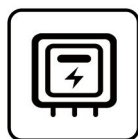
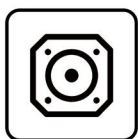


自主封測 品質把控 售後保障

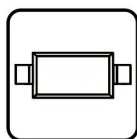
WEB | WWW.TDSEMIC.COM



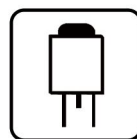
電源管理



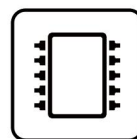
顯示驅動



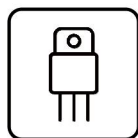
二三極管



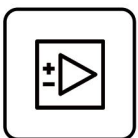
LDO穩壓器



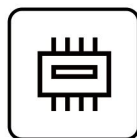
觸摸芯片



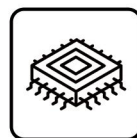
MOS管



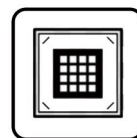
運算放大器



存儲芯片



MCU



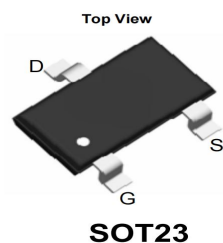
串口通信

BSS84K-TD

產品規格說明書

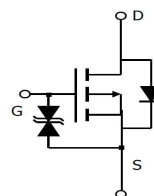
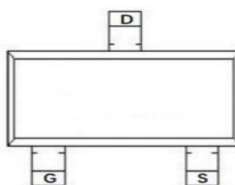
Features

- $V_{DS} = -60V$, $I_D = -0.3A$
 $R_{DS(ON)} < 9\Omega$ @ $V_{GS} = -10V$
 $R_{DS(ON)} < 13\Omega$ @ $V_{GS} = -4.5V$
- Advanced Trench Technology
- Excellent $R_{DS(ON)}$ and Low Gate Charge
- Lead free product is acquired
- ESD Protected



Application

- PWM Applications
- Load Switch
- Power Management



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

Symbol	Parameter		Max.	Units
V_{DSS}	Drain-Source Voltage		-60	V
V_{GSS}	Gate-Source Voltage		± 20	V
I_D	Continuous Drain Current	$T_A = 25^\circ C$	-0.3	A
		$T_A = 100^\circ C$	-0.17	
I_{DM}	Pulsed Drain Current ^{note1}		-1	A
P_D	Power Dissipation	$T_A = 25^\circ C$	0.35	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient		525	$^\circ C/W$
T_J, T_{STG}	Operating and Storage Temperature Range		-55 to +150	$^\circ C$

Electrical Characteristics (T_C=25°C unless otherwise specified)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
Off Characteristic						
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D = -250μA	-60	-	-	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = -60V, V _{GS} = 0V,	-	-	-1	μA
I _{GSS}	Gate to Body Leakage Current	V _{DS} =0V, V _{GS} = ±20V	-	-	±100	nA
On Characteristics						
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} , I _D = -250μA	-1.1	-1.6	-2.2	V
R _{DS(on)}	Static Drain-Source on-Resistance note2	V _{GS} =-10V, I _D =-0.15A	-	5.0	9	Ω
		V _{GS} =-4.5V, I _D =-0.15A	-	5.7	13	
Dynamic Characteristics						
C _{iss}	Input Capacitance	V _{DS} = -30V, V _{GS} = 0V, f = 1.0MHz	-	19	-	pF
C _{oss}	Output Capacitance		-	5	-	pF
C _{rss}	Reverse Transfer Capacitance		-	3	-	pF
Q _g	Total Gate Charge	V _{DS} = -30V, I _D = -0.15A, V _{GS} = -10V	-	0.4	-	nC
Q _{gs}	Gate-Source Charge		-	0.15	-	nC
Q _{gd}	Gate-Drain(“Miller”) Charge		-	0.15	-	nC
Switching Characteristics						
t _{d(on)}	Turn-on Delay Time	V _{DD} = -30V, R _L =5Ω, R _{GEN} =3Ω,V _{GS} =-4.5V,	-	2.5	-	ns
t _r	Turn-on Rise Time		-	1.0	-	ns
t _{d(off)}	Turn-off Delay Time		-	16	-	ns
t _f	Turn-off Fall Time		-	7	-	ns
Drain-Source Diode Characteristics and Maximum Ratings						
I _S	Maximum Continuous Drain to Source Diode Forward Current		-	-	-0.3	A
I _{SM}	Maximum Pulsed Drain to Source Diode Forward Current		-	-	-1	A
V _{SD}	Drain to Source Diode Forward Voltage	V _{GS} = 0V, I _S = -2.5A	-	-	-1.2	V

Notes:1. Repetitive Rating: Pulse Width Limited by Maximum Junction Temperature
2. Pulse Test: Pulse Width≤300μs, Duty Cycle≤2%

