

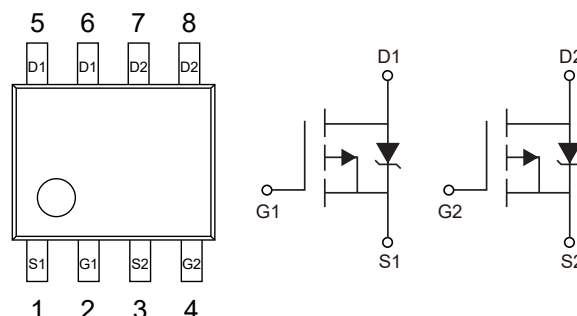
1.Features

- $V_{DS(V)} = -30V$
- $I_D = -8A$
- $R_{DS(ON)} < 21m\Omega (V_{GS} = -10V, I_D = -8A)$
- $R_{DS(ON)} < 32m\Omega (V_{GS} = -4.5V, I_D = -6.8A)$
- Trench Technology
- Ultra Low On-Resistance
- Dual P-Channel MOSFET
- Available in Tape & Reel

2.Pinning information

Pin	Symbol	Description
2,4	G1,G2	GATE
1,3	S1,S2	SOURCE
5,6,7,8	D1,D2	DRAIN

SOP-8



3.Absolute Maximum Ratings $T_A = 25^\circ C$ unless otherwise noted

Parameter	Symbol	Rating	Units
Drain-Source Voltage	V_{DS}	-30	V
Continuous Drain Current, $V_{GS} = -10V$	I_D	-8	A
Continuous Drain Current, $V_{GS} = -10V$		-6.4	A
Pulsed Drain Current ①	I_{DM}	-32	A
Maximum Power Dissipation ③	P_D	2	W
Maximum Power Dissipation ③		1.3	W
Linear Derating Factor		16	mW/°C
Gate-to-Source Voltage	V_{GS}	±20	V
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to 150	°C

4.Thermal Resistance Rating

Parameter	Symbol	Typ	Max	Units
Maximum Junction-to-Ambient ③	$R_{\theta JA}$		62.5	°C/W



5. Electrical Characteristics $T_J=25^{\circ}\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=-250\mu\text{A}$, $V_{GS}=0\text{V}$	-30			V
Breakdown Voltage Temp. Coefficient	$\Delta V_{(BR)DSS}/T_J$	$I_D=-1\text{mA}$, Reference to 25°C		0.018		V/ $^{\circ}\text{C}$
Static Drain-to-Source On-Resistance	$R_{DS(ON)}$	$V_{GS}=-10\text{V}$, $I_D=-8\text{A}$ ②		17	21	m Ω
		$V_{GS}=-4.5\text{V}$, $I_D=-6.8\text{A}$ ②		26.8	32	
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$, $I_D=-250\mu\text{A}$	-1		-2.5	V
Forward Transconductance	g_{FS}	$V_{DS}=-10\text{V}$, $I_D=-8\text{A}$	12			S
Drain-to-Source Leakage Current	I_{DSS}	$V_{DS}=-24\text{V}$, $V_{GS}=0\text{V}$			-15	μA
		$V_{DS}=-24\text{V}$, $V_{GS}=0\text{V}$, $T_J=70^{\circ}\text{C}$			-25	
Gate-to-Source Forward Leakage	I_{GSS}	$V_{GS}=-20\text{V}$			-100	nA
Gate-to-Source Reverse Leakage		$V_{GS}=20\text{V}$			100	
Total Gate Charge	Q_g	$I_D=-8\text{A}$		52	78	nC
Gate-to-Source Charge	Q_{gs}	$V_{DS}=-15\text{V}$		9.8		
Gate-to-Drain ("Miller") Charge	Q_{gd}	$V_{GS}=-10\text{V}$		8.3		
Turn-On Delay Time	$t_{D(on)}$	$V_{DD}=-15\text{V}$, $V_{GS}=-10\text{V}$		13	20	ns
Rise Time	t_r	$I_D=-1\text{A}$		15	23	ns
Turn-Off Delay Time	$t_{D(off)}$	$R_G=6\Omega$		198	297	ns
Fall Time	t_f	$R_D=15\Omega$ ②		98	147	ns
Input Capacitance	C_{iss}	$V_{GS}=0\text{V}$		2675		pF
Output Capacitance	C_{oss}	$V_{DS}=-25\text{V}$		409		pF
Reverse Transfer Capacitance	C_{rss}	$f=1.0\text{MHz}$		262		pF



