

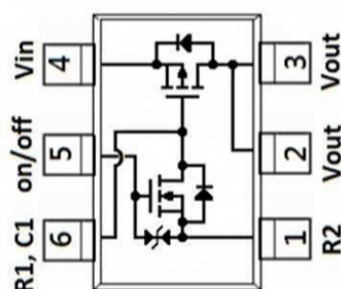
Product Summary

- $V_{drop} = 0.2V @ V_{in}=12V, I_L=3.0A, R_{DS(ON)} = 55m\Omega$
- $V_{drop} = 0.2V @ V_{in}=5.0V, I_L=2.0A, R_{DS(ON)} = 75m\Omega$
- Configuration Level-Shif

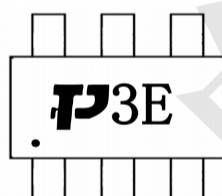
Application

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

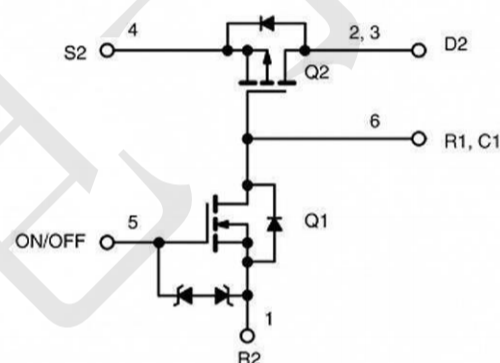
Package and Pin Configuration



Marking:



Circuit diagram



Absolute Maximum Ratings ($T_A=25^\circ C$ unless otherwise noted)

Symbol	Parameter	Rating	Unit
V_{IN}	Input Voltage	20	V
V_{ON}/OFF	ON/OFF Voltage	12	
I_L	Load Current	Continuous ^{a, b}	A
		Pulsed ^{b, c}	
I_S	Diode Continuous Forward Current ^a	-1	$^\circ C$
T_J	Maximum Junction Temperature ^a	150	
T_{STG}	Storage Temperature Range	-55 to 150	
P_D	Maximum Power Dissipation ^a	$T_A=25^\circ C$	W
V_{ESD}	ESD, MIL-STD-883D HBM (100pF/1.5kohm) (Von/off pin)		KV
R_{qJA}	Thermal Resistance-Junction to Ambient	150	$^\circ C/W$

Note a : Surface Mounted on FR4 Board.

Note b : $V_{IN}=8V, V_{ON/OFF}=8V, T_A=25^\circ C$.

Note c : Pulse test: pulse width $\leq 300ms$, duty cycle $\leq 2\%$.

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

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
OFF Characteristics						
I_{FL}	Reverse Leakage Current	$V_{IN}=8\text{V}, V_{ON/OFF}=0\text{V}$	-	-	1	nA
V_{SD}	Diode Forward Voltage	$I_S=-1\text{A}$	-	-0.7	-1.3	V
ON Characteristics						
V_{IN}	Input Voltage Range		3.0	-	20	V
$R_{DS(ON)}$	On-Resistance (Q2)	$V_{IN}=-12\text{V}, I_{DS}=-3\text{A}$	-	55	65	mW
		$V_{IN}=-5.0\text{V}, I_{DS}=-2\text{A}$	-	75	95	
$I_{D(ON)}$	On-State (Q2) Drain-Current	$V_{IN-OUT}\leq 0.2\text{V}, V_{IN}=12\text{V}, V_{ON/OFF}=3.3\text{V}$	2.6	-	-	A
		$V_{IN-OUT}\leq 0.2\text{V}, V_{IN}=5\text{V}, V_{ON/OFF}=3.3\text{V}$	1.7	-	-	

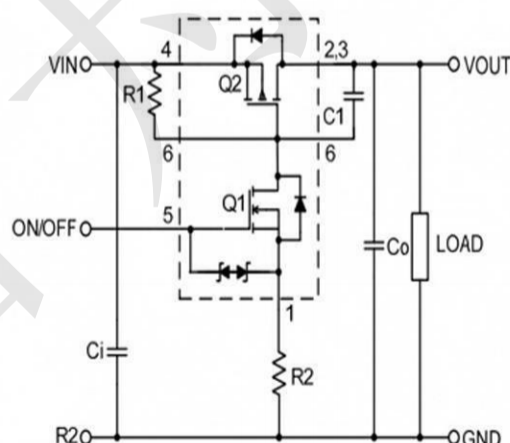
NOTES :

Note a : Surface Mounted on FR4 Board.

Note b : $V_{IN}=8\text{V}, V_{ON/OFF}=8\text{V}, T_A=25^\circ\text{C}$.

