

Product Summary

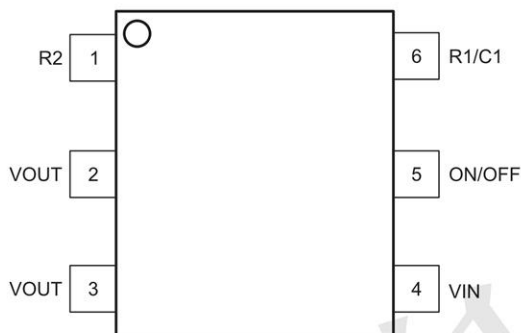
- Extremely Low RDS(on) P-Channel Load Switch MOSFET
- Low Profile, Small Footprint Package
- VIN Range 1.8 to 8.0 V
- ON/OFF Range 1.5 to 8.0 V
- Level Shift MOSFET is ESD Protected
- TPS27081ADDCR PIN to PIN fully compatible

Application

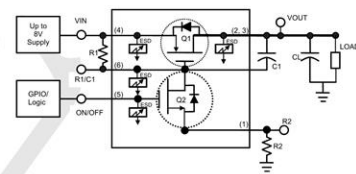
- Battery Packs
- Battery-Powered Portable Equipment
- Cellular and Cordless Telephones

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 ⁽¹⁾
C1	可选 ⁽¹⁾

Marking: AUA

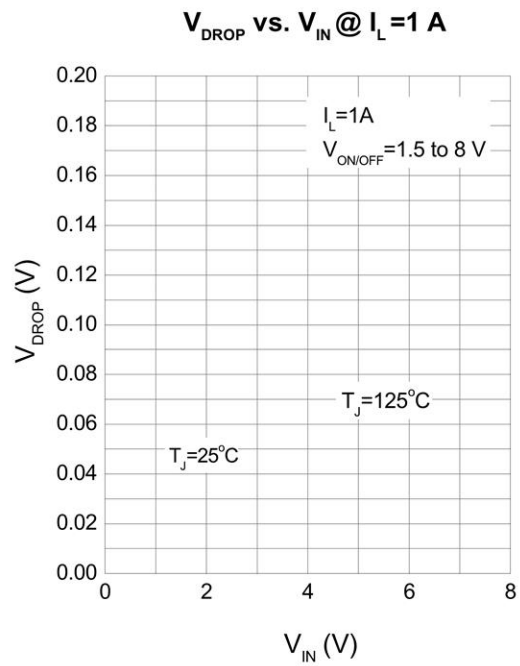
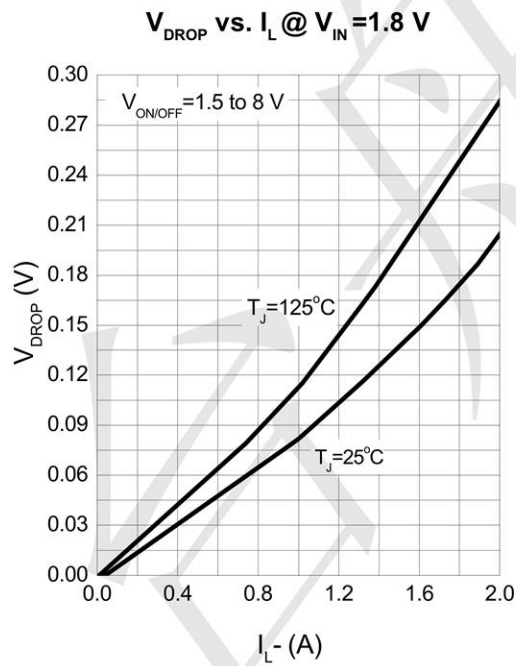
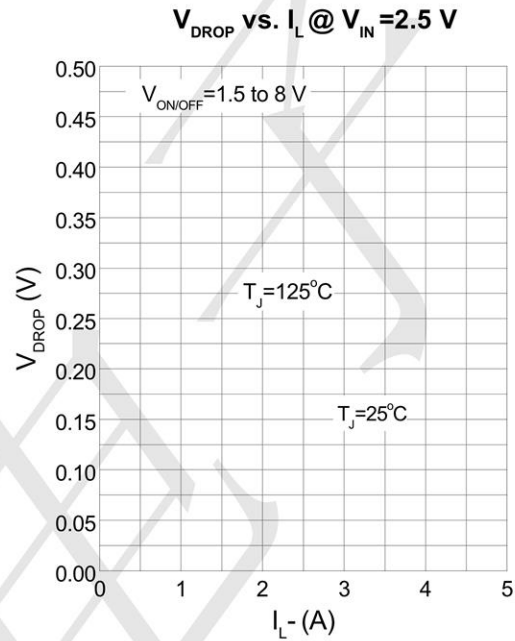
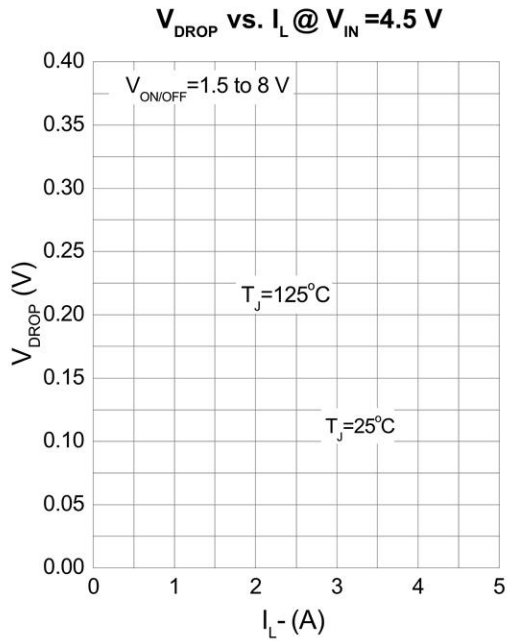
Absolute Maximum Ratings (TA=25°C unless otherwise noted)