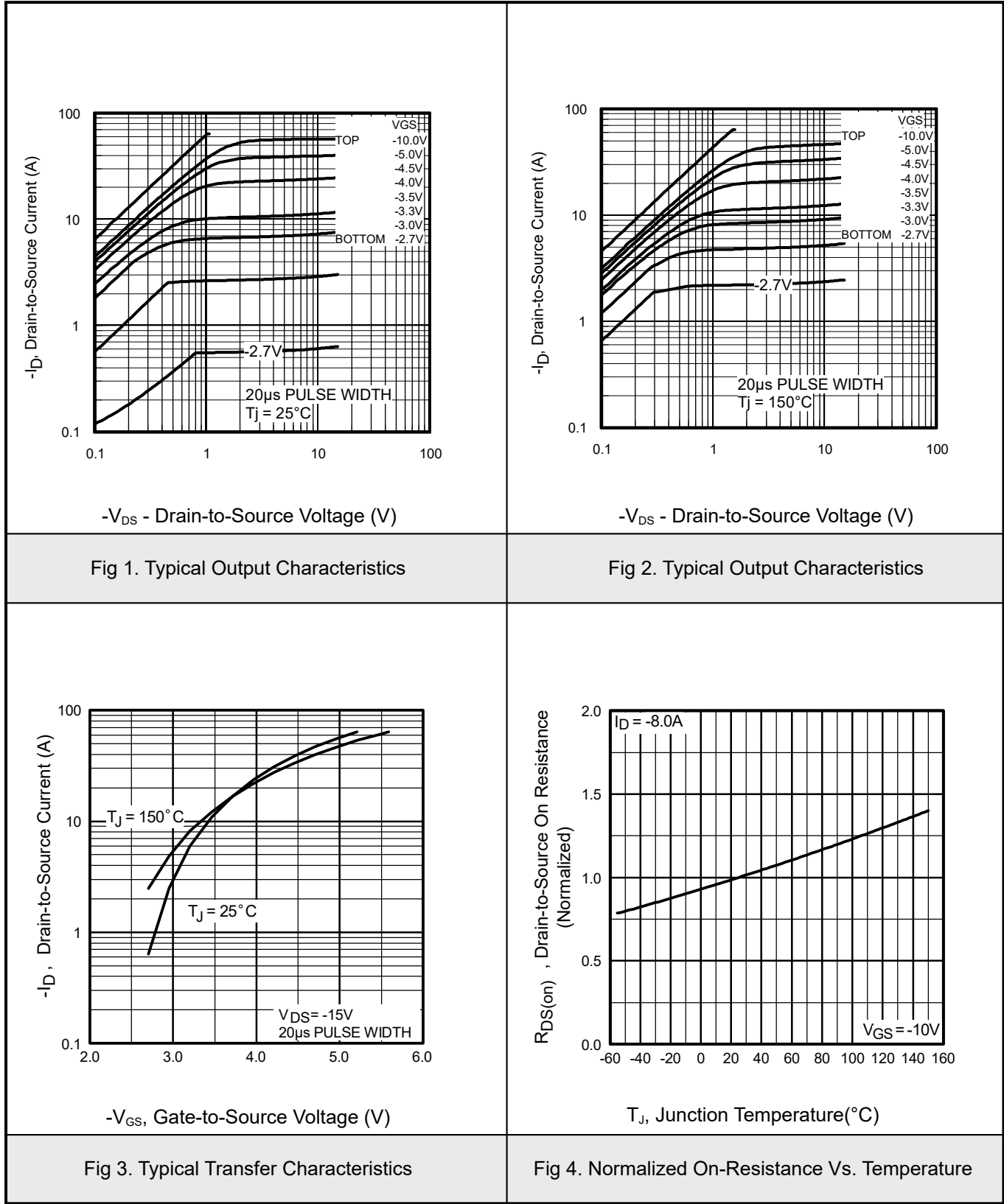
Source-Drain Ratings and Characteristics						
Continuous Source Current (Body Diode)	I_S	MOSFET symbol showing the integral reverse p-n junction diode.			-2	A
Pulsed Source Current (Body Diode) ①	I_{SM}				-32	
Diode Forward Voltage	V_{SD}		$T_J=25^\circ\text{C}, I_S=-2\text{A}, V_{GS}=0\text{V}$ ②		-1.2	V
Reverse Recovery Time	t_{rr}	$T_J=25^\circ\text{C}, I_F=-2\text{A}$		37	56	ns
Reverse Recovery Charge	Q_{rr}	$di/dt=-100\text{A}/\mu\text{s}$ ②		36	54	nC

Notes:

- ① Repetitive rating; pulse width limited by max.junction temperature.
- ② Pulse width $\leq 400\mu\text{s}$; duty cycle $\leq 2\%$.
- ③ Surface mounted on FR-4 board, $t \leq 10\text{sec}$.