Note c : Pulse test: pulse width $\leq 300\text{ns}$, duty cycle $\leq 2\%$.

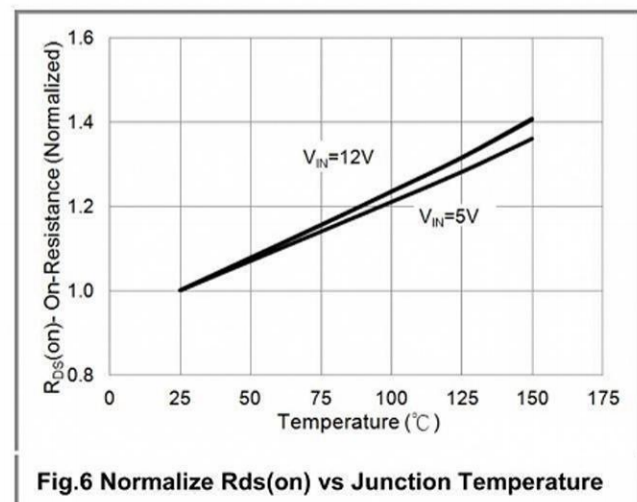
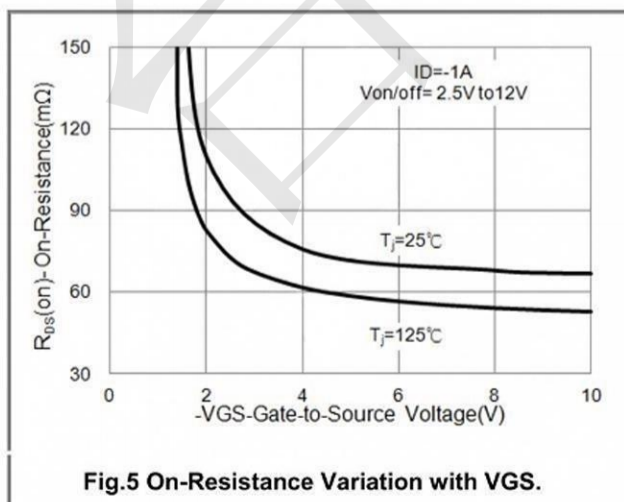
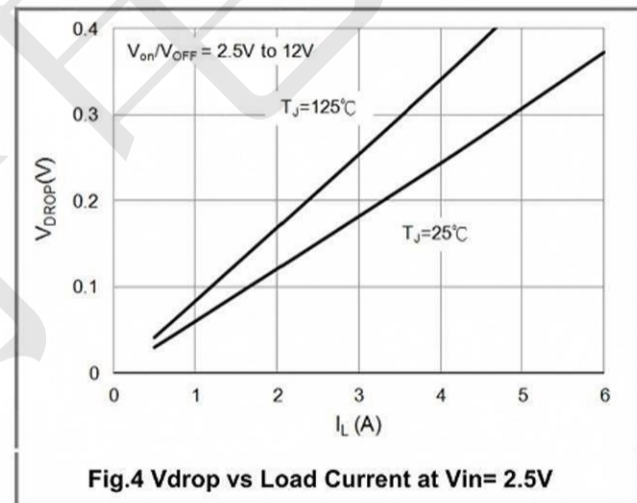
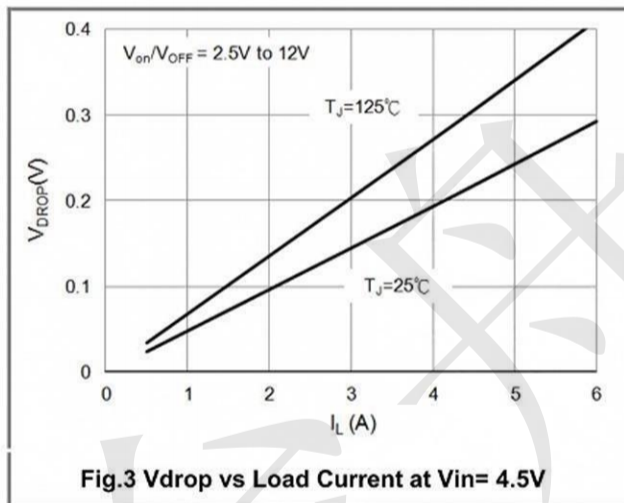
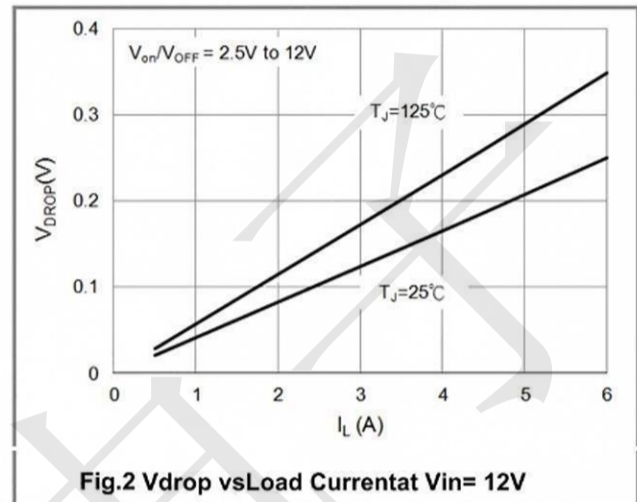
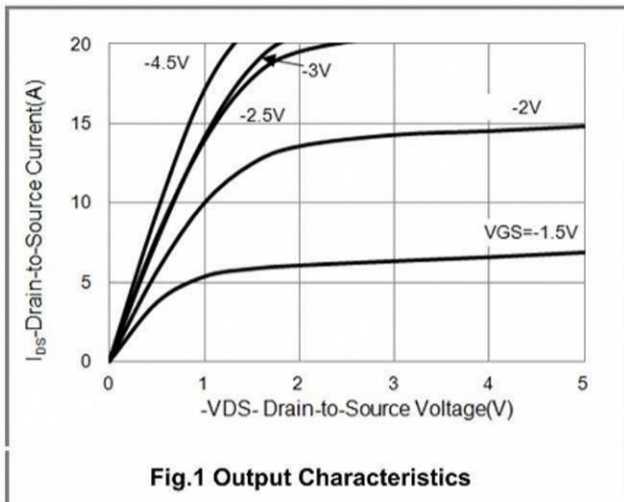
Typical Application Circuit

