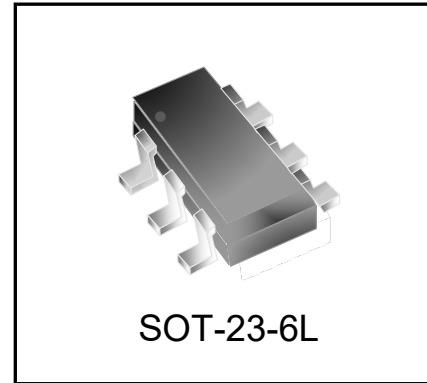


Features

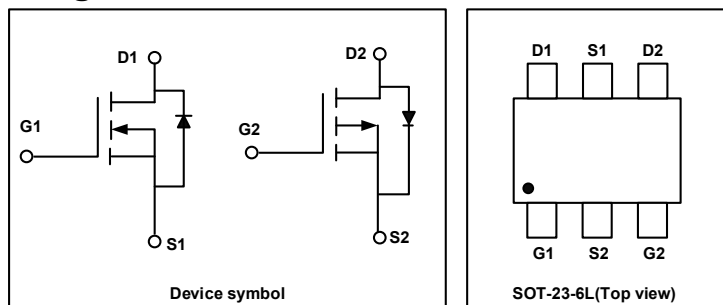
- Way-on Small Signal MOSFETs
- N - Channel:
 - $V_{DS} = 30V, I_D = 3.4A$
 - $R_{DS(on)} < 47m\Omega @ V_{GS} = 10V$
 - $R_{DS(on)} < 65m\Omega @ V_{GS} = 4.5V$
- P - Channel:
 - $V_{DS} = -30V, I_D = -2.3A$
 - $R_{DS(on)} < 88m\Omega @ V_{GS} = -10V$
 - $R_{DS(on)} < 138m\Omega @ V_{GS} = -4.5V$
- Trench LV MOSFET Technology



Mechanical Characteristics

- SOT-23-6L Package
- Marking : Making Code
- RoHS Compliant

Schematic & PIN Configuration



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

Parameter	Symbol	Value		Unit
Drain-Source Voltage	V_{DS}	30	-30	V
Gate-Source Voltage	V_{GS}	± 20	± 20	V
Continuous Drain Current	I_D	3.4	-2.3	A
Pulsed Drain Current ¹	I_{DM}	13.6	-9.2	A
Power Dissipation	P_D	1.2		W
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to 150		$^\circ C$

Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance from Junction to Ambient ²	$R_{\theta JA}$	104	$^\circ C/W$

Electrical Characteristics N-Channel ($T_J=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS} = 0\text{ V}, I_D = 250\mu\text{A}$	30	-	-	V
Gate-body Leakage Current	I_{GSS}	$V_{DS} = 0\text{ V}, V_{GS} = \pm 20\text{V}$	-	-	± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 30\text{V}, V_{GS} = 0\text{ V}$	-	-	1	μA
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu\text{A}$	1.0	1.5	2	V
Drain-Source On-state Resistance ³	$R_{DS(on)}$	$V_{GS} = 10\text{V}, I_D = 3.4\text{A}$	-	32	47	m Ω
		$V_{GS} = 4.5\text{V}, I_D = 2\text{A}$	-	42	65	
Dynamic Characteristics⁴						
Input Capacitance	C_{iss}	$V_{GS} = 0\text{V}, V_{DS} = 15\text{V},$ $f = 1\text{MHz}$	-	295	-	pF
Output Capacitance	C_{oss}		-	43	-	
Reverse Transfer Capacitance	C_{rss}		-	34	-	
Switching Characteristics⁴						
Total gate charge	Q_{gt}	$V_{GS}=10\text{V}, V_{DS}=15\text{V},$ $I_D= 3.4\text{A}$	-	6	-	nC
Gate-source charge	Q_{gs}		-	1.6	-	
Gate-drain charge	Q_{gd}		-	0.6	-	
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}= 10\text{V}, V_{DD} = 15\text{V},$ $R_G= 3\Omega, I_D=3.4\text{A}$	-	7	-	ns
Turn-On Rise Time	t_r		-	12	-	
Turn-Off Delay Time	$t_{d(off)}$		-	14	-	
Turn- Off Fall Time	t_f		-	6	-	
Source-Drain Diode characteristics						
Body Diode Voltage ³	V_{SD}	$I_S= 1\text{A}, V_{GS} = 0\text{V}$	-	-	1.2	V
Continuous Source Current	I_S		-	-	3.4	A

