

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
20V	250mΩ@4.5V	0.75A
	350mΩ@2.5V	
-20V	650mΩ@-4.5V	-0.66A
	850mΩ@-2.5V	

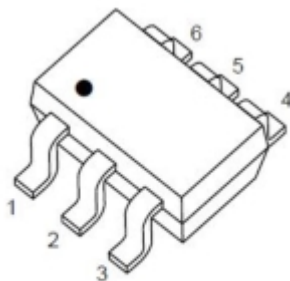
Feature

- Trench Technology
- Supper high density cell design for extremely low $R_{ds(on)}$
- Exceptional ON resistance and maximum DC current capability
- ESD Protected

Applications

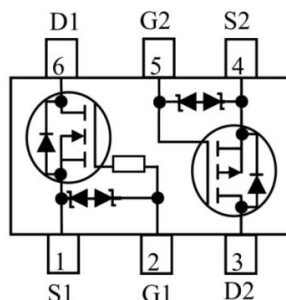
- Driver: Relays, Solenoids, Lamps, Hammers
- Power supply converters circuit
- Load/Power Switching for potable device

Package



SOT-363

Circuit diagram



Marking



26K =Device Code

Absolute maximum ratings

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

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	0.15	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	833	$^{\circ}\text{C}/\text{W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}\text{C}$

Maximum Ratings - N-Channel Q1

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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	± 12	V
Continuous Drain Current	I_D	0.75	A

Maximum Ratings - P-Channel Q2

(T_a=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V _{DS}	-20	V
Gate-Source Voltage	V _{GS}	±12	V
Continuous Drain Current	I _D	-0.66	A

Electrical characteristics - N-Channel Q1

(T_A=25°C, unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	$BV_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	20			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = 16V, V_{GS} = 0V$			1	μA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 10V, V_{DS} = 0V$			± 10	μA
Gate threshold voltage ⁽¹⁾	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	0.35	0.65	1	V
Drain-source on-resistance	$R_{DS(on)}$	$V_{GS} = 4.5V, I_D = 0.5A$		0.25	0.38	m Ω
		$V_{GS} = 2.5V, I_D = 0.2A$		0.35	0.45	
Dynamic Characteristics						
Input capacitance	C_{iss}	$V_{DS} = 16V, V_{GS} = 0V,$ $f = 1MHz$		79	120	pF
Output capacitance	C_{oss}			13	20	
Reverse transfer capacitance	C_{rss}			9	15	
Switching Characteristics						
Turn-on Delay Time	$T_{d(on)}$	$V_{GS} = 4.5V, V_{DS} = 10V,$ $I_D = 500mA, R_{GEN} = 10\Omega$		6.7		nS
Turn-on Rise Time	T_r			4.8		
Turn-Off Delay Time	$T_{d(off)}$			17.3		
Turn-Off Fall Time	t_f			7.4		
Source-Drain Diode Characteristics						
Body Diode Voltage	V_{SD}	$I_S = 0.5A, V_{GS} = 0V$		0.7	1.3	V

