



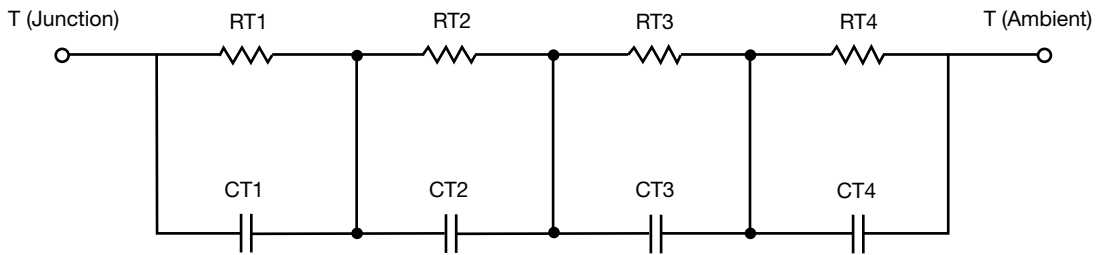
R-C Thermal Model Parameters

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



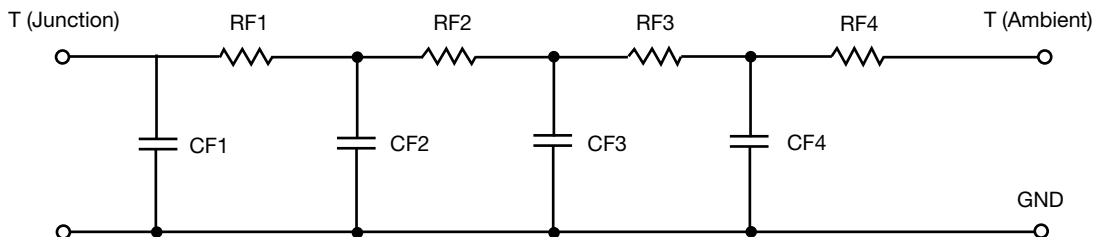
R-C VALUES FOR TANK CONFIGURATION			
THERMAL RESISTANCE (°C/W)			
Junction to	Ambient	Case	Foot
RT1	N/A	359.3701m	N/A
RT2	N/A	149.0514m	N/A
RT3	N/A	831.8850m	N/A
RT4	N/A	354.8390m	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	N/A	934.0132m	N/A
CT2	N/A	1.7760m	N/A
CT3	N/A	49.7580m	N/A
CT4	N/A	15.7115m	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	367.4829m	N/A
RF2	N/A	703.1545m	N/A
RF3	N/A	277.8453m	N/A
RF4	N/A	340.8853m	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CF1	N/A	2.8989m	N/A
CF2	N/A	22.9986m	N/A
CF3	N/A	60.3476m	N/A
CF4	N/A	538.7557m	N/A

Note

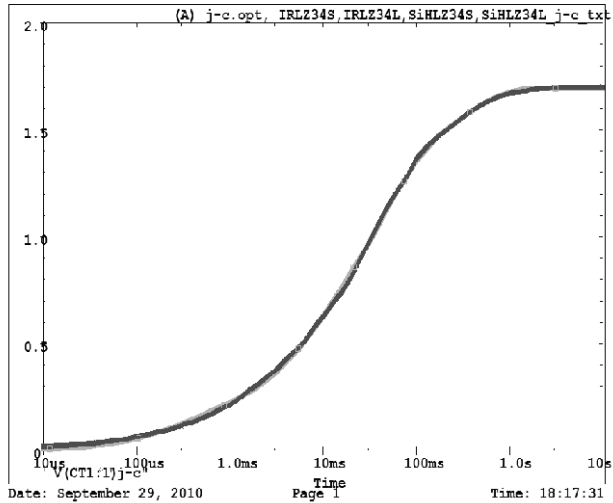
N/A indicates not applicable



IRLZ34S_RC, IRLZ34L_RC, SiHLZ34S_RC, SiHLZ34L_RC

Vishay Siliconix

IRLZ34S, IRLZ34L, SiHLZ34S, SiHLZ34L Tank j-c Temperature: 27.0



IRLZ34S, IRLZ34L, SiHLZ34S, SiHLZ34L Filter j-c Temperature: 27.0

