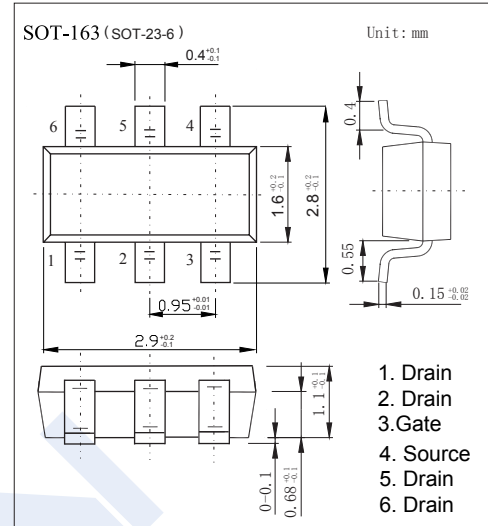
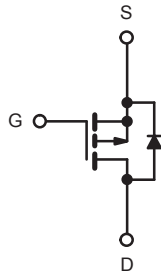


## P-Channel MOSFET

### SI3437DV (KI3437DV)

#### ■ Features

- $V_{DS} (V) = -150V$
- $I_D = -1.4 A (V_{GS} = -10V)$
- $R_{DS(ON)} < 750m\Omega (V_{GS} = -10V)$
- $R_{DS(ON)} < 790m\Omega (V_{GS} = -6V)$



#### ■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	-150	V
Gate-Source Voltage	$V_{GS}$	$\pm 20$	V
Continuous Drain Current ( $T_J = 150^\circ C$ )	$I_D$	$T_c = 25^\circ C$	-1.4
		$T_c = 70^\circ C$	-1.1
		$T_a = 25^\circ C$ (Note.1,2)	-1.1
		$T_a = 70^\circ C$ (Note.1,2)	-0.88
Pulsed Drain Current	$I_{DM}$	-5	A
Avalanche Current	$I_{AS}$	5	A
Single-Pulse Avalanche Energy	$E_{AS}$	1.25	mJ
Power Dissipation	$P_D$	$T_c = 25^\circ C$	3.2
		$T_c = 70^\circ C$	2.1
		$T_a = 25^\circ C$ (Note.1,2)	2
		$T_a = 70^\circ C$ (Note.1,2)	1.25
Thermal Resistance.Junction- to-Ambient	$R_{thJA}$	62.5	$^\circ C/W$
Thermal Resistance.Junction- to-Case	$R_{thJC}$	39	$^\circ C/W$
Junction Temperature	$T_J$	150	$^\circ C$
Junction Storage Temperature Range	$T_{stg}$	-55 to 150	$^\circ C$

Note.1:  $t = 5 s$ .

Note.2: Surface Mounted on 1" x 1" FR4 board.

Note.3: Maximum under Steady State conditions is  $110^\circ C/W$ .

