

PRIMARY CHARACTERISTICS

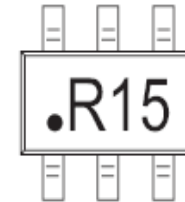
$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
-20V	50mΩ@-4.5V	-4.0A
	60mΩ@-2.5V	
	73mΩ@-1.8V	

FEATURES

- Excellent RDS(ON), low gate charge, low gate voltage
- High power and current handling capability
- Load switch and in PWM applications

SOT-23-6 PACKAGE

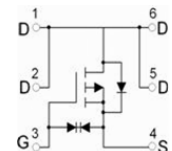
MARKING:



PIN1



Equivalent Circuit



MECHANICAL DATA

- Case : Molded plastic, SOT-23-6
- Polarity : Shown above
- Terminals : Plated terminals, solderable per MIL-STD-750, Method 2026
- Epoxy : UL94-V0 rated flame retardant

Maximum ratings ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	±8	
Continuous Drain Current ($t \leq 10s$)	I_D	-4.0	A
Pulsed Drain Current (note1)	I_{DM}	-30	A
Maximum Power Dissipation ($t \leq 10s$)	P_D	0.35	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	$^{\circ}\text{C/W}$
Operating Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 ~ +150	$^{\circ}\text{C}$

MOSFET ELECTRICAL CHARACTERISTICS

$T_a=25\text{ }^{\circ}\text{C}$ unless otherwise specified

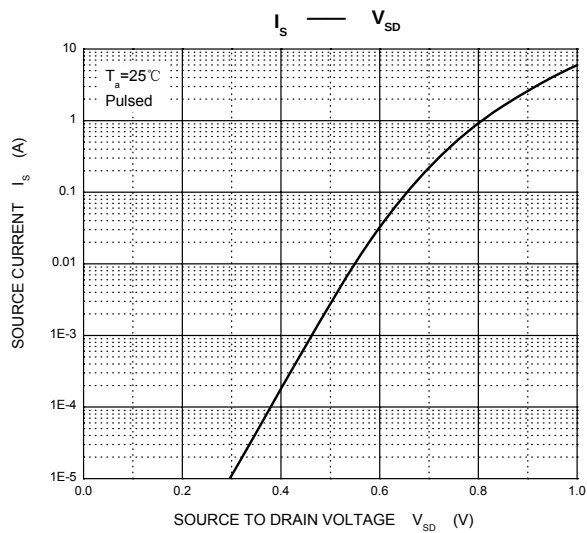
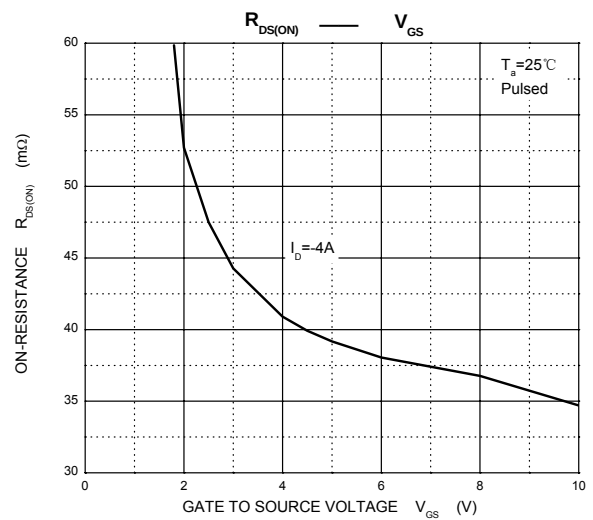
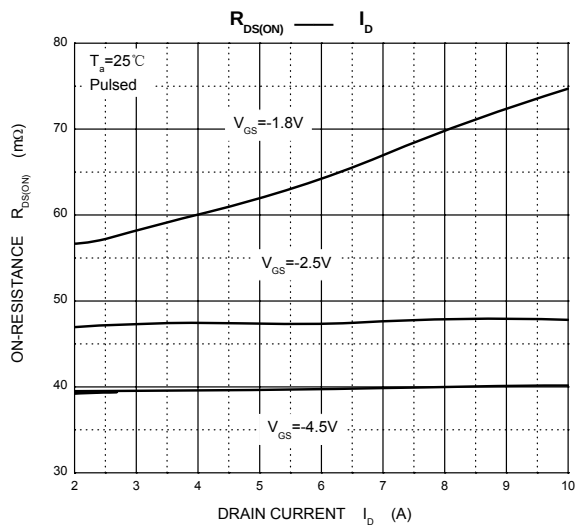
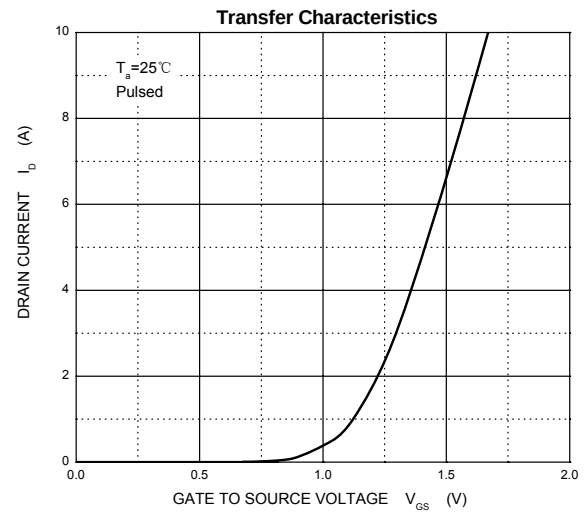
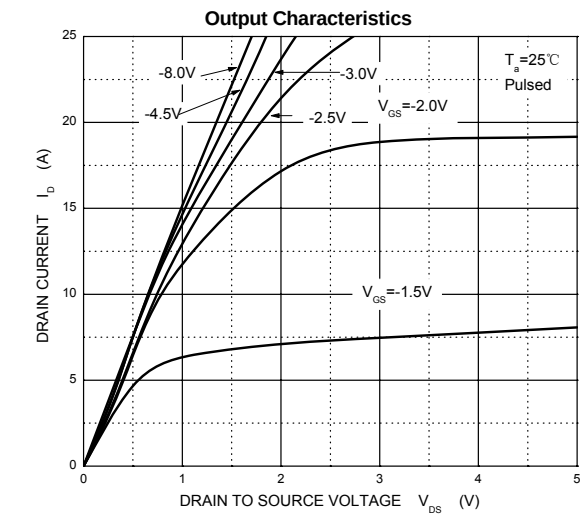
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static Parameters						