Notes:

1. Repetitive rating, pulse width limited by junction temperature $T_{J(MAX)}=150^\circ\text{C}$.
2. The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ copper, The value in any given application depends on the user's specific board design.
3. Pulse Test: Pulse width $\leq 300\mu\text{s}$, duty cycle $\leq 2\%$.
4. This value is guaranteed by design hence it is not included in the production test.

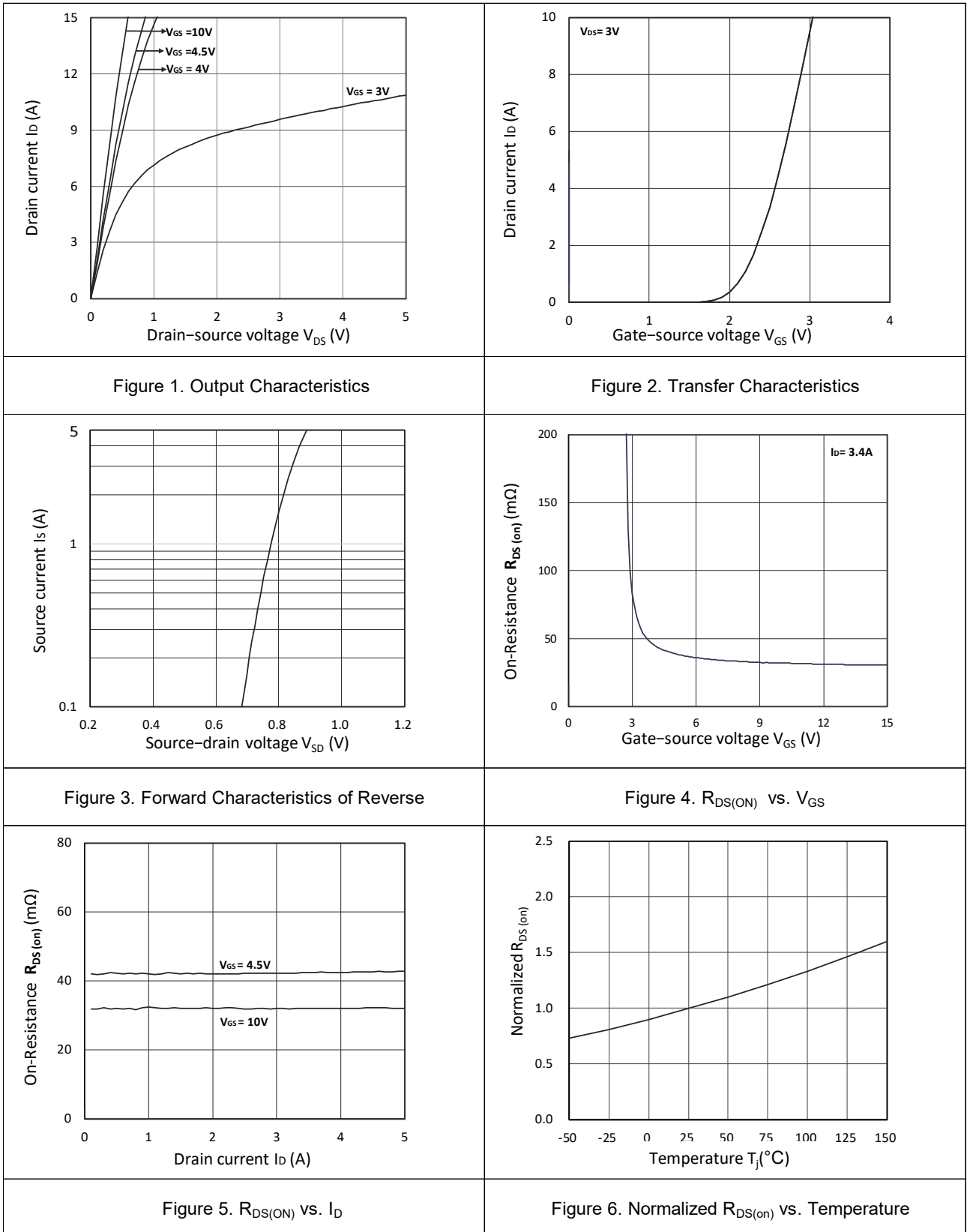
Electrical Characteristics P-Channel (T_J=25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	BV_{DSS}	V _{GS} = 0V, I _D = -250μA	-30	-	-	V
Gate-body Leakage Current	I_{GSS}	V _{DS} = 0V, V _{GS} = ±20V	-	-	±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V _{DS} = -30V, V _{GS} = 0V	-	-	-1	μA
Gate Threshold Voltage	V_{GS(th)}	V _{DS} = V _{GS} , I _D = -250μA	-1	-1.5	-3	V
Drain-Source On-state Resistance ³	R_{DS(on)}	V _{GS} = -10V, I _D = -2.3A	-	62	88	mΩ
		V _{GS} = -4.5V, I _D = -2A	-	84	138	
Dynamic Characteristics⁴						
Input Capacitance	C_{iss}	V _{GS} = 0V, V _{DS} = -15V, f = 1MHz	-	345	-	pF
Output Capacitance	C_{oss}		-	47	-	
Reverse Transfer Capacitance	C_{rss}		-	35	-	
Switching Characteristics⁴						
Total Ggate Charge	Q_g	V _{GS} = -10V, V _{DS} = -15V, I _D = -2.3A	-	7.8	-	nC
Gate-Source Charge	Q_{gs}		-	1.2	-	
Gate-Drain Charge	Q_{gd}		-	1.7	-	
Turn-On Delay Time	t_{d(on)}	V _{GS} = -10V, V _{DD} = -15V, I _D = -2.3A, R _G =3Ω	-	13	-	ns
Turn-On Rise Time	t_r		-	10	-	
Turn-Off Delay Time	t_{d(off)}		-	28	-	
Turn- Off Fall Time	t_f		-	13	-	
Source-Drain Diode characteristics						
Body Diode Voltage ³	V_{DS}	I _S = -1A, V _{GS} = 0V	-	-	-1.2	V
Continuous Source Current	I_S		-	-	-2.3	A

