

### Product Summary

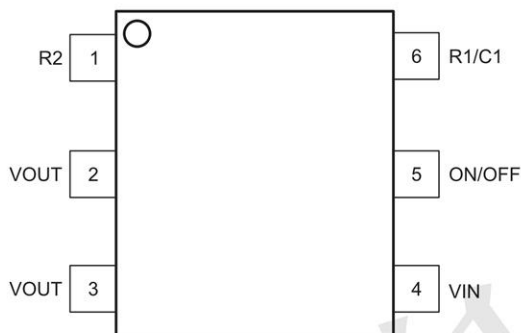
- Extremely Low RDS(on) P-Channel Load Switch MOSFET
- Low Profile, Small Footprint Package
- VIN Range 1.8 to 8.0 V
- ON/OFF Range 1.5 to 8.0 V
- Level Shift MOSFET is ESD Protected
- TPS27081ADDCR PIN to PIN fully compatible

### Application

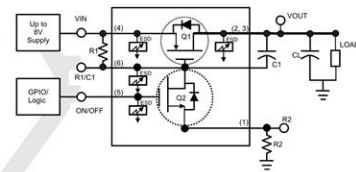
- Battery Packs
- Battery-Powered Portable Equipment
- Cellular and Cordless Telephones

### Package and Pin Configuration

#### SOT23-6 Or TSOP6



#### Circuit diagram



组件	说明
R1	电平位移器/上拉电阻器
R2	可选 <sup>(1)</sup>
C1	可选 <sup>(1)</sup>

### Marking: AUA

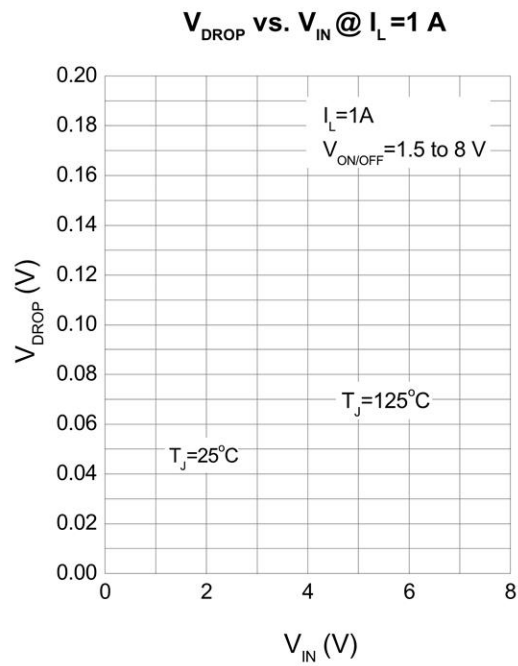
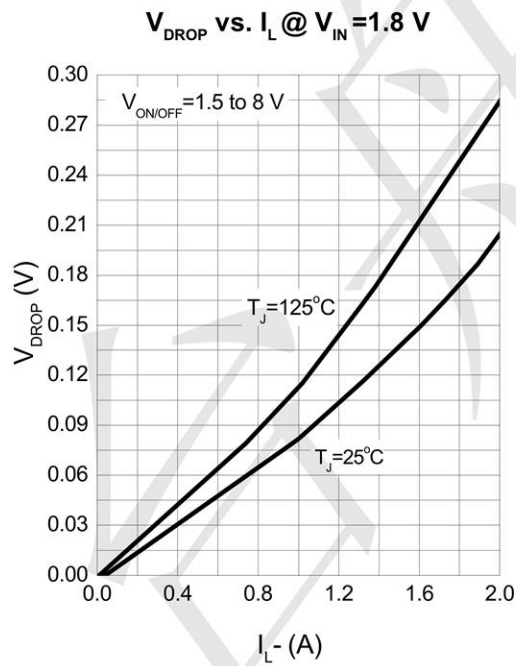
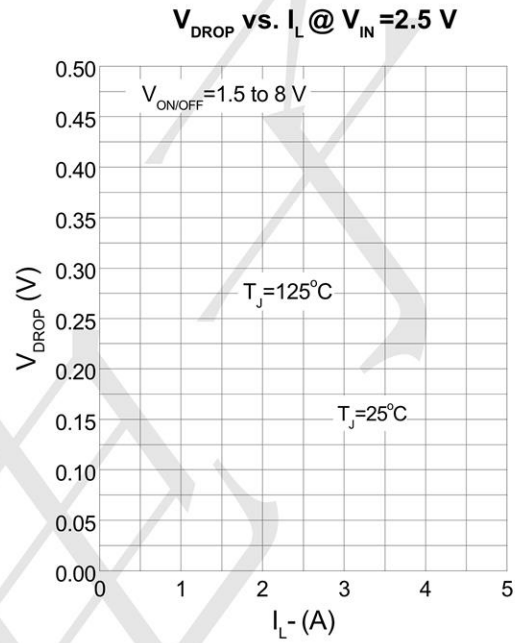
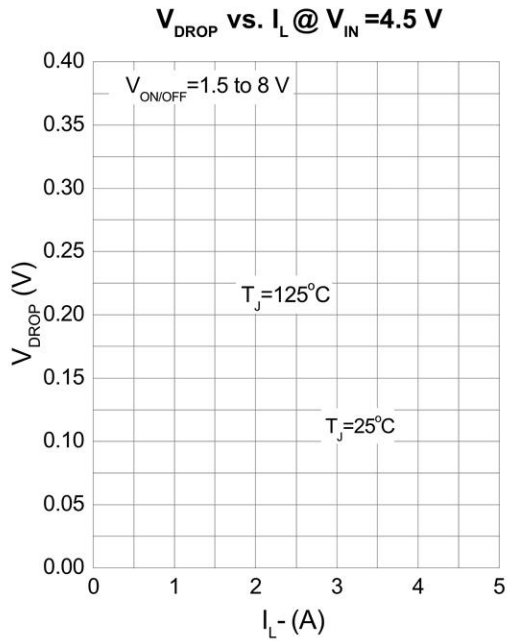
### Absolute Maximum Ratings (TA=25°C unless otherwise noted)