## P-Channel MOSFET

### SI3437DV (KI3437DV)

#### ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V <sub>DSS</sub>	I <sub>D</sub> =-250 μA, V <sub>GS</sub> =0V	-150			V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =-150V, V <sub>GS</sub> =0V			-1	μA
		V <sub>DS</sub> =-150V, V <sub>GS</sub> =0V, T <sub>J</sub> =55°C			-10	
Gate-Body leakage current	I <sub>GSS</sub>	V <sub>DS</sub> =0V, V <sub>GS</sub> =±20V			±100	nA
Gate Threshold Voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> =V <sub>GS</sub> I <sub>D</sub> =-250 μA	-2		-4	V
Static Drain-Source On-Resistance	R <sub>DS(on)</sub>	V <sub>GS</sub> =-10V, I <sub>D</sub> =-1.4A (Note.1)			750	mΩ
		V <sub>GS</sub> =-6V, I <sub>D</sub> =-1A (Note.1)			790	
On state drain current	I <sub>D(ON)</sub>	V <sub>GS</sub> =-10V, V <sub>DS</sub> ≥-10V (Note.1)	-3			A
Forward Transconductance	g <sub>FS</sub>	V <sub>DS</sub> =-10V, I <sub>D</sub> =-1.4A (Note.1)		4.5		S
Input Capacitance	C <sub>iss</sub>	V <sub>GS</sub> =0V, V <sub>DS</sub> =-50V, f=1MHz		510		pF
Output Capacitance	C <sub>oss</sub>			30		
Reverse Transfer Capacitance	C <sub>rss</sub>			21		
Gate resistance	R <sub>g</sub>	f=1MHz		8.5	13	Ω
Total Gate Charge	Q <sub>g</sub>	V <sub>GS</sub> =-10V, V <sub>DS</sub> =-75V, I <sub>D</sub> =-1A		12.2	19	nC
				8	12	
Gate Source Charge	Q <sub>gs</sub>	V <sub>GS</sub> =-6V, V <sub>DS</sub> =-75V, I <sub>D</sub> =-1A		2.1		
Gate Drain Charge	Q <sub>gd</sub>			3.9		
Turn-On DelayTime	t <sub>d(on)</sub>	V <sub>DD</sub> = -75V, R <sub>L</sub> = 75Ω I <sub>D</sub> = -1A, V <sub>GEN</sub> = -10V, R <sub>g</sub> = 1Ω		9	15	ns
Turn-On Rise Time	t <sub>r</sub>			11	18	
Turn-Off DelayTime	t <sub>d(off)</sub>			28	42	
Turn-Off Fall Time	t <sub>f</sub>			12	18	
Turn-On DelayTime	t <sub>d(on)</sub>	V <sub>DD</sub> = -75V, R <sub>L</sub> = 75Ω I <sub>D</sub> = -1A, V <sub>GEN</sub> = -6V, R <sub>g</sub> = 1Ω		14	21	ns
Turn-On Rise Time	t <sub>r</sub>			29	44	
Turn-Off DelayTime	t <sub>d(off)</sub>			23	35	
Turn-Off Fall Time	t <sub>f</sub>			14	21	
Body Diode Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> =-1.2A, di/dt=100A/μs, T <sub>J</sub> =25°C		60	90	nC
Body Diode Reverse Recovery Charge	Q <sub>rr</sub>			120	180	
Reverse Recovery Fall Time	t <sub>a</sub>			35		ns
Reverse Recovery Rise Time	t <sub>b</sub>			25		
Maximum Body-Diode Continuous Current	I <sub>S</sub>	T <sub>C</sub> = 25°C			-1.4	A
Pulse Diode Forward Current	I <sub>SM</sub>				-5	
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> =-1A, V <sub>GS</sub> =0V			-1.2	V

Note.1: Pulse test; pulse width ≤ 300 μs, duty cycle ≤ 2 %.