Drain-source breakdown voltage	V _{(BR) DSS}	V _{GS} = 0V, I _D =-250μA	-20			V
Gate threshold voltage (note2)	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250μA	-0.3		-1	
Gate-body leakage current	I _{GSS}	V _{DS} =0V, V _{GS} =±8V			±10	μA
		V _{DS} =0V, V _{GS} =±4.5V			±1	
Zero gate voltage drain current	I _{DSS}	V _{DS} =-16V, V _{GS} =0V			-1	
Drain-source on-state resistance(note2)	R _{DS(on)}	V _{GS} =-4.5V, I _D =-4A		44	50	mΩ
		V _{GS} =-2.5V, I _D =-4A		52	60	
		V _{GS} =-1.8V, I _D =-2A		64	73	
Forward transconductance(note2)	g _{FS}	V _{DS} =-5V, I _D =-4A	8	16		S
Dynamic Parameters (note3)						
Input capacitance	C _{iss}	V _{DS} =-10V,V _{GS} =0V,f =1MHz		1450		pF
Output capacitance	C _{oss}			205		
Reverse transfer capacitance	C _{rss}			160		
Switching Parameters(note3)						
Total gate charge	Q _g	V _{DS} =-10V,V _{GS} =-4.5V,I _D =-4A		17.2		nC
Gate-Source charge	Q _{gs}			1.3		
Gate-drain charge	Q _{gd}			4.5		
Turn-on delay time	t _{d(on)}	V _{DS} =-10V, V _{GS} =-4.5V R _{GEN} =3Ω, R _L =2.5Ω,		9.5		ns
Turn-on rise time	t _r			17		
Turn-off delay time	t _{d(off)}			94		
Turn-off fall time	t _f			35		
Drain-Source Diode Characteristics						
Drain-source diode forward voltage(note2)	V _{DS}	V _{GS} = 0V, I _S =-1A			-1	V
Maximum continuous drain-source diode forward current	I _S				-4	A

