

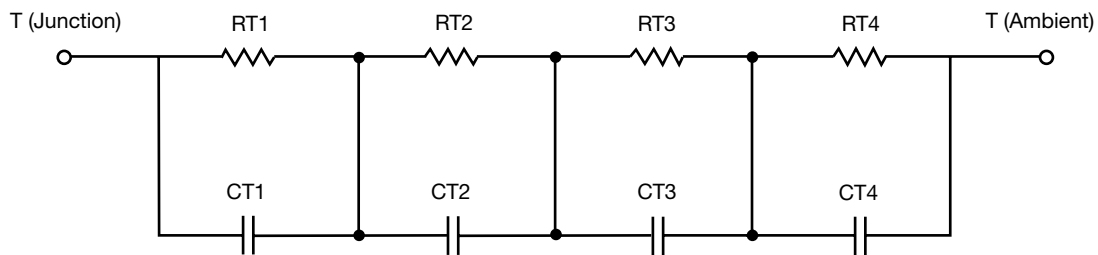
R-C Thermal Model Parameters

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



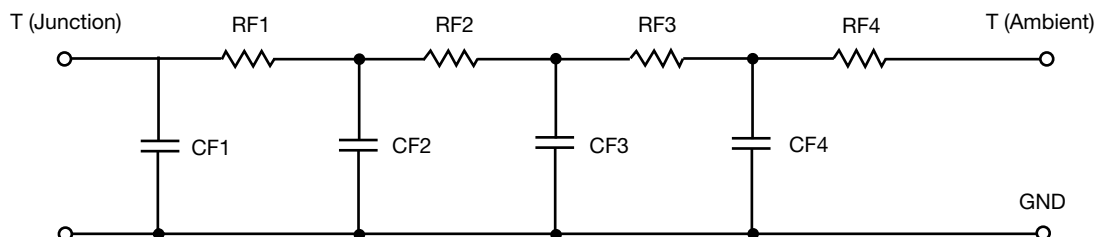
R-C VALUES FOR TANK CONFIGURATION			
THERMAL RESISTANCE (°C/W)			
Junction to	Ambient	Case	Foot
RT1	7.5968	76.1856m	N/A
RT2	1.8278	723.7026m	N/A
RT3	12.338	738.0885m	N/A
RT4	43.2374	262.0233m	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CT1	54.3333m	62.6061u	N/A
CT2	10.7056m	43.7096m	N/A
CT3	507.2688m	63.5986m	N/A
CT4	1.8564	7.9727m	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



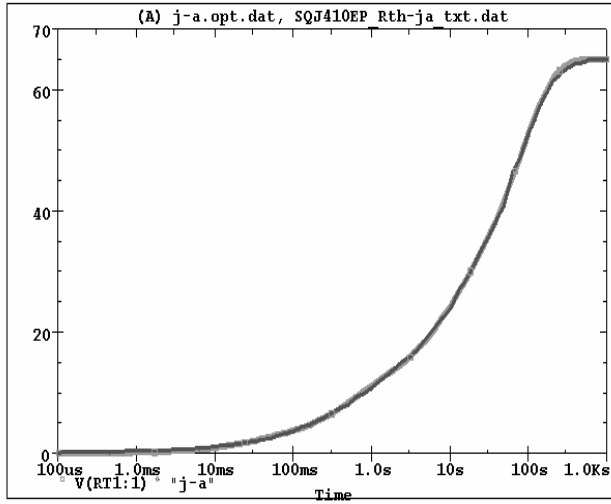
R-C VALUES FOR FILTER CONFIGURATION			
THERMAL RESISTANCE (°C/W)			
Junction to	Ambient	Case	Foot
RF1	1.4142	408.5072m	N/A
RF2	9.0904	778.4090m	N/A
RF3	17.3165	447.1436m	N/A
RF4	37.1789	165.9402m	N/A
THERMAL CAPACITANCE (Joules/°C)			
Junction to	Ambient	Case	Foot
CF1	4.1095m	3.1706m	N/A
CF2	34.3627m	21.5485m	N/A
CF3	330.2152m	12.0772m	N/A
CF4	1.7529	7.6172m	N/A

Note

N/A indicates not applicable

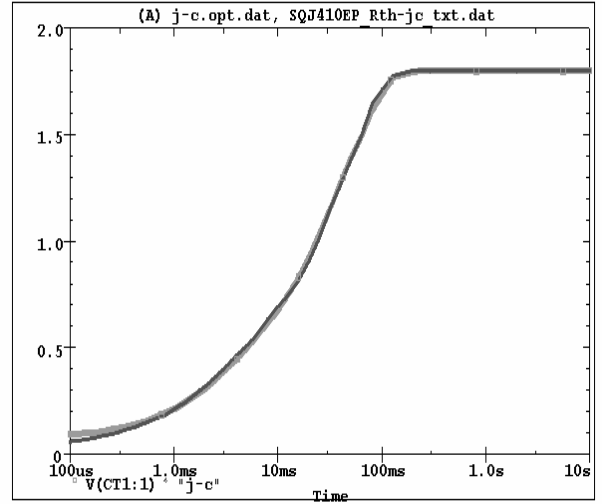


SQJ410EP Tank j-a Temperature: 27.0



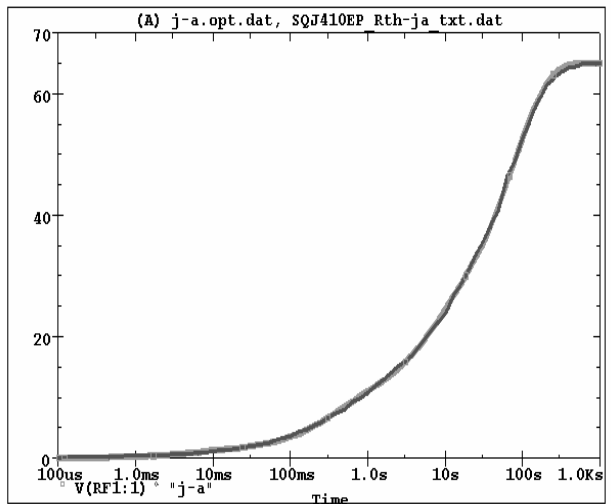
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SQJ410EP Tank j-c Temperature: 27.0



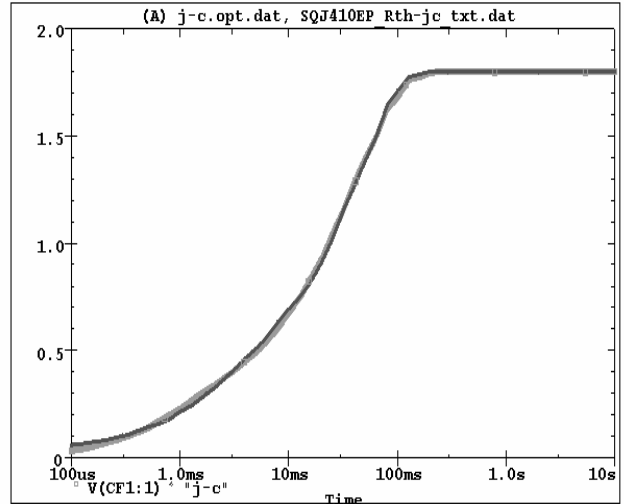
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SQJ410EP Filter j-a Temperature: 27.0



Date: December 14, 2010 Page 1 Time: 11:00:38

SQJ410EP Filter j-c Temperature: 27.0



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