Notes:

1. Repetitive rating, pulse width limited by junction temperature T_{J(MAX)}=150°C.
2. The data tested by surface mounted on a 1 inch² FR-4 board with 20Z copper, The value in any given application depends on the user's specific board design.
3. Pulse Test: Pulse width≤300μs, duty cycle≤2%.
4. This value is guaranteed by design hence it is not included in the production test.

Typical Characteristics: N-Channel



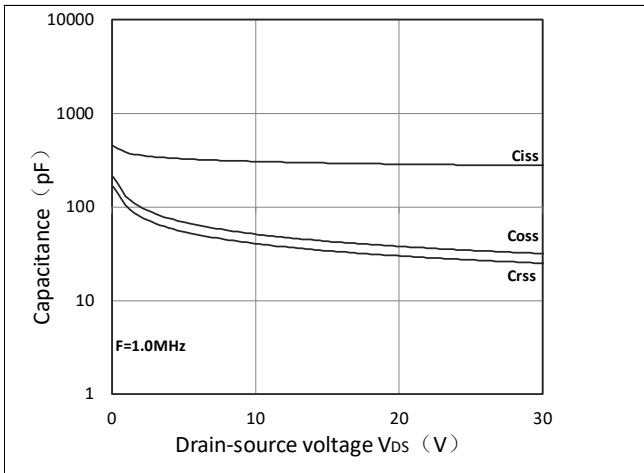


Figure 7. Capacitance Characteristics

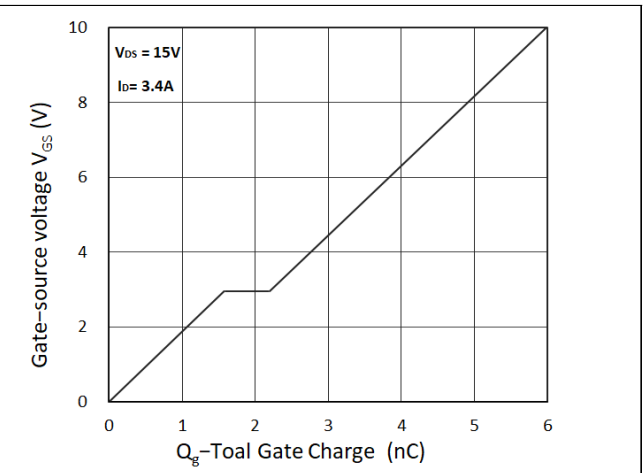
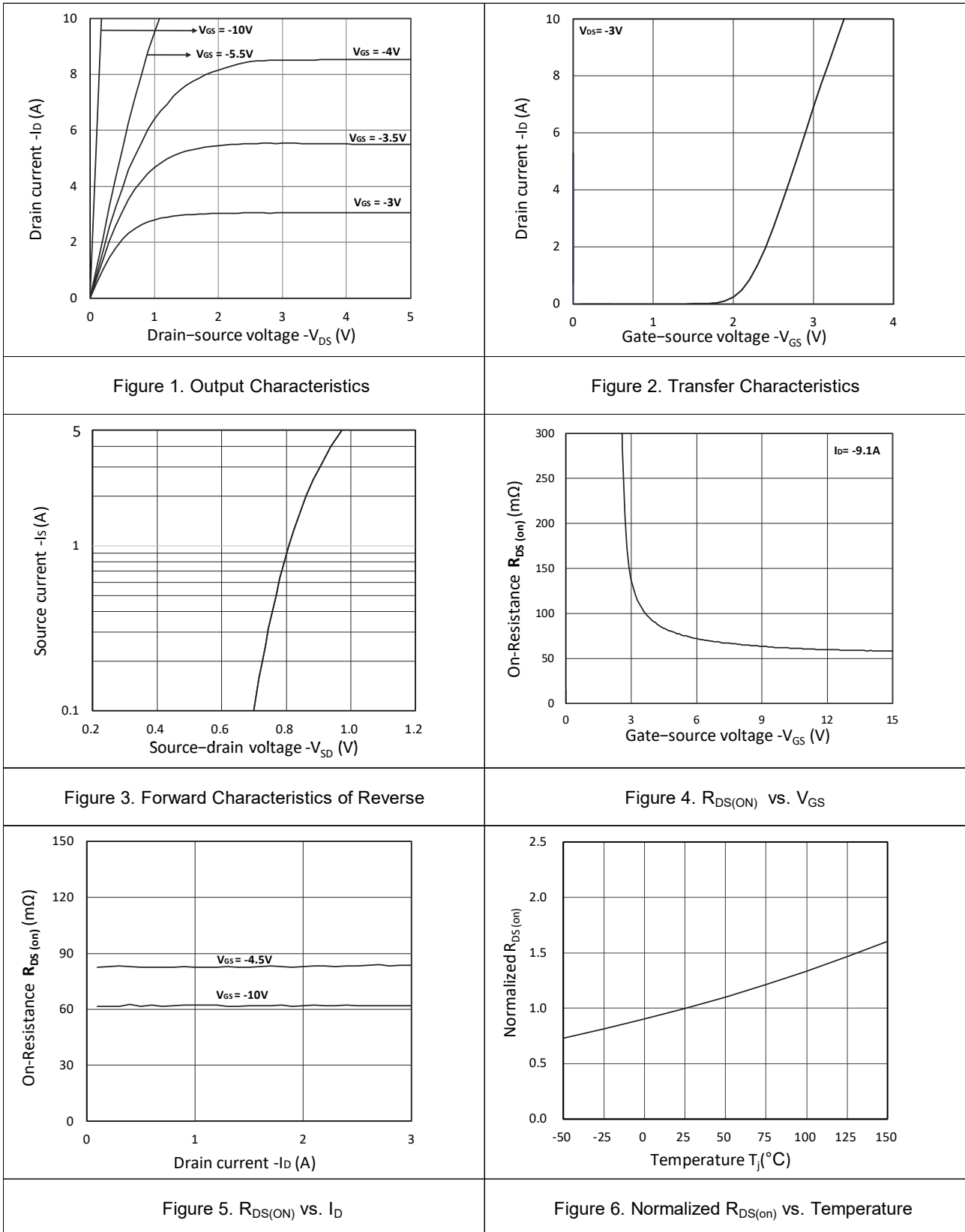
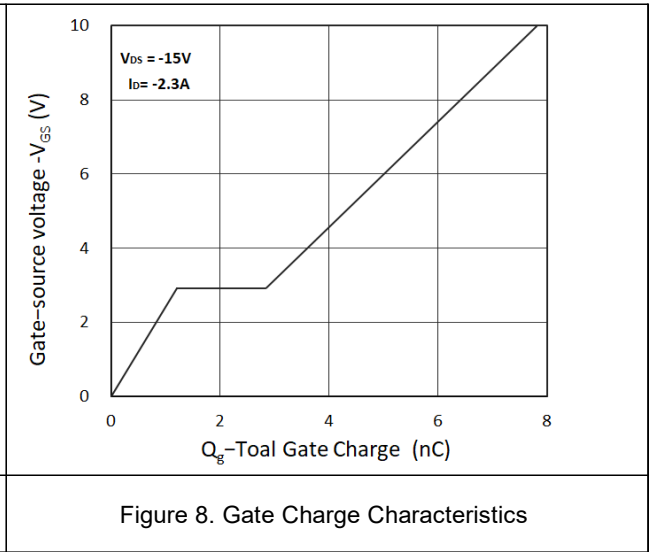
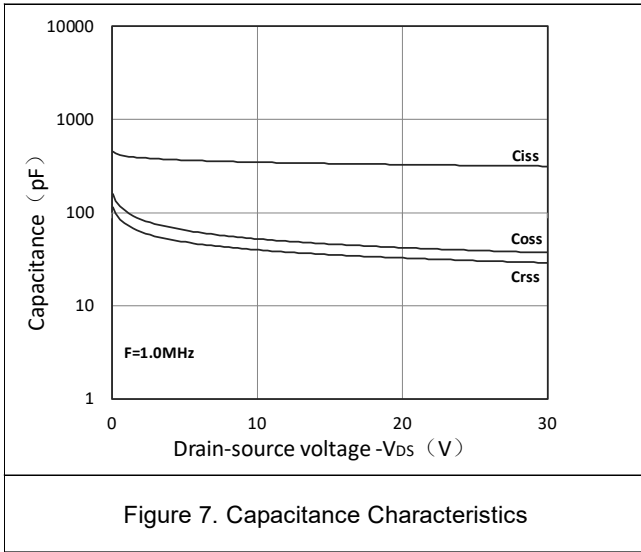