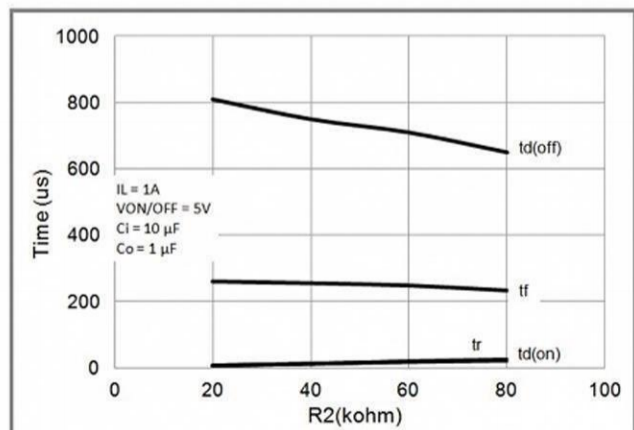
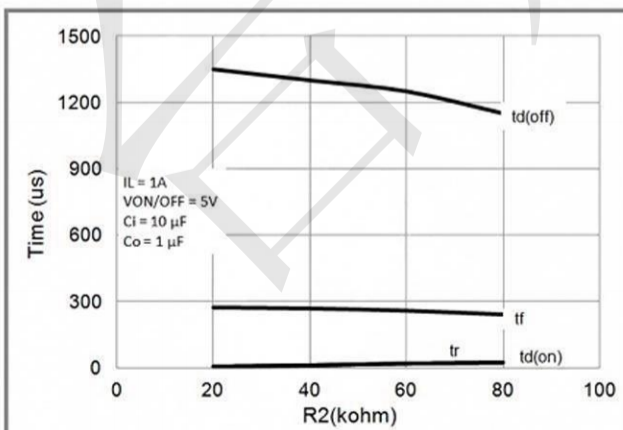
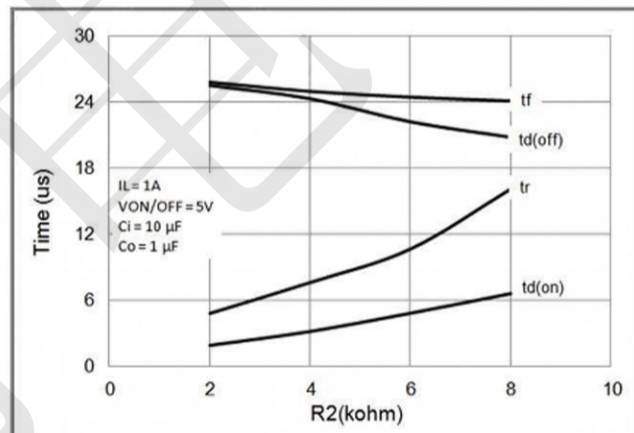
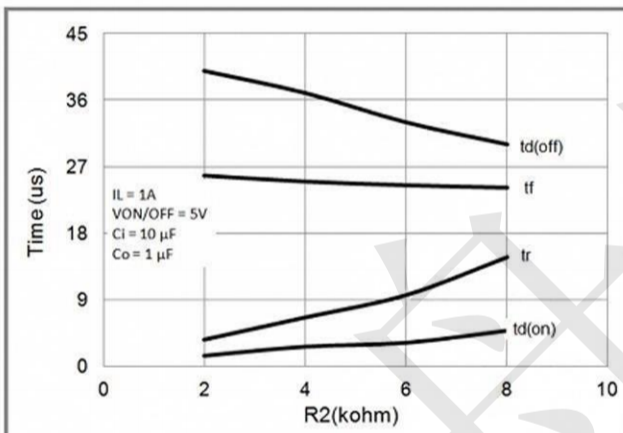
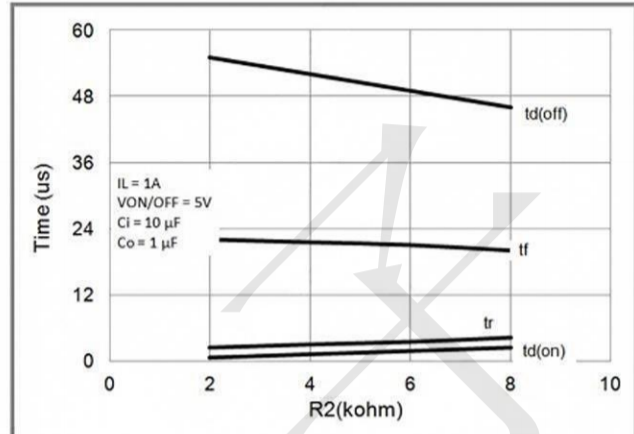
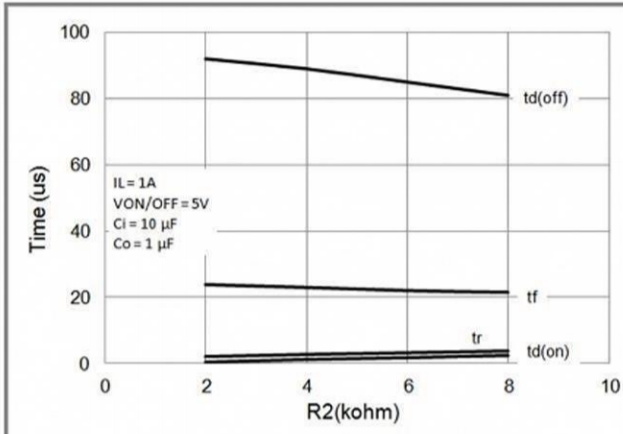


