



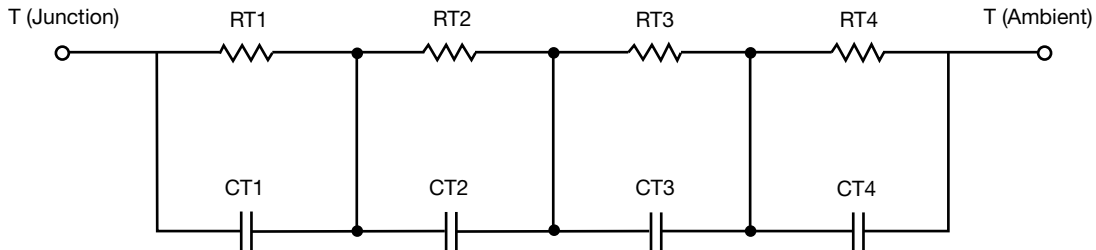
R-C Thermal Model Parameters

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	11.0829	148.1147m	N/A
RT2	4.0206	489.3291m	N/A
RT3	8.4307	441.8017m	N/A
RT4	29.8417	117.1689m	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	1.1025	1.3150m	N/A
CT2	8.3136	30.7895m	N/A
CT3	42.7908m	205.4107m	N/A
CT4	3.4928	64.2251m	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	6.5795	153.0001m	N/A
RF2	8.7148	567.3616m	N/A
RF3	23.0721	384.5585m	N/A
RF4	15.1637	87.9313m	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CF1	29.6624m	1.1004m	N/A
CF2	264.8149m	15.5400m	N/A
CF3	1.0348	100.8022m	N/A
CF4	5.7294	1.1367	N/A

Note

- n/a indicates not applicable