Test Circuit P-MOS

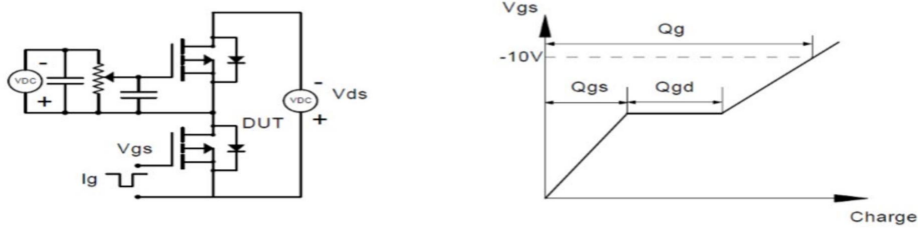


Figure 1: Gate Charge Test Circuit & Waveform

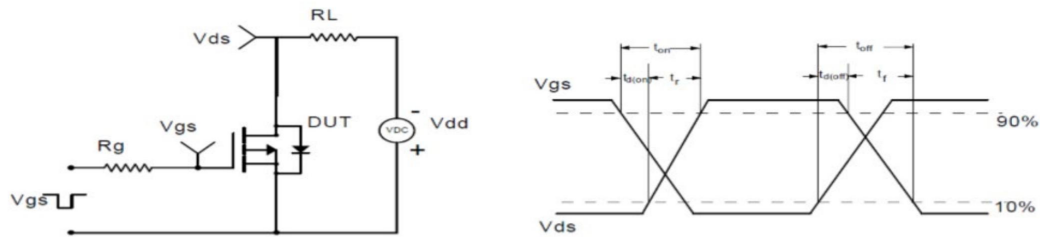


Figure 2: Resistive Switching Test Circuit & Waveform

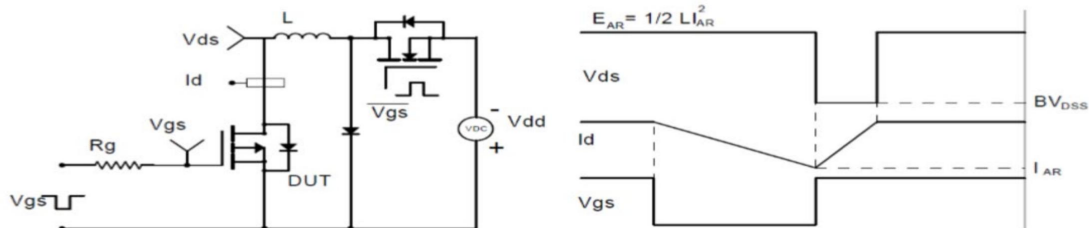


Figure 3: Unclamped Inductive Switching Test Circuit & Waveform

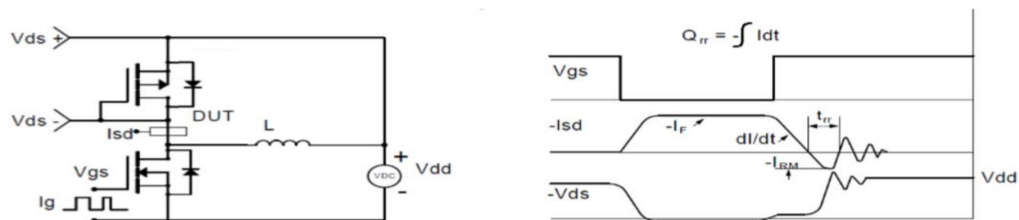
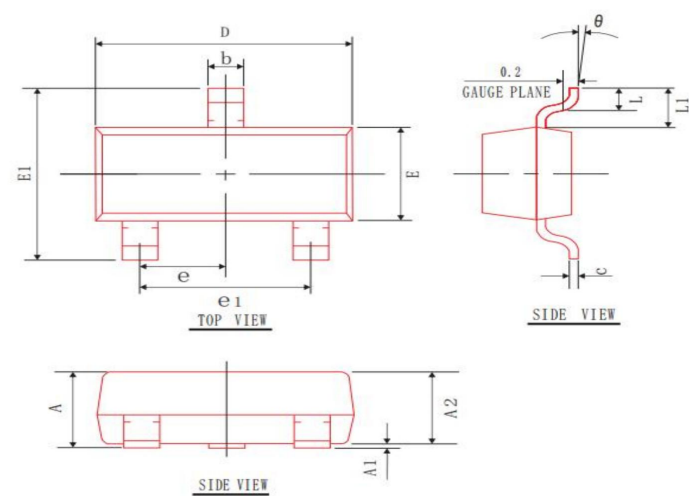


Figure 4: Diode Recovery Test Circuit & Waveform

Package Mechanical Data-SOT-23



COMMON DIMENSIONS (UNITS OF MEASURE=mm)			
SYMBOL	MIN	NOM	MAX
A	0.90	1.05	1.20
A1	0.00	0.05	0.10
A2	0.90	1.00	1.10
b	0.30	0.40	0.50
c	0.08	0.10	0.15
D	2.80	2.90	3.00
E	1.20	1.30	1.40
E1	2.30	2.40	2.50
L	0.30	0.40	0.50
θ	0°	5°	10°
L1	0.55 REF		
e	0.95 BSC		
e1	1.90 REF		

Recommended Footprint