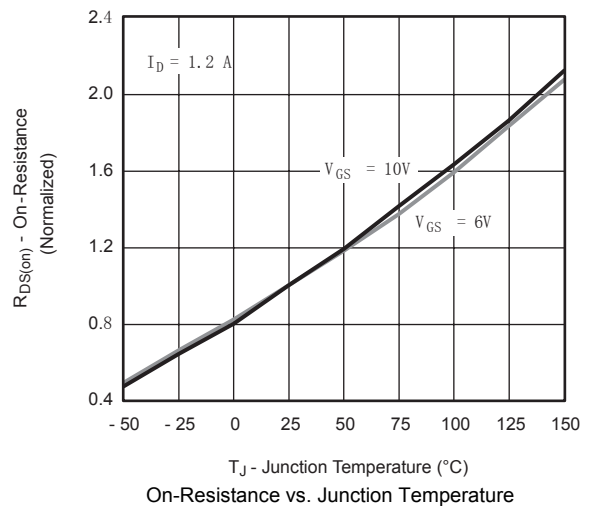
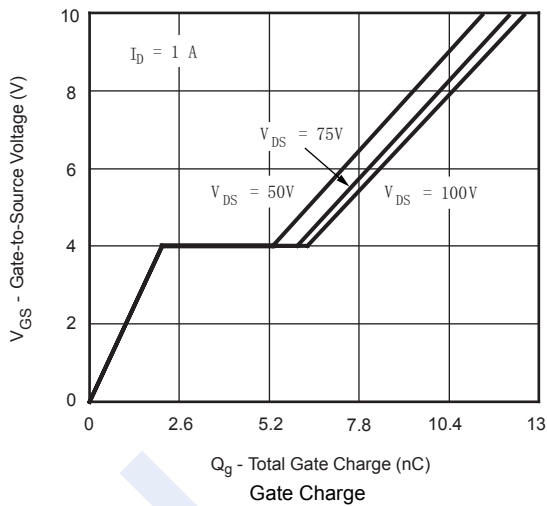
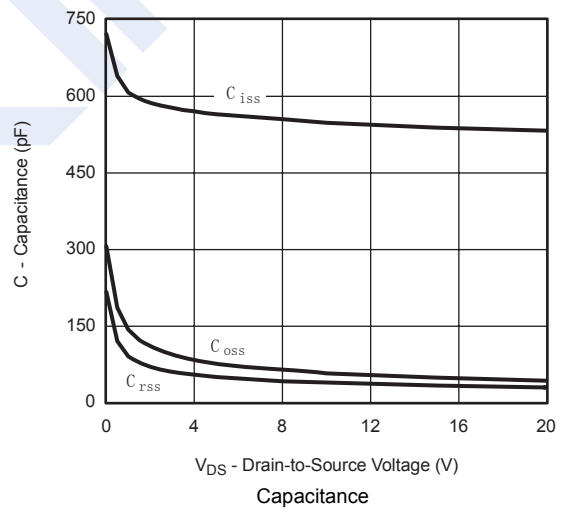
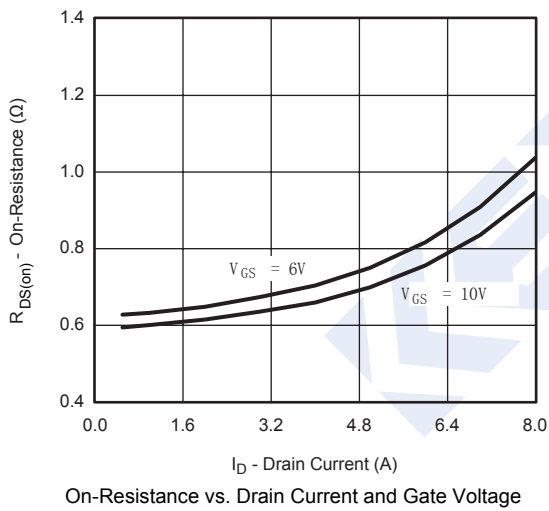
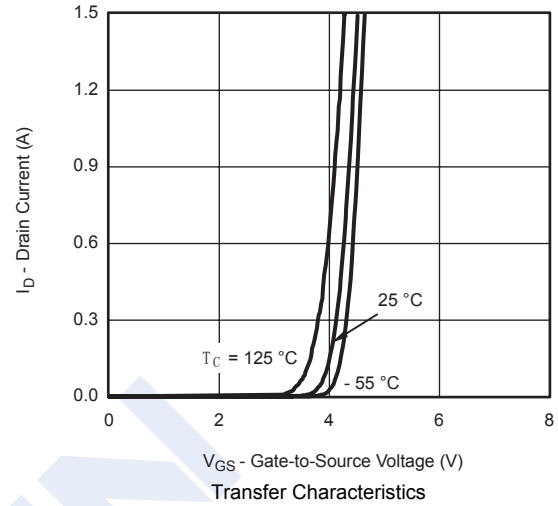
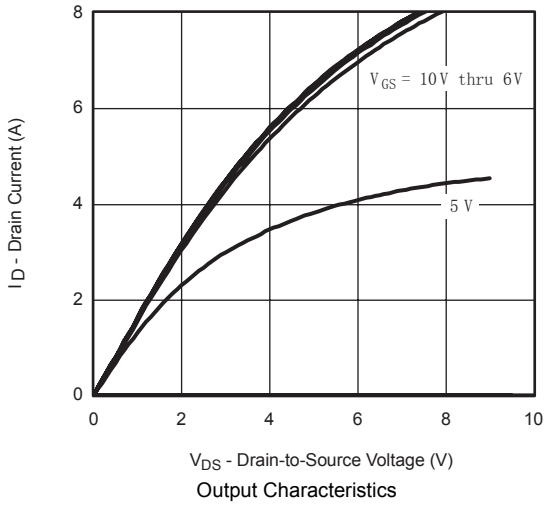
#### ■ Marking