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

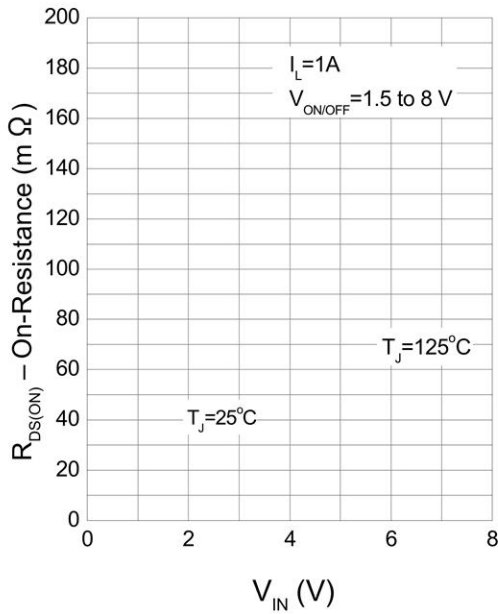
Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Off Characteristics						
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	μA
Q1 Gate-to-Source Leakage Current	I_{GSS}	$V_{DS1}=0V, V_{GS1} = 8V$	-	-	1	μA
Q1 Diode Forward Voltage	V_{SD}	$I_S=-0.4A, V_{DS1}=0V$		-0.8	-1.1	V
On Characteristics						
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 Ω
		$V_{ON/OFF} = 1.8V, V_{IN} = 2.5V, I_D = 1A$		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	-		