Electrical characteristics - P-Channel Q2

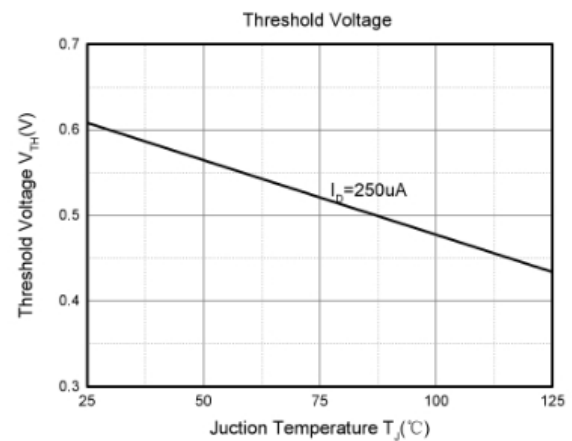
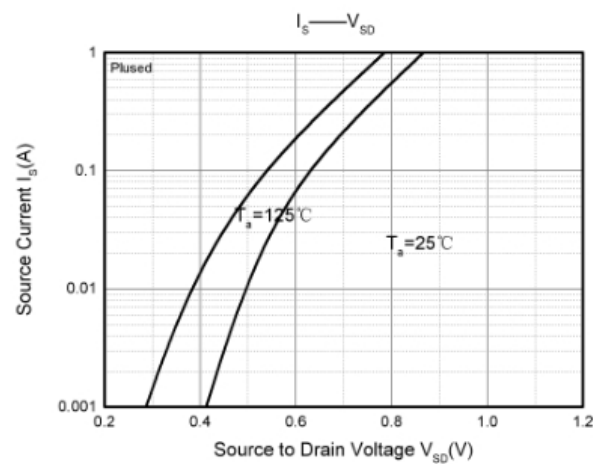
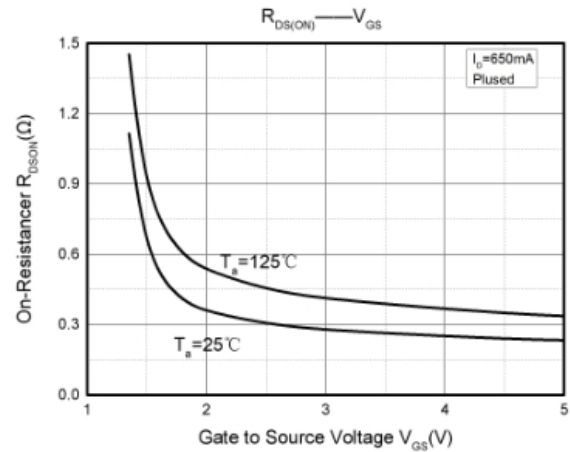
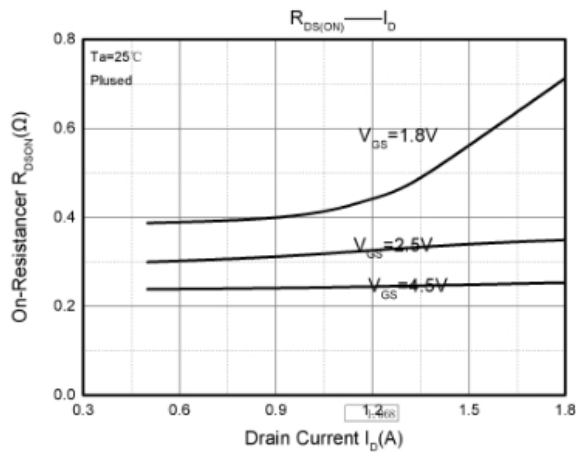
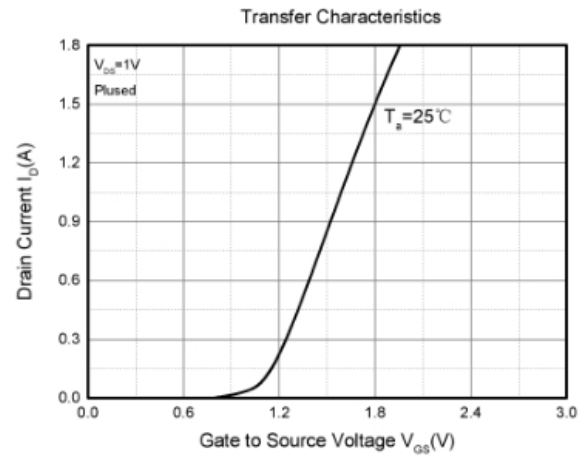
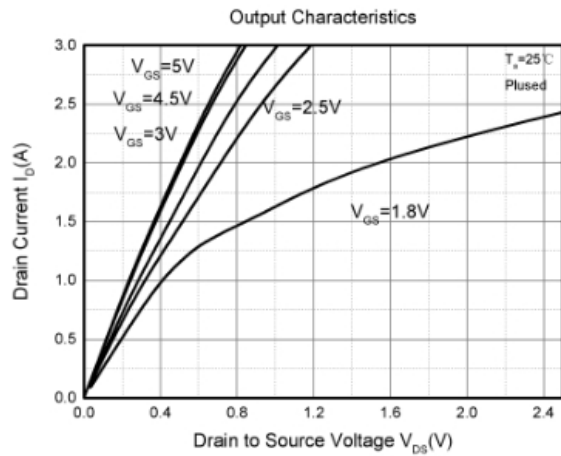
(T_A=25°C, unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	BV (BR)DSS	V _{GS} = 0V, I _D = -250μA	-20			V
Zero gate voltage drain current	I _{DSS}	V _{DS} = -16V, V _{GS} = 0V			-1	uA
Gate-body leakage current	I _{GSS}	V _{GS} = ±10V, V _{DS} = 0V			±10	uA
Gate threshold voltage ⁽¹⁾	V _{GS(th)}	V _{DS} =V _{GS} , I _D = -250μA	-0.35	-0.65	-1	V
Drain-source on-resistance ⁽¹⁾	R _{DS(on)}	V _{GS} = -4.5V, I _D = -0.5A		0.65	0.75	Ω
		V _{GS} = -2.5V, I _D = -0.2A		0.85	1.0	
Dynamic Characteristics ²⁾						
Input capacitance	C _{iss}	V _{DS} = -16V, V _{GS} =0V, f=1MHz		113		pF
Output capacitance	C _{oss}			15		
Reverse transfer capacitance	C _{rss}			9		
Turn-on Delay Time	T _{d(on)}	V _{DS} = -10V, I _D =200mA, V _{GS} = -4.5V, R _{GEN} =10Ω		9		nS
Turn-on Rise Time	T _r			5.7		
Turn-Off Delay Time	T _{d(off)}			32.6		
Turn-Off Fall Time	t _f			20.3		
Source-Drain Diode Characteristics						
Diode Forward voltage	V _{SD}	I _S = -0.5A, V _{GS} = 0V			-1.2	V