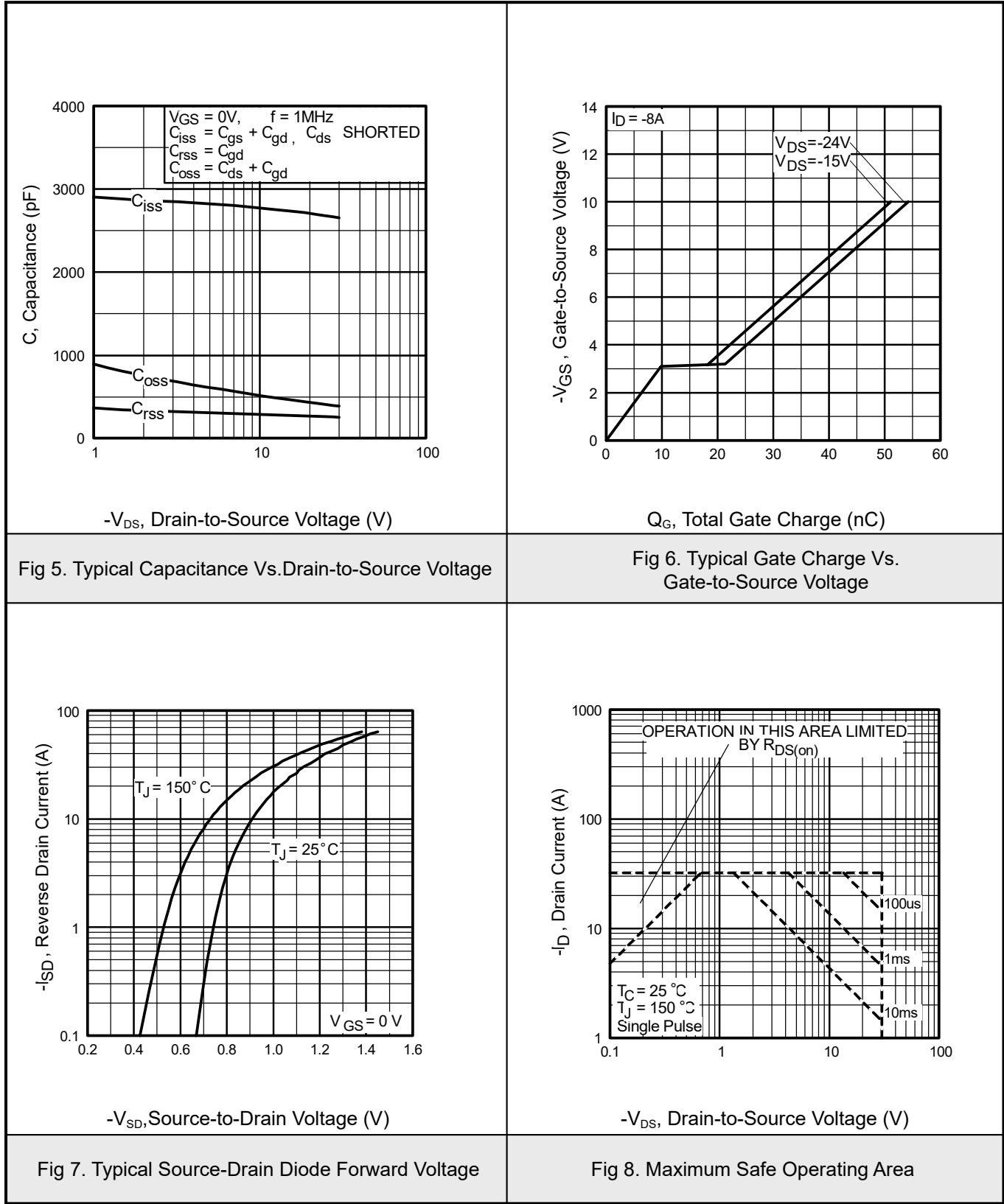


6.1 Typical Characteristics





6.2Typical Characterisitics





6.3 Typical Characteristics

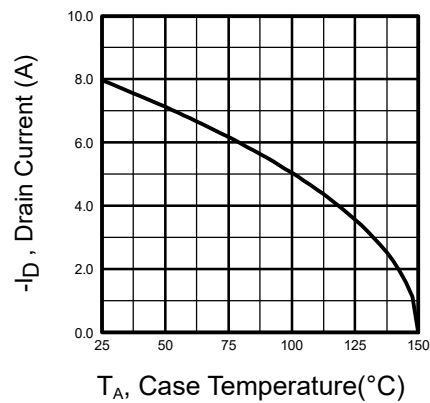


Fig 9. Maximum Drain Current Vs. Case Temperature

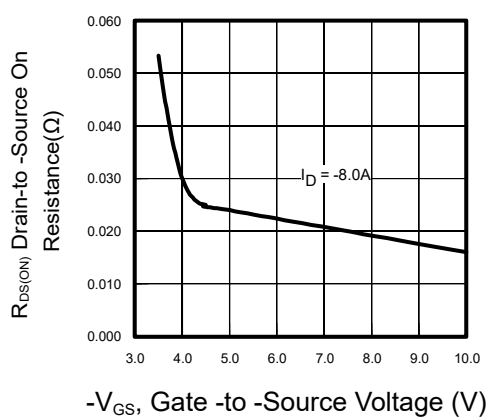


Fig 10. Typical On-Resistance Vs. Gate Voltage

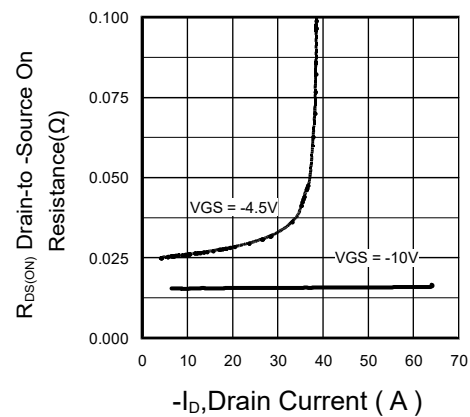


Fig 11. Typical On-Resistance Vs. Drain Current

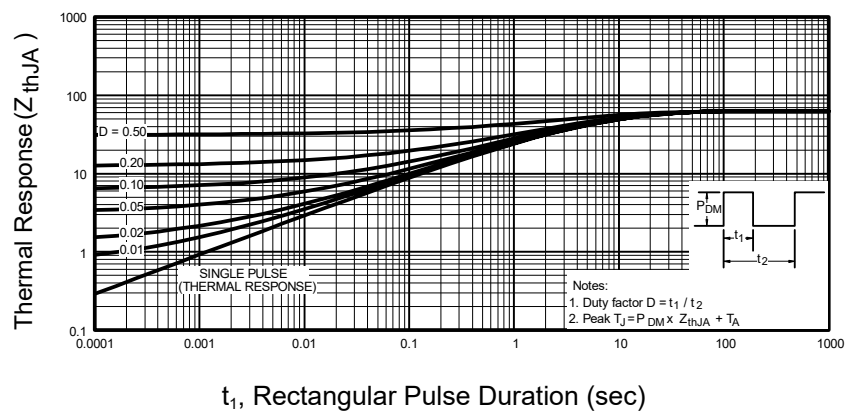