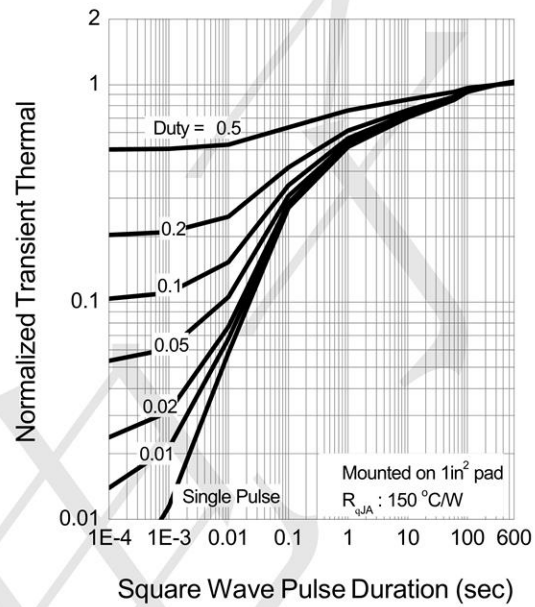
Typical Operating Characteristics



On-Resistance vs. Input Voltage

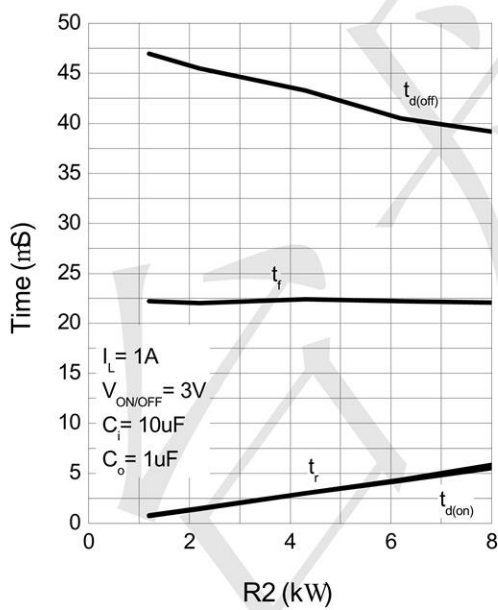


Thermal Transient Impedance



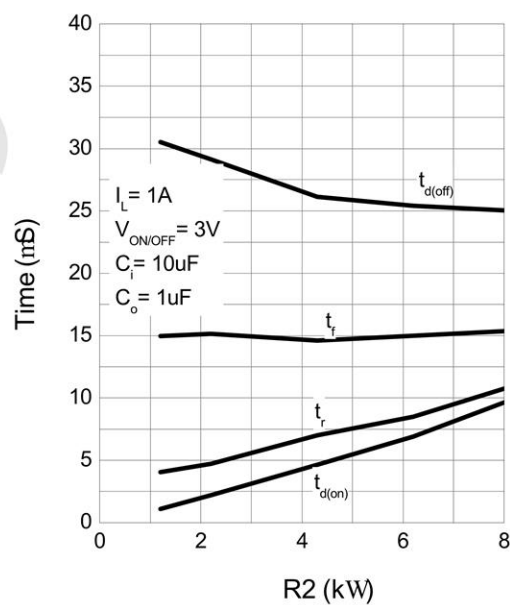
Switching Variation

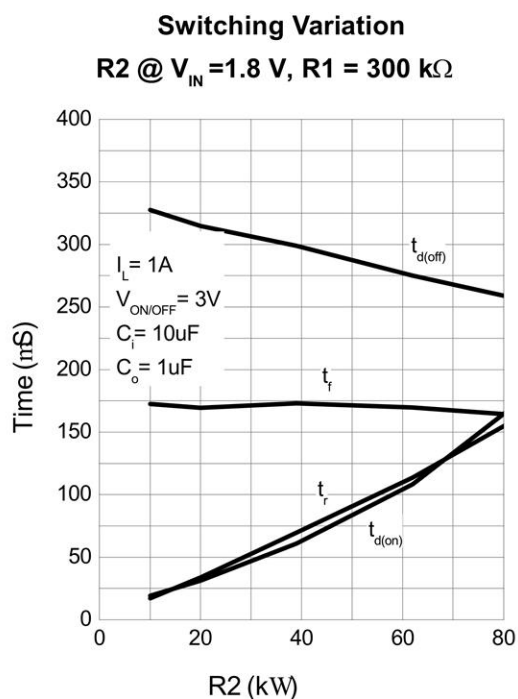
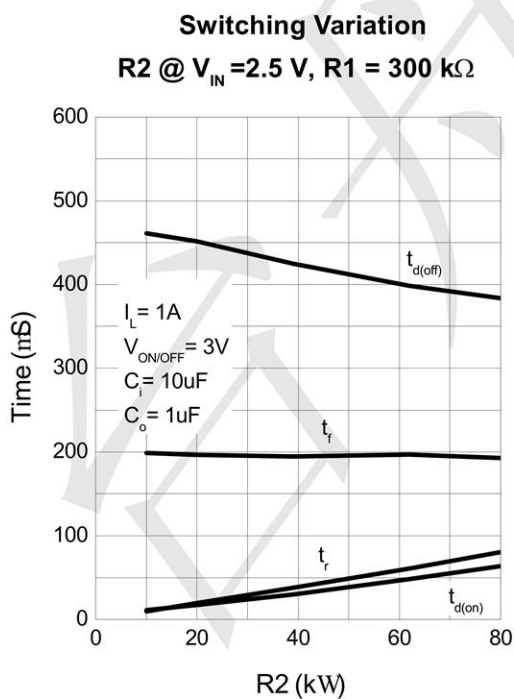
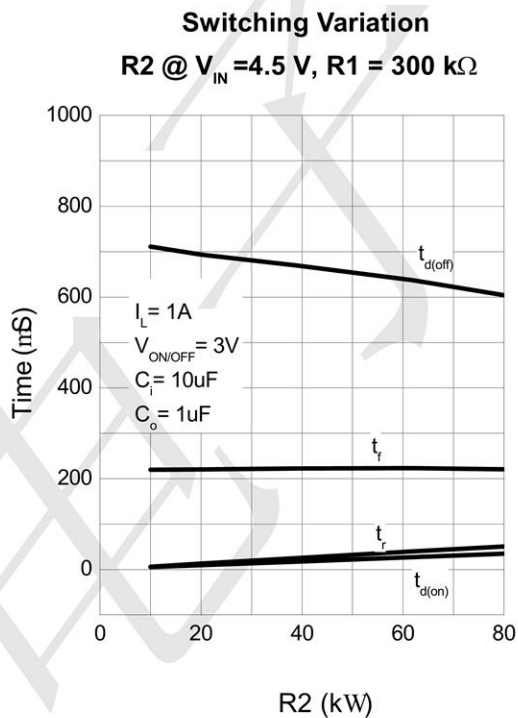
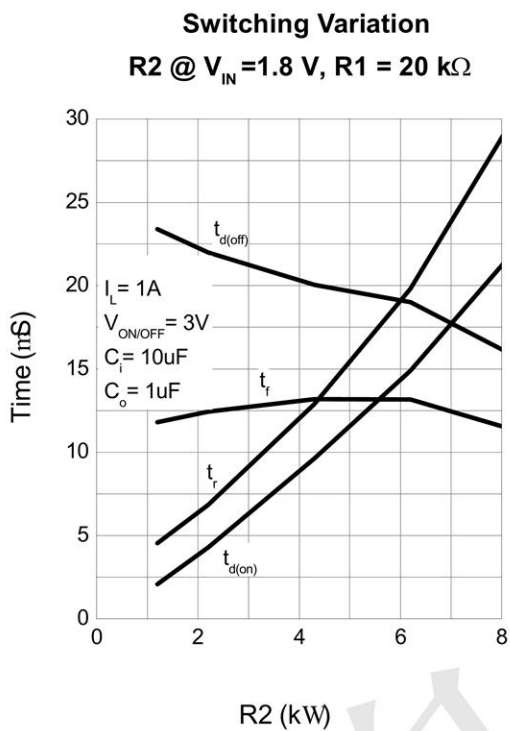
R2 @ $V_{IN} = 4.5V$, R1 = 20 kΩ