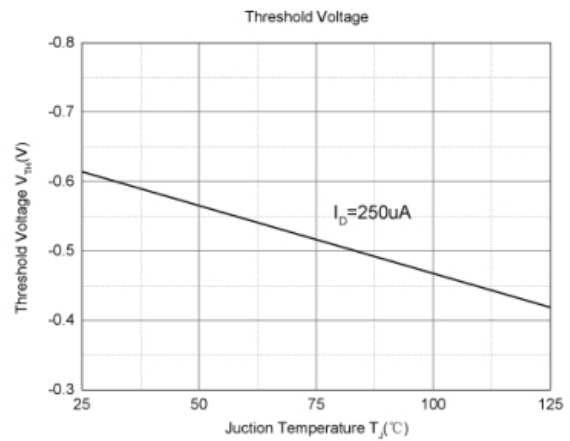
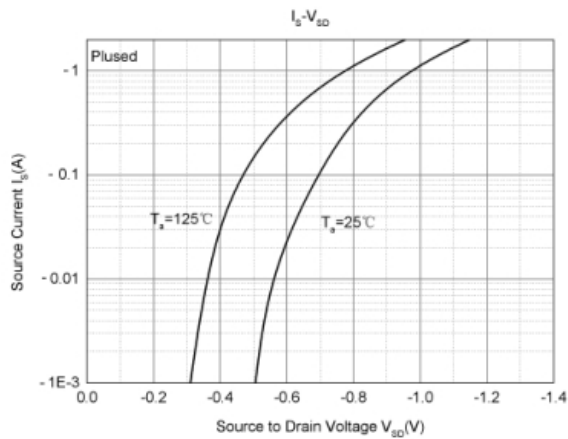
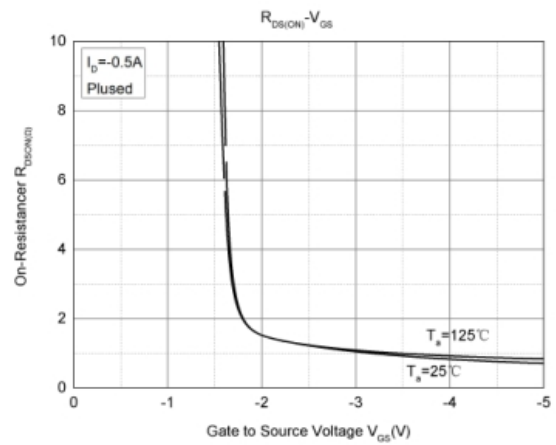
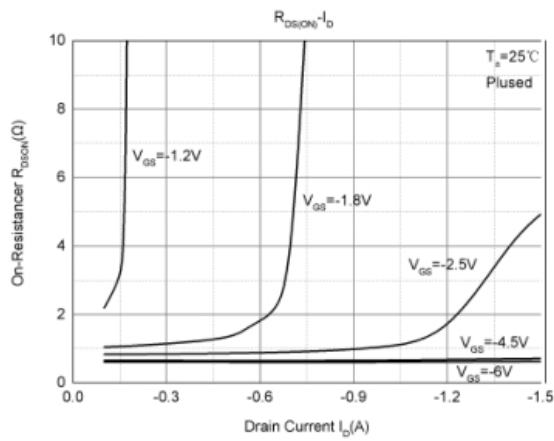
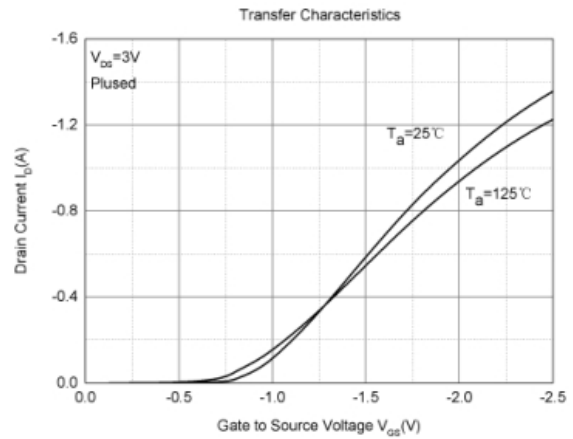
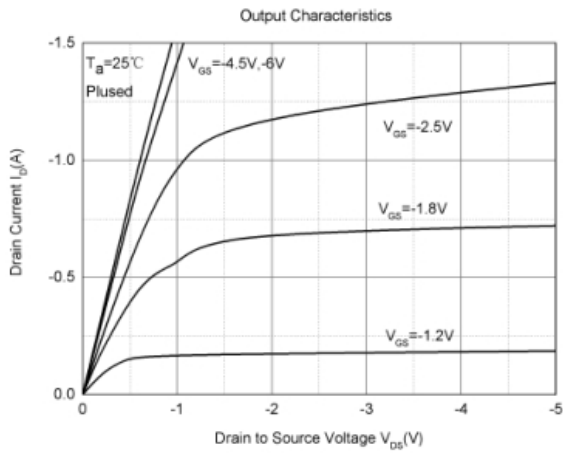
Notes:

1. Pulse Test: Pulse Width < 300μs, Duty Cycle ≤ 2%.
2. Guaranteed by design, not subject to production testing.

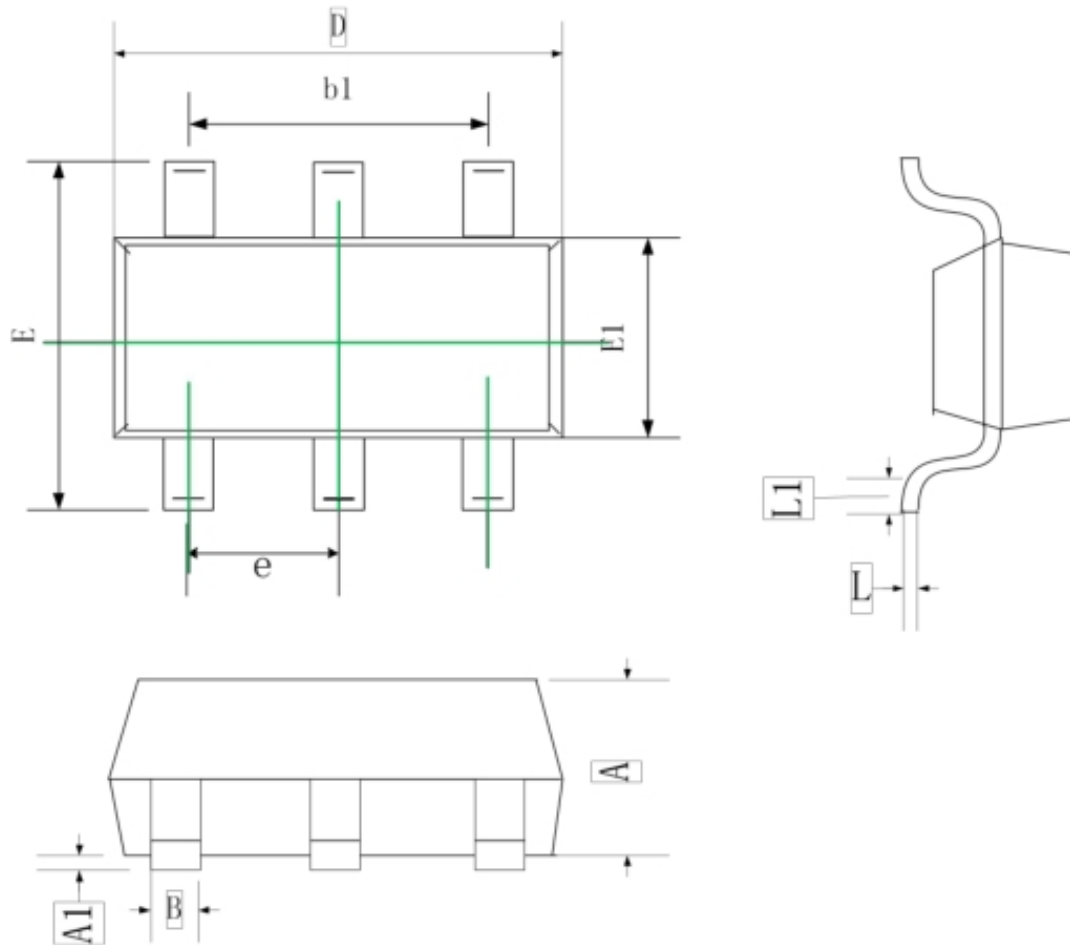
Typical Characteristics - N-Channel Q1



Typical Characteristics - P-Channel Q2



SOT-363 Package Information



Symbol	Dimensions In Millimeters	
	Min.	Max.
A	0.90	1.00
A1	0.00	0.10
B	0.10	0.30
b1	1.30	
D	1.80	2.20
E	2.00	2.20
E1	1.15	1.35
e	0.65 TYP.	
L	0.10	0.25
L1	0.15	0.4