



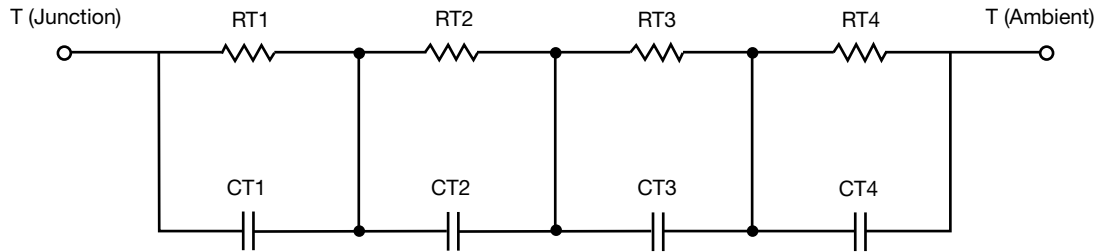
R-C Thermal Model Parameters

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	11.2036	1.2769	N/A
RT2	10.8318	2.3093	N/A
RT3	20.1681	1.1583	N/A
RT4	42.1267	1.2152	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	42.3583m	1.9847m	N/A
CT2	4.1466m	4.4725m	N/A
CT3	60.9585m	419.4234m	N/A
CT4	1.1437	616.2238u	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	13.0100	642.6259m	N/A
RF2	20.9076	2.3628	N/A
RF3	12.7798	1.8974	N/A
RF4	37.6933	1.0662	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CF1	2.8920m	320.7938u	N/A
CF2	20.2179m	289.8758u	N/A
CF3	104.1708m	5.3257m	N/A
CF4	1.1957	490.2495m	N/A

Note

- n/a indicates not applicable