PARAMETER	SYMBOL	Ratings	UNITS
Input Voltage Range	V <sub>IN</sub>	8	V
On/Off Voltage Range	V <sub>ON</sub> /V <sub>OFF</sub>	8	V
Continuous Load Current	I <sub>L</sub>	3.0	A
Pulsed Load Current	I <sub>LM</sub>	9.0	A
Continuous intrinsic diode conduction	I <sub>S</sub>	- 1.0	A
Maximum power dissipation	P <sub>D</sub>	1.0	W
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55~150	°C
ESD, MIL-STD-883D HBM (100pF/1.5kohm) (Von/off pin)	V <sub>ESD</sub>	2	kV
Typical Junction to Ambient <sup>(Note 2)</sup>	R <sub>θJA</sub>	250	°C/W

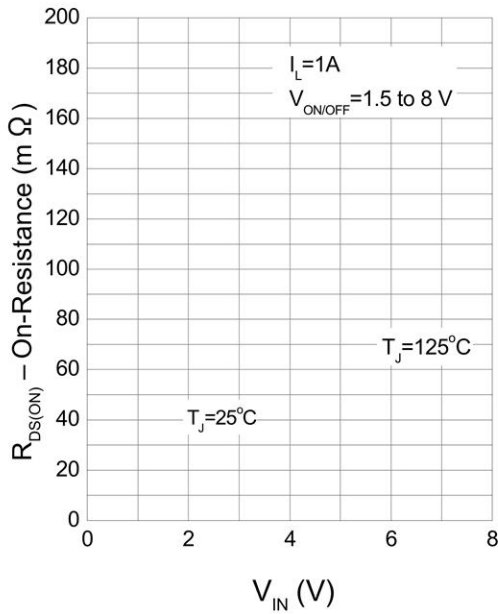
**Electrical Characteristics (  $T_A = 25^\circ\text{C}$  unless otherwise noted )**