Fig 12. Maximum Effective Transient Thermal Impedance, Junction-to-Ambient



6.4Typical Characterisitics

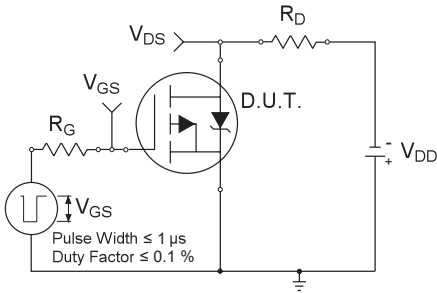


Fig 13a. Switching Time Test Circuit

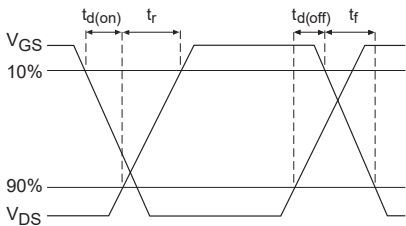


Fig 13b. Switching Time Waveforms

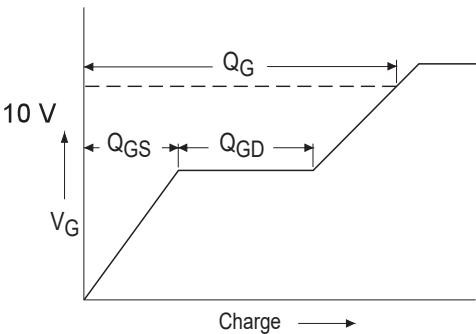


Fig 14a. Basic Gate Charge Waveform

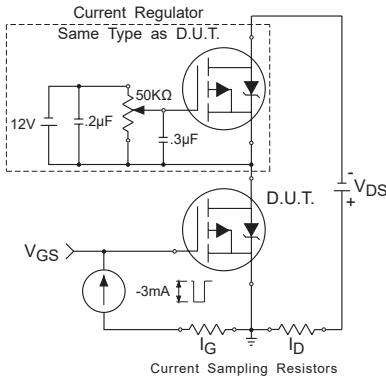
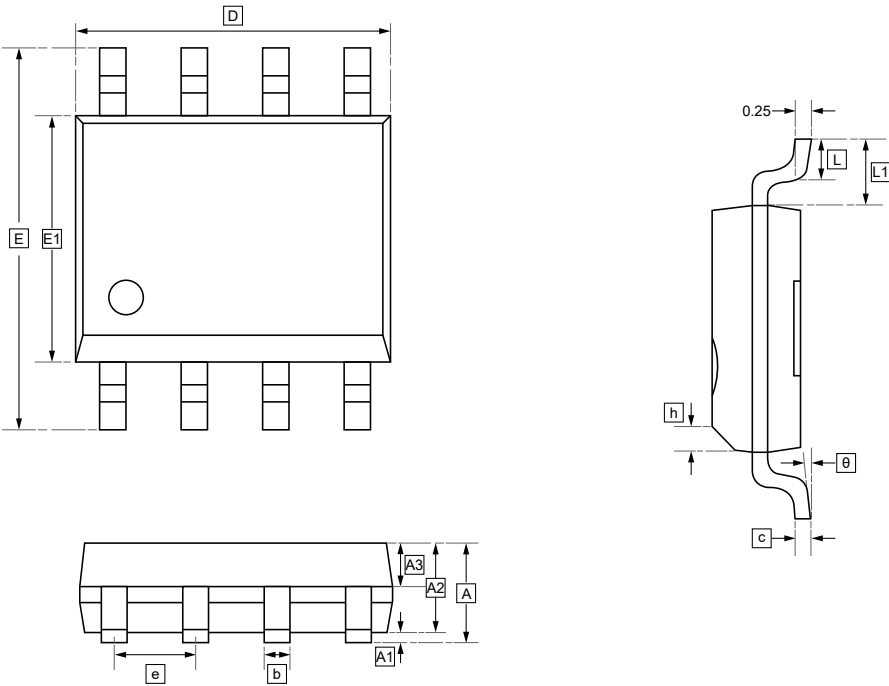


Fig 14b. Gate Charge Test Circuit



7.SOP-8 Package Outline Dimensions



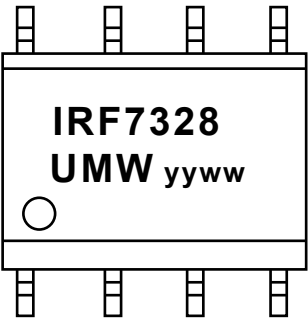
DIMENSIONS (mm are the original dimensions)

Symbol	A	A1	A2	A3	b	c	D	E	E1	e	h	L
Min	-	0.05	1.30	0.60	0.39	0.20	4.80	5.80	3.80	1.24	0.30	0.50
Max	1.75	0.20	1.50	0.70	0.47	0.24	5.00	6.20	4.00	1.30	0.50	0.80

Symbol	L1	θ
Min	1.00	0°
Max	1.10	8°



8.Ordering information



yy: Year Code
ww: Week Code

Order Code	Package	Base QTY	Delivery Mode
UMW IRF7328TR	SOP-8	3000	Tape and reel



9.Disclaimer

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