Marking	AH***
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# P-Channel MOSFET

## SI3437DV (KI3437DV)

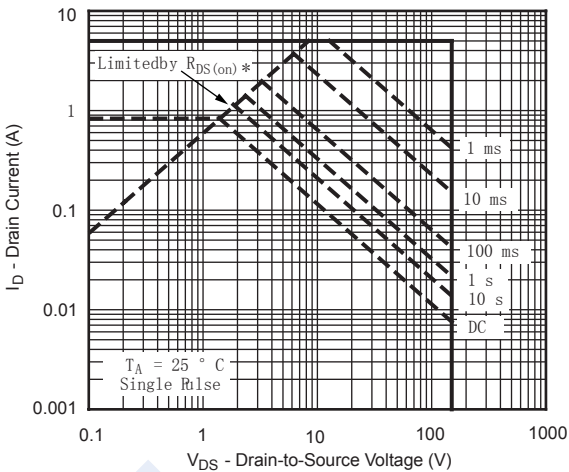
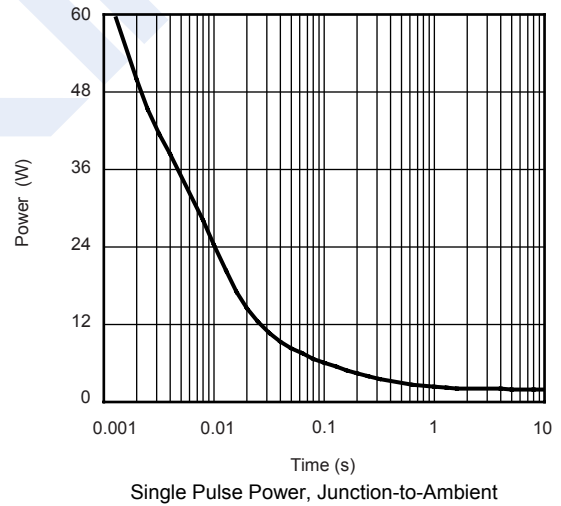
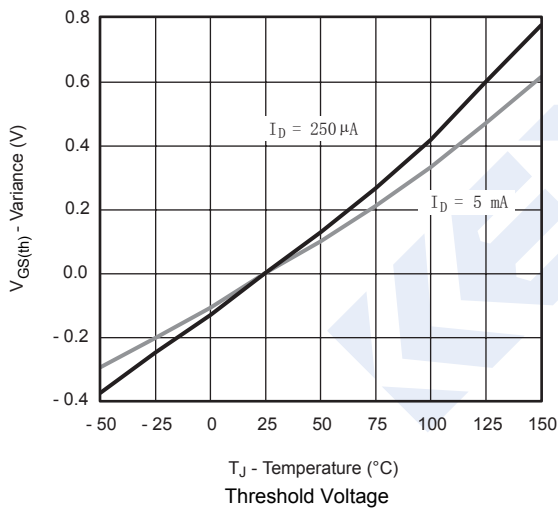
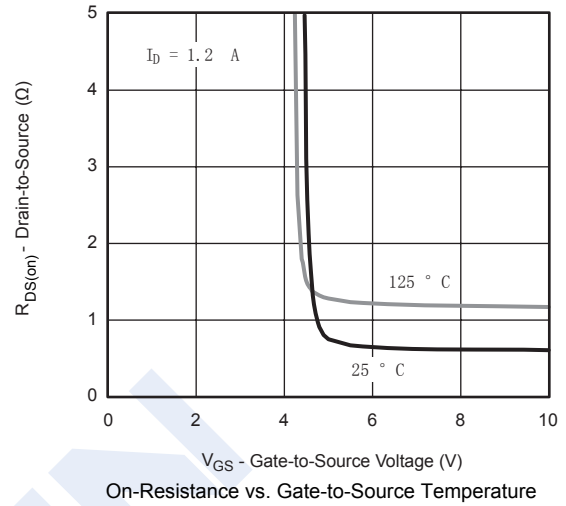
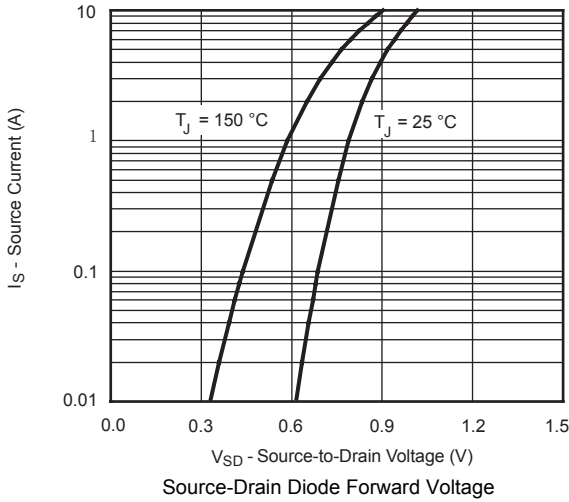
■ Typical Characteristics



