



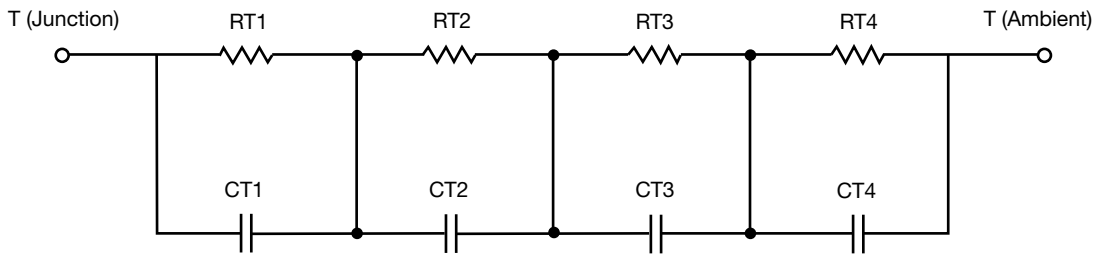
### R-C Thermal Model Parameters

#### 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)			
Junction to	Ambient	Case	Foot
RT1	N/A	292.5826m	N/A
RT2	N/A	327.8366m	N/A
RT3	N/A	109.6506m	N/A
RT4	N/A	24.1996m	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	N/A	190.6331m	N/A
CT2	N/A	27.0276m	N/A
CT3	N/A	6.4601m	N/A
CT4	N/A	1.0451m	N/A

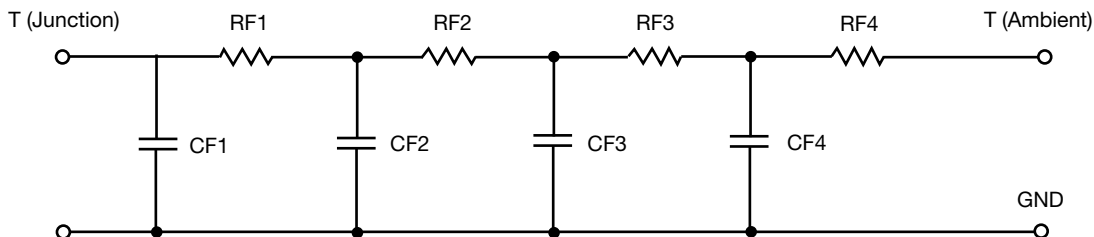
**Note**

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.



## R-C THERMAL MODEL FOR FILTER CONFIGURATION



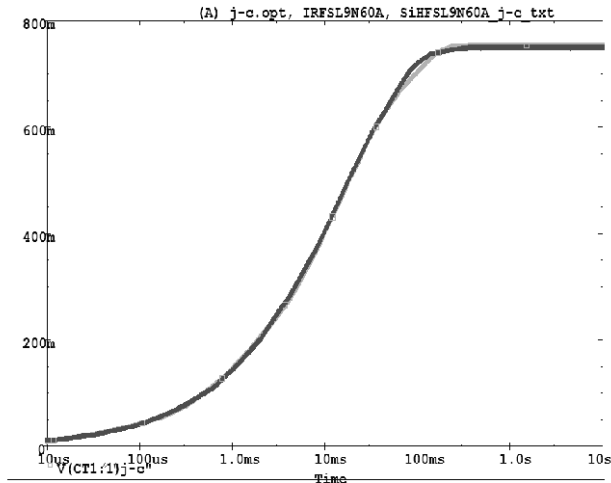
R-C VALUES FOR FILTER CONFIGURATION			
THERMAL RESISTANCE (°C/W)			
Junction to	Ambient	Case	Foot
RF1	N/A	111.1826m	N/A
RF2	N/A	297.9059m	N/A
RF3	N/A	270.6739m	N/A
RF4	N/A	71.5244m	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CF1	N/A	2.3538m	N/A
CF2	N/A	11.9463m	N/A
CF3	N/A	62.4973m	N/A
CF4	N/A	929.9909m	N/A

**Note**

N/A indicates not applicable



IRFSL9N60A, SiHFSL9N60A Tank j-c Temperature: 27.0



IRFSL9N60A, SiHFSL9N60A Filter j-c Temperature: 27.0