Figure 8. Gate Charge Characteristics

Typical Characteristics: P-Channel





Outline Drawing – SOT-23-6L

PACKAGE OUTLINE

SOT-23-6L

DIMENSIONS				
SYMBOL	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.90	1.45	0.035	0.057
A1	0.00	0.15	0.000	0.006
b	0.25	0.55	0.010	0.022
c	0.08	0.22	0.003	0.009
D	2.80	3.10	0.110	0.122
E1	1.50	1.75	0.060	0.069
E	2.60	3.00	0.102	0.118
e	0.95 BSC		0.037 BSC	
e1	1.90 BSC		0.075 BSC	
L	0.30	0.60	0.012	0.024
L1	0.55	0.75	0.022	0.030
θ1	0°	8°	0°	8°

DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	0.098	2.50
G	0.055	1.40
P	0.037	0.95
X	0.024	0.60
Y	0.043	1.10
Z	0.141	3.60

Notes:

Controlling Dimension: Millimeter.

Marking Codes

Part Number	WM03DH34M3
Marking Code	

Package Information

Qty: 3k/Reel

CONTACT INFORMATION

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WAYON website: <http://www.way-on.com>

For additional information, please contact your local Sales Representative.

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Specifications are subject to change without notice.
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.
Users should verify actual device performance in their specific applications.