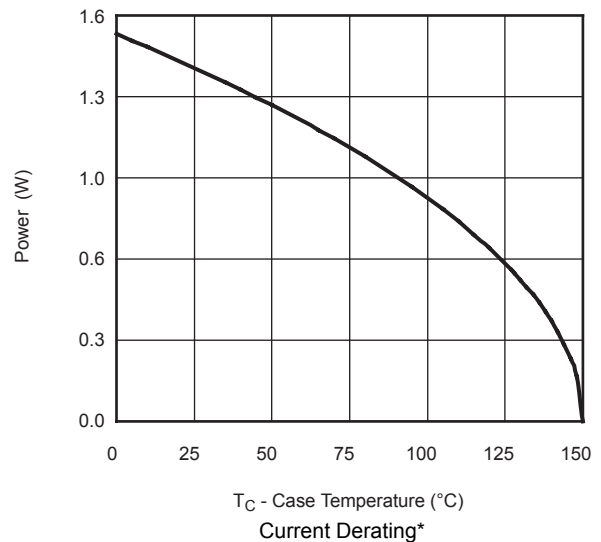
# P-Channel MOSFET

## SI3437DV (KI3437DV)

■ Typical Characteristics

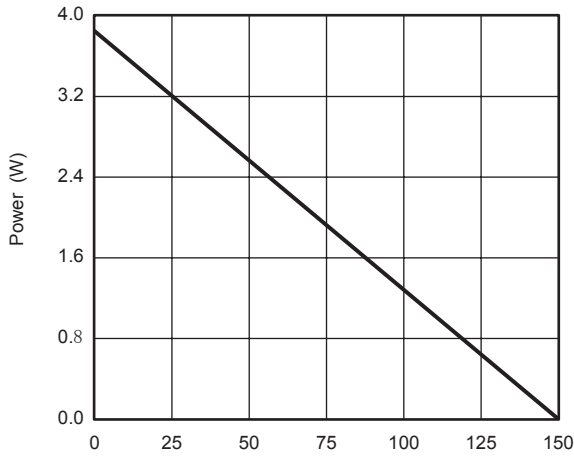


\*  $V_{GS} >$  minimum  $V_{GS}$  at which  $R_{DS(on)}$  is specified  
 Safe Operating Area, Junction-to-Ambient