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
<b>Off Characteristics</b>						
Q1 Drain-to-Source Breakdown Voltage	$V_{in}$	$V_{GS2}=0V, I_{D2} = -250 \mu A$			-8	V
Leakage Current	$I_{FL}$	$V_{GS1}=0V, V_{DS2} = -8V$	-	-	1	$\mu A$
Q1 Gate-to-Source Leakage Current	$I_{GSS}$	$V_{DS1}=0V, V_{GS1} = 8V$	-	-	1	$\mu A$
Q1 Diode Forward Voltage	$V_{SD}$	$I_S=-0.4A, V_{DS1}=0V$		-0.8	-1.1	V
<b>On Characteristics</b>						
Input voltage range	$V_{ON/OFF}$		1.5			V
Q1 Gate Threshold Voltage	$V_{GS(th)}$	$V_{GS1} = V_{ds1}, I_D = -250 \mu A$	0.4		1.0	V
Input Voltage	$V_{in}$	$V_{GS1} = V_{ds1}, I_D = -250 \mu A$	1.8		8	V
Drain-Source On-State Resistance (Q2)	$R_{DS(on)}$	$V_{ON/OFF} = 1.8V, V_{IN} = 4.5V, I_D = 1.0A$		45	55	m $\Omega$
		$V_{ON/OFF} = 1.8V, V_{IN} = 2.5V, I_D = 1A$		60	65	
		$V_{ON/OFF} = 1.8V, V_{IN} = 1.8V, I_D = 1A$		80	150	
Load Current	$I_L$	$V_{drop} \leq 0.2V, V_{in}=5.0, V_{on/off}=1.5V$	1.0	-		A
		$V_{drop} \leq 0.3V, V_{in}=2.5, V_{on/off}=1.5V$	1.0	-		

