# SUU10P10-195-GE3\_RC



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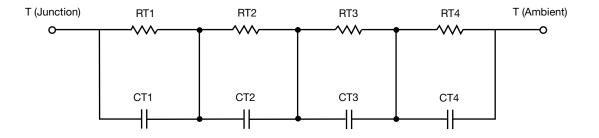
## **R-C Thermal Model Parameters**

#### DESCRIPTION

The parametric values in the R-C thermal model have been derived using curve-fitting techniques. R-C values for the electrical circuit in the Foster/tank and Cauer/filter configurations are included. When implemented in P-SPICE, these values have matching characteristic curves to the single-pulse transient thermal impedance curves for the MOSFET.

These RC values can be used in the P-SPICE simulation to evaluate the thermal behavior of the MOSFET junction temperature under a defined power profile. These techniques are described in application note AN609, "Thermal Simulation of Power MOSFETs on the P-SPICE Platform".

#### **R-C THERMAL MODEL FOR TANK CONFIGURATION**



R-C VALUES FOR TANK CONFIGURATION THERMAL RESISTANCE (°C/W)					
RT1	N/A	549.6307m	N/A		
RT2	N/A	1.8358	N/A		
RT3	N/A	1.2538	N/A		
RT4	N/A	265.3410m	N/A		
·	THERMAL CAPAC	ITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot		
CT1	N/A	386.8237u	N/A		
CT2	N/A	32.1334m	N/A		
CT3	N/A	2.4395m	N/A		
CT4	N/A	1.6610	N/A		

Note

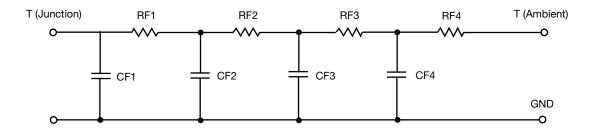
• n/a indicates not applicable

This document is intended as a SPICE modeling guideline and does not constitute a commercial product datasheet. Designers should refer to the appropriate datasheet of the same number for guaranteed specification limits.



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### **R-C THERMAL MODEL FOR FILTER CONFIGURATION**



R-C VALUES FOR FILTER CONFIGURATION THERMAL RESISTANCE (°C/W)					
RF1	N/A	980.6553m	N/A		
RF2	N/A	1.4225	N/A		
RF3	N/A	464.1721m	N/A		
RF4	N/A	1.0153	N/A		
·	THERMAL CAPAC	ITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot		
CF1	N/A	405.1050u	N/A		
CF2	N/A	4.4490m	N/A		
CF3	N/A	47.8167m	N/A		
CF4	N/A	15.3867m	N/A		

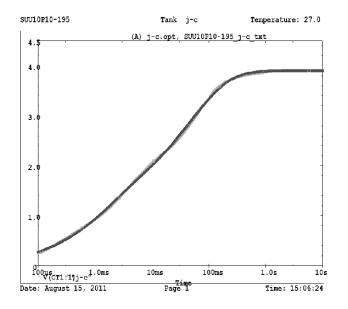
Note

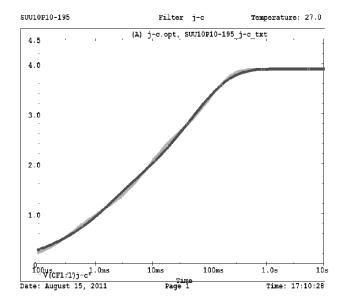
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