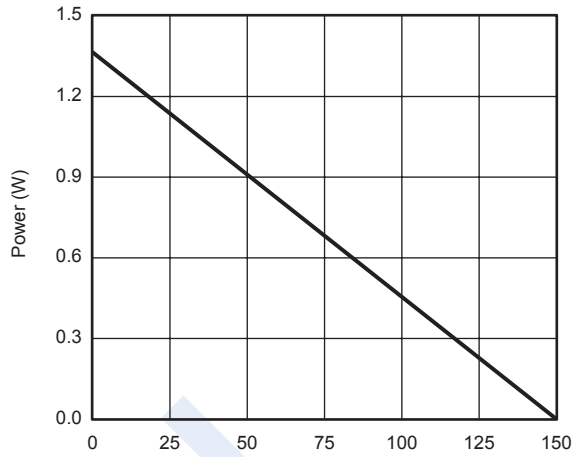


## P-Channel MOSFET SI3437DV (KI3437DV)

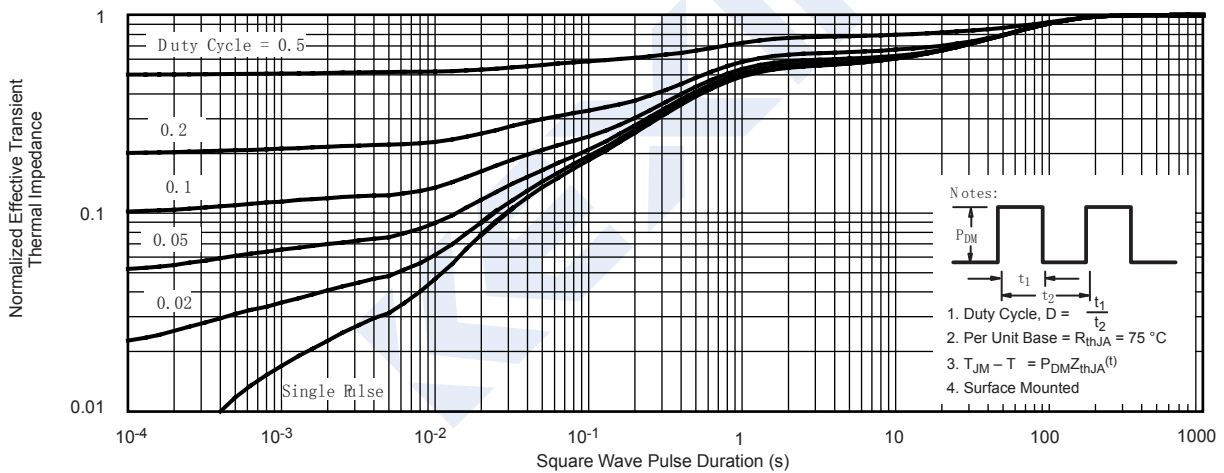
### Typical Characteristics



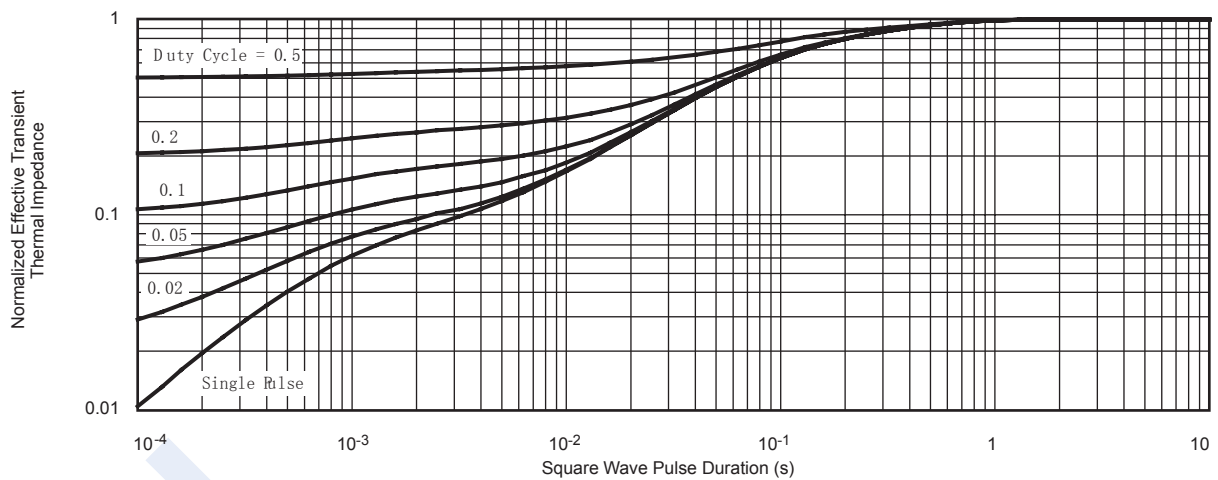
$T_C$  - Case Temperature (°C)  
Power, Junction-to-Foot



$T_A$  - Ambient Temperature (°C)  
Power Derating, Junction-to-Ambient



Normalized Thermal Transient Impedance, Junction-to-Ambient



Normalized Thermal Transient Impedance, Junction-to-Foot