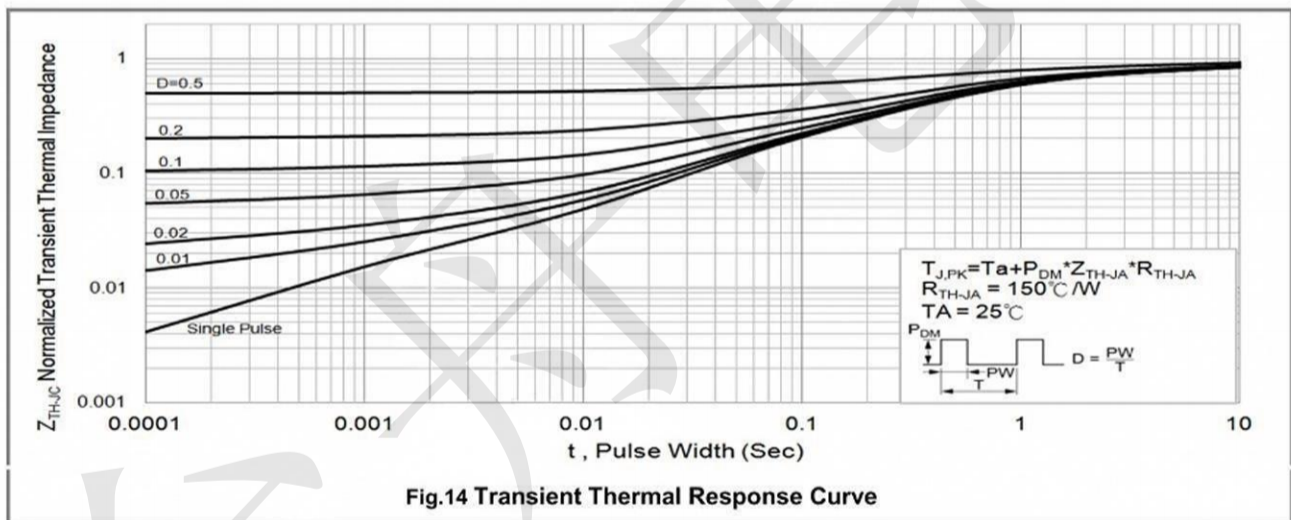
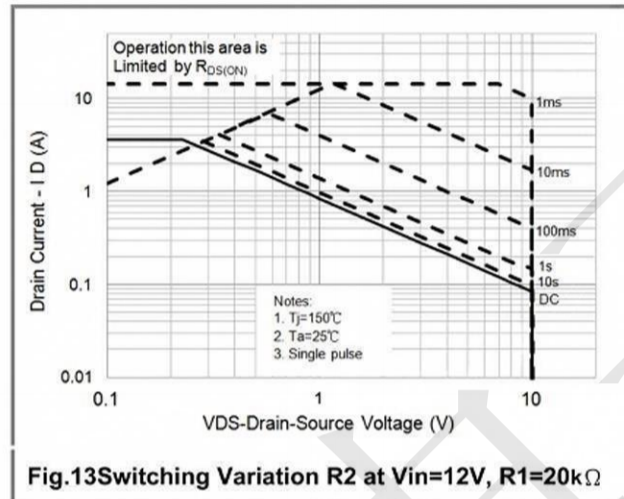
COMPONENTS