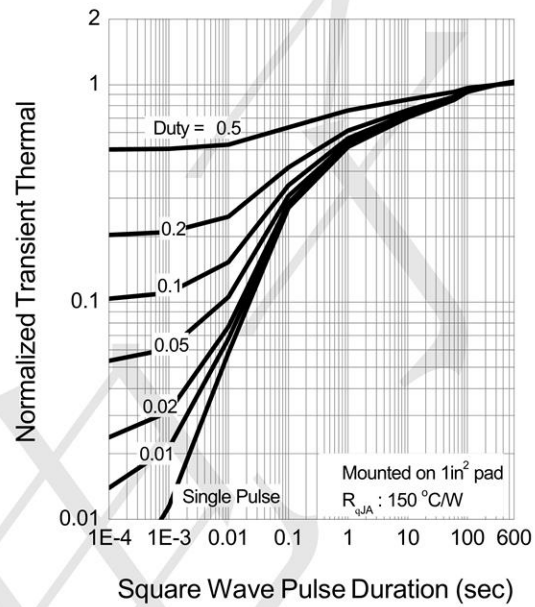
## Typical Operating Characteristics



**On-Resistance vs. Input Voltage**

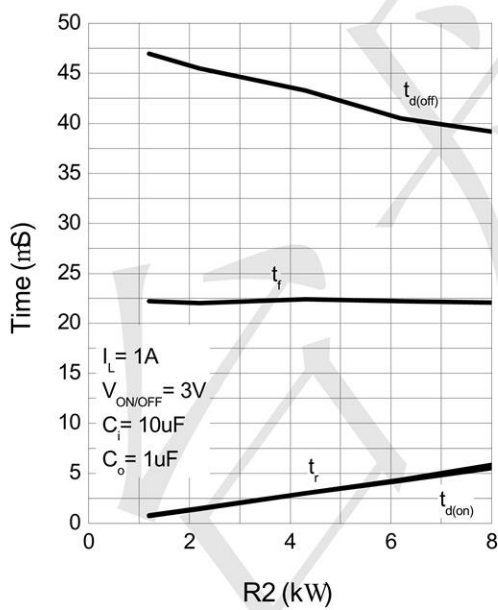


**Thermal Transient Impedance**



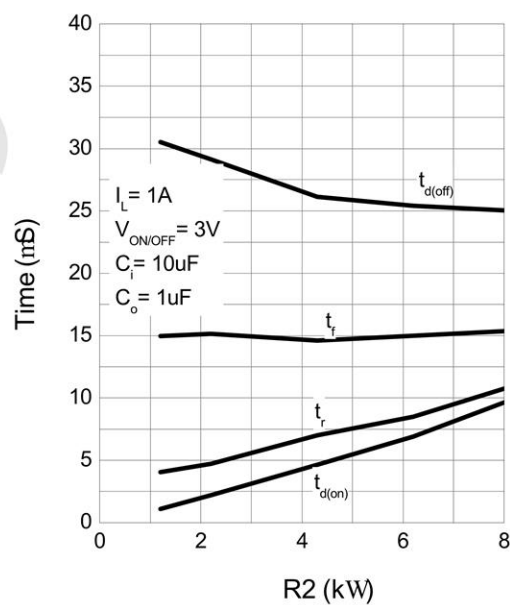
**Switching Variation**

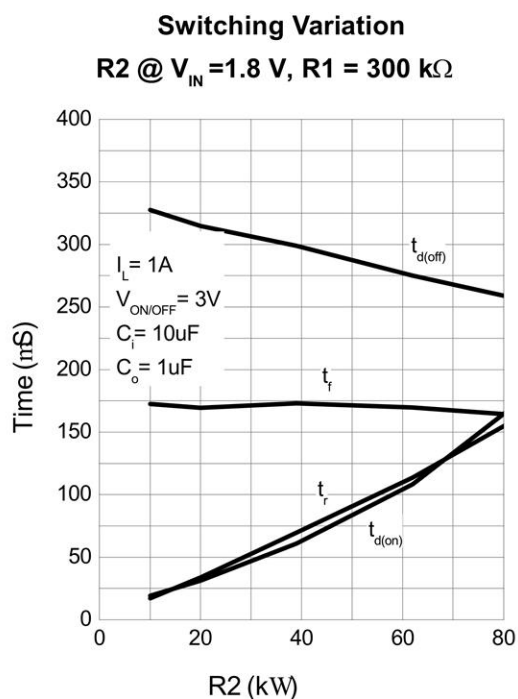
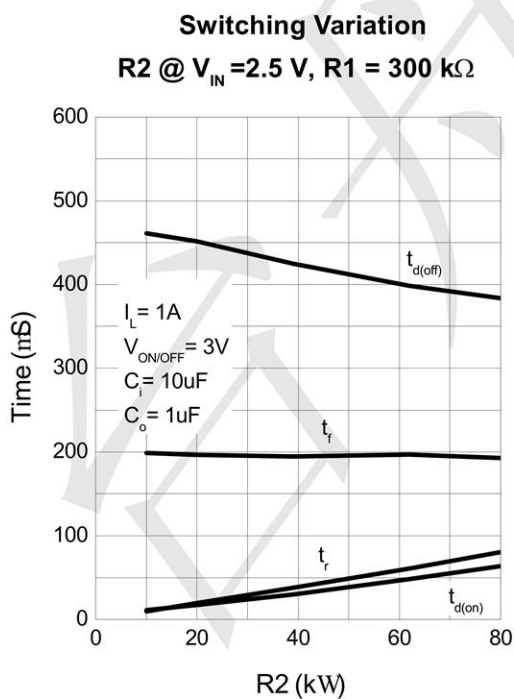
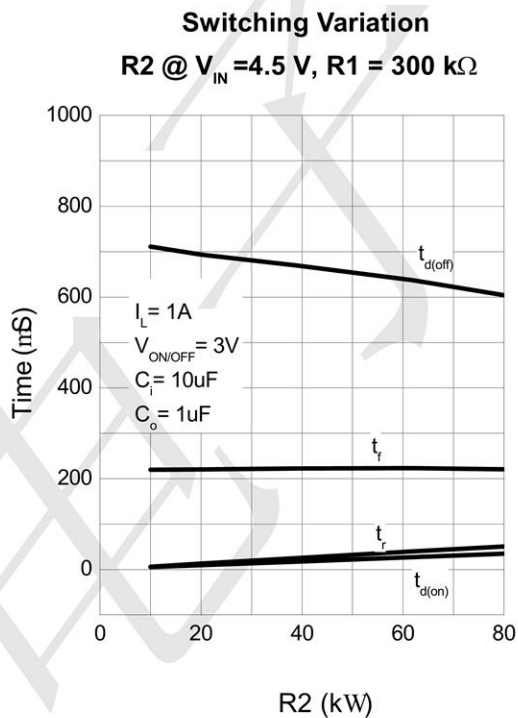
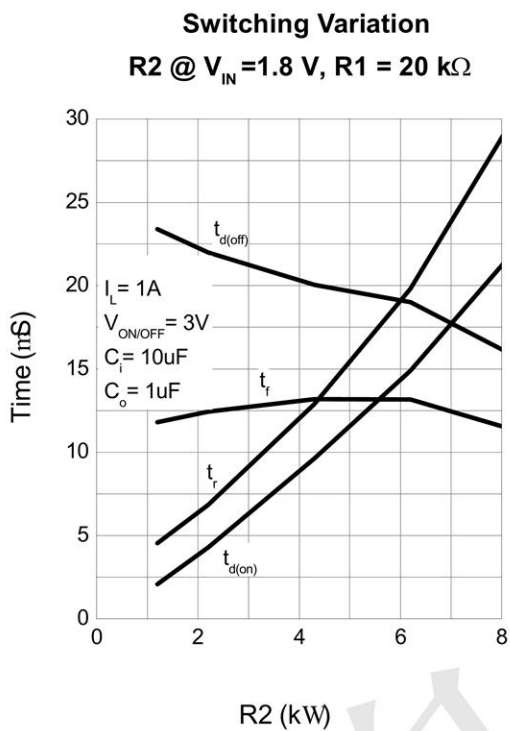
**R2 @  $V_{IN} = 4.5 \text{ V}$ , R1 = 20 kΩ**