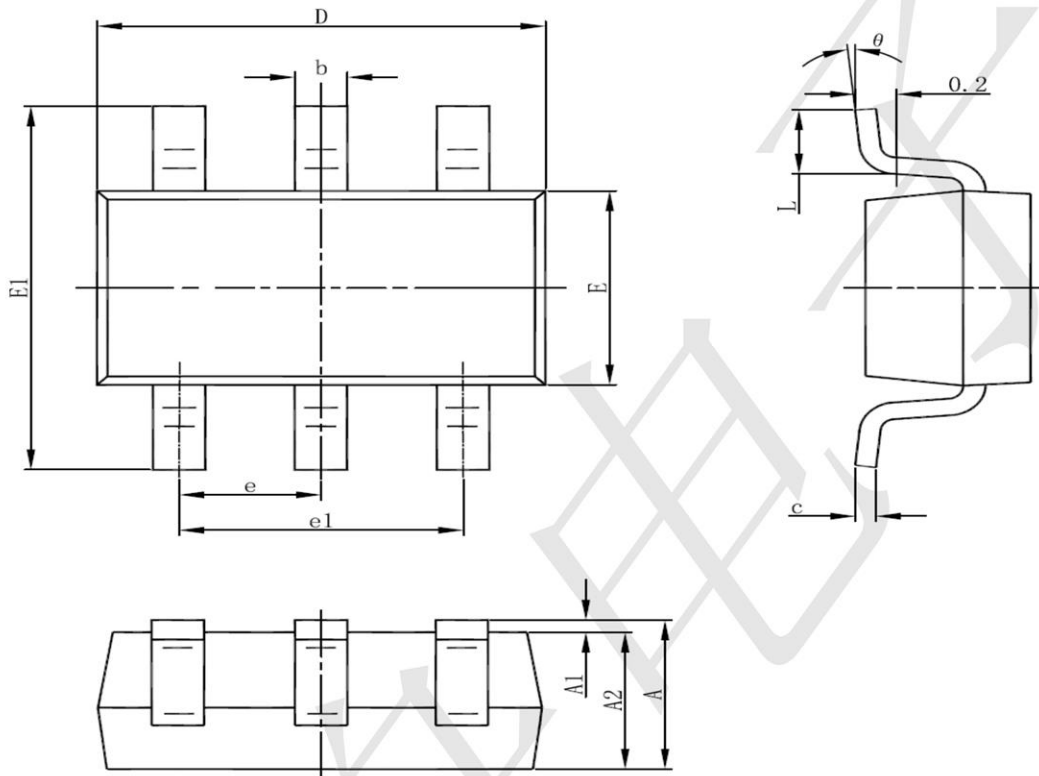
Switching Variation

R2 @ $V_{IN} = 2.5V$, 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°

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