R1	Pull-Up Resistor	Typical $10\text{k}\Omega$ to $1\text{M}\Omega^*$
R2	Optional Slew-Rate Control	Typical 0 to $100\text{k}\Omega$
C1	Optional Slew-Rate Control	Typical 1000pF

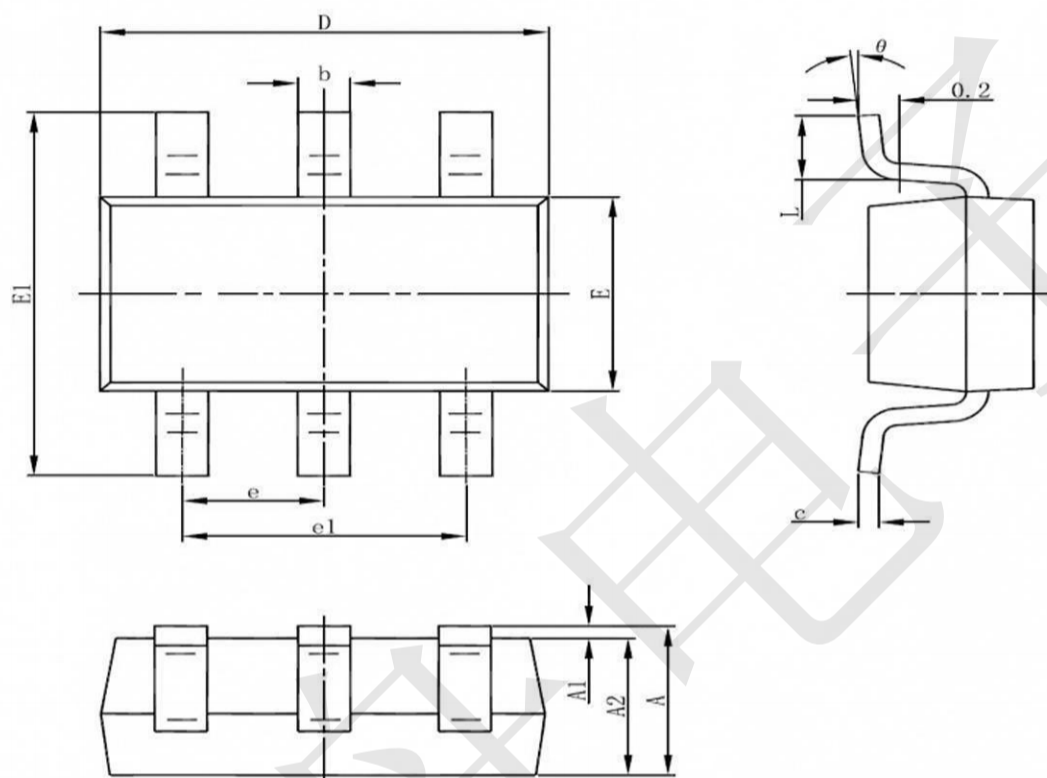
Typical Operating Characteristics







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°