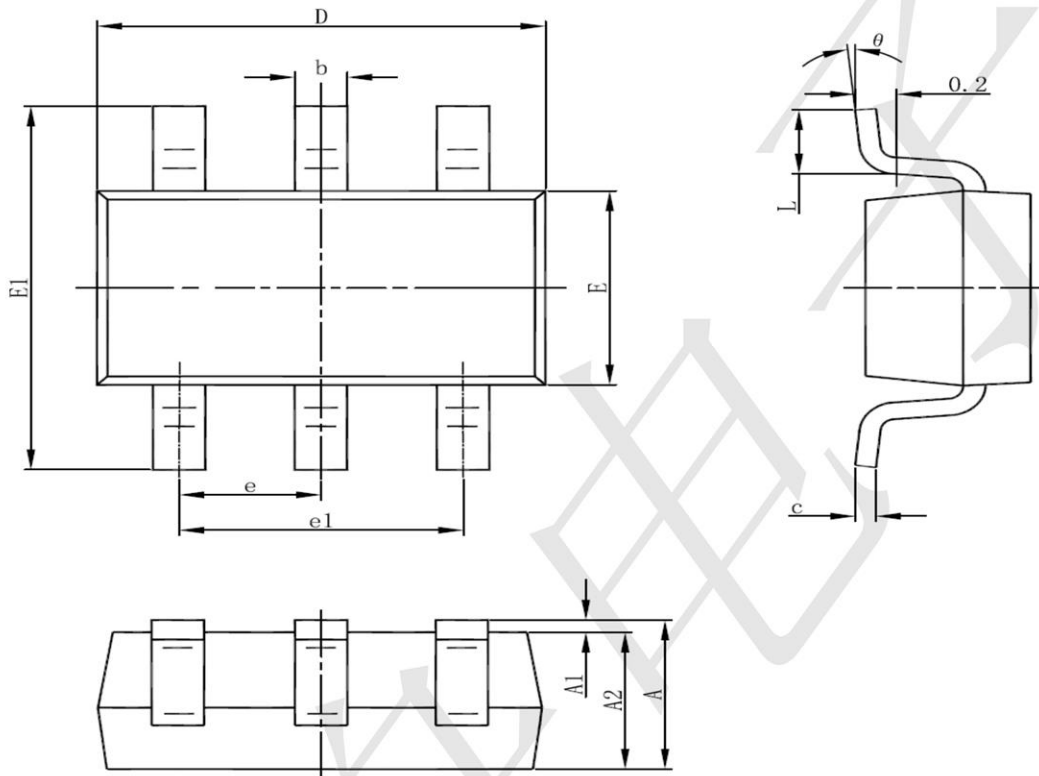
**Switching Variation**

**R2 @  $V_{IN} = 2.5 \text{ V}$ , R1 = 20 kΩ**





**SOT23-6 Package Information**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°