Notes:

1. Repetitive rating, pulse width limited by junction temperature.
2. Pulse Test : Pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.
3. These parameters have no way to verify.

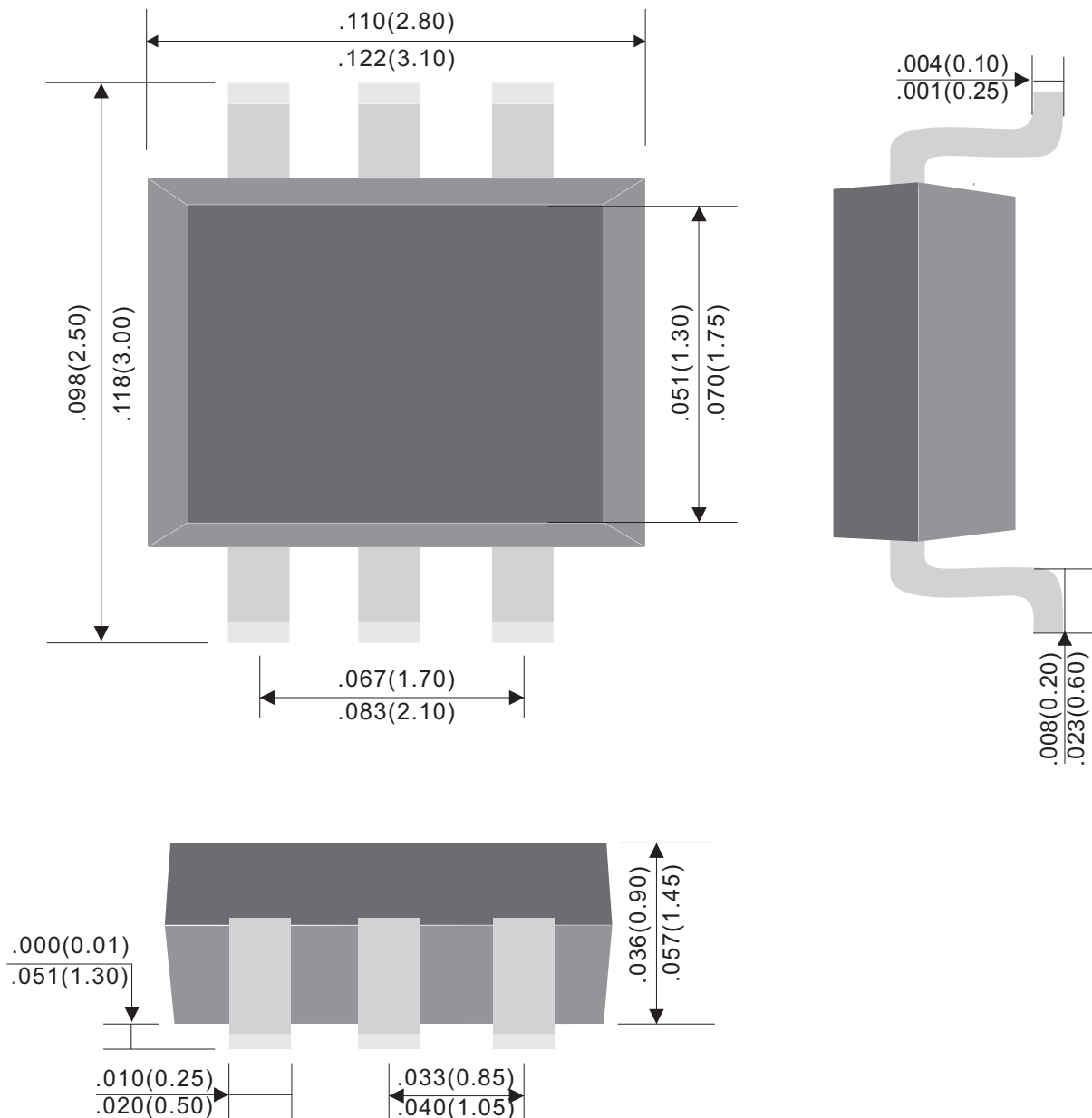


Typical Characteristics



Outline Drawing

SOT-23-6



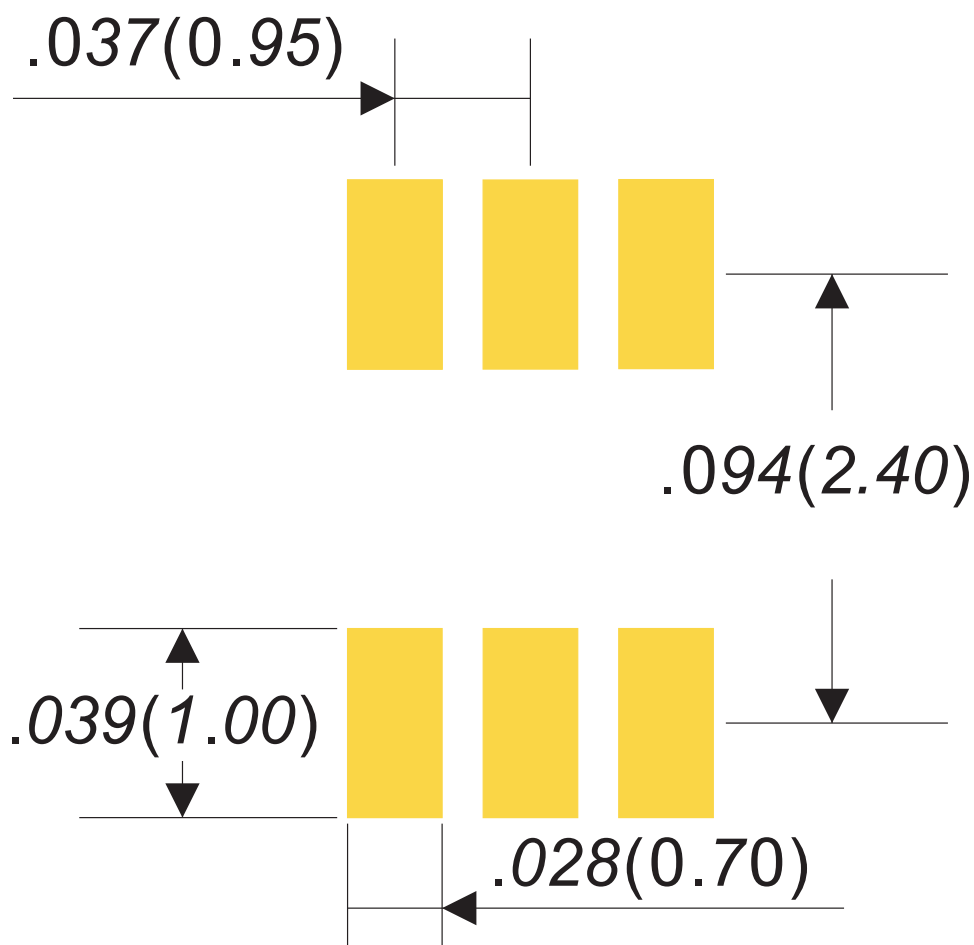
Dimensions in inches and (millimeters)

Rev.C



Suggested Soldering Pad Layout

SOT-23-6



Dimensions in inches and (millimeters)

RevA

Device PN	Packing
SEL3415 -T ⁽¹⁾ G ⁽²⁾ -WS	Tape&Reel: 3 Kpcs/Reel

(2) RoHS product for packing code suffix "G" ; Halogen free product for packing code suffix "H"

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