

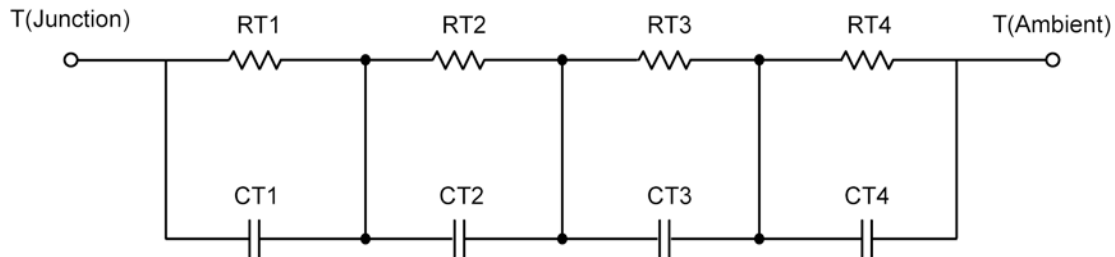
R-C Thermal Model Parameters

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.

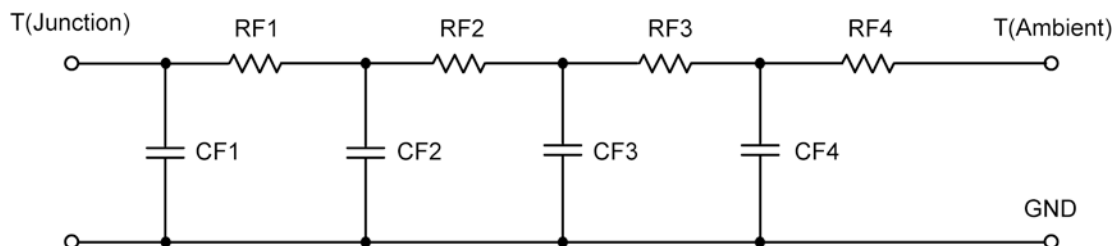
These RC values can be used in the P-SPICE simulation to evaluate the thermal behavior of the MOSFET junction temperature under a defined power profile. These techniques are described in Application Note AN609, "Thermal Simulation of Power MOSFETs on the P-Spice Platform."

R-C THERMAL MODEL FOR TANK CONFIGURATION



R-C VALUES FOR TANK CONFIGURATION			
Thermal Resistance (°C/W)			
Junction to	Ambient	Case	Foot
RT1	1.0132	494.7518 m	N/A
RT2	8.7408	538.1622 m	N/A
RT3	14.0162	802.8169 m	N/A
RT4	57.2298	564.2691 m	N/A
Thermal Capacitance (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	763.8048 u	918.0270 u	N/A
CT2	14.4180 m	44.6976 m	N/A
CT3	70.8569 m	17.1825 m	N/A
CT4	1.2242	13.0101 m	N/A

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

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

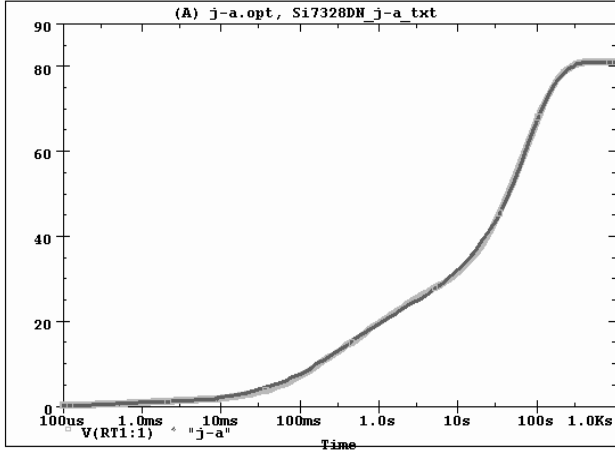
Thermal Resistance ($^{\circ}\text{C}/\text{W}$)			
Junction to	Ambient	Case	Foot
RF1	1.5363	601.7256 m	N/A
RF2	14.7129	171.4368 m	N/A
RF3	12.3336	532.1376 m	N/A
RF4	52.4172	1.0947	N/A
Thermal Capacitance (Joules/ $^{\circ}\text{C}$)			
Junction to	Ambient	Case	Foot
CF1	644.3874 u	848.5510 u	N/A
CF2	13.6410 m	3.2232 m	N/A
CF3	168.8700 m	736.5466 u	N/A
CF4	1.1993	8.5593 m	N/A

Note

NA indicates not applicable

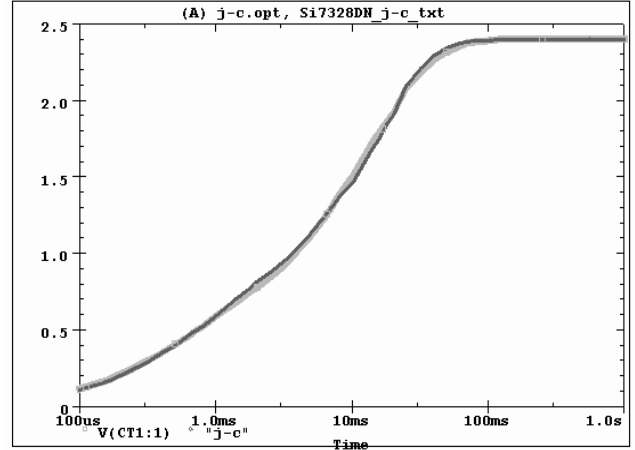


Si7328DN Tank j-a Temperature:27.0



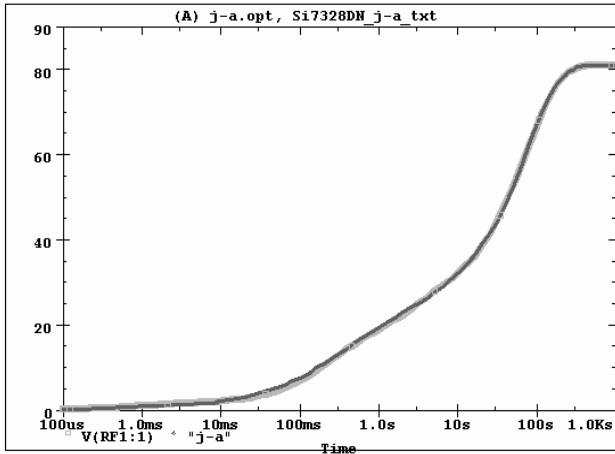
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Si7328DN Tank j-c Temperature:27.0



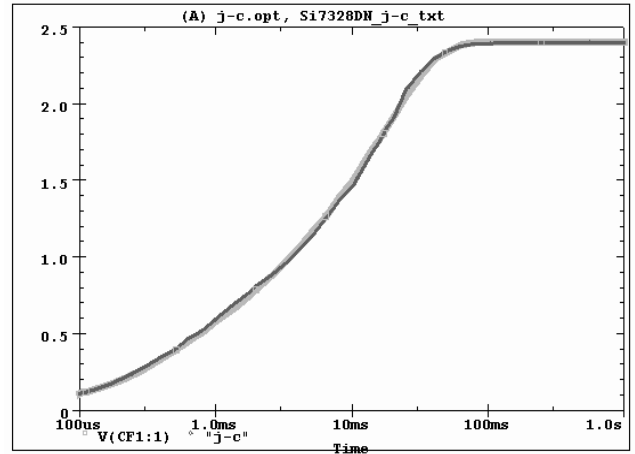
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Si7328DN Filter j-a Temperature:27.0



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Si7328DN Filter j-c Temperature:27.0



Date:June 13, 2008 Time: 21:58:11