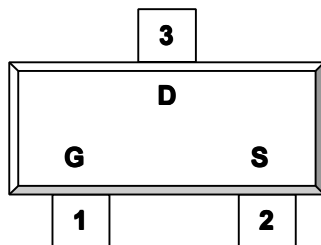


DESCRIPTION

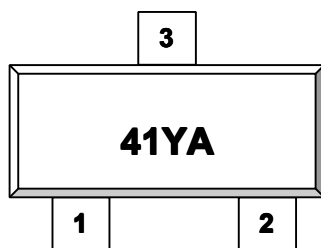
ST2341M is the P-Channel logic enhancement mode power field effect transistor which is produced using high cell density, DMOS trench technology. This high density process is especially tailored to minimize on-state resistance. These devices are particularly suited for low voltage application such as cellular phone and notebook computer power management, other battery powered circuits, and low in-line power loss are required. The product is in a very small outline surface mount package.

**PIN CONFIGURATION
SOT-23-3L**


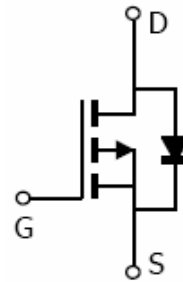
1. Gate 2. Source 3. Drain

FEATURE

- -20V/-2.8A, $R_{DS(ON)} = 47m\Omega$ (Typ.) @VGS = -4.5V
- -20V/-2.8A, $R_{DS(ON)} = 66m\Omega$ @VGS = -2.5V
- -20V/-2.3A, $R_{DS(ON)} = 100m\Omega$ @VGS = -1.8V
- Super high density cell design for extremely low $R_{DS(ON)}$
- Exceptional on-resistance and maximum DC current capability
- SOT-23-3L package design

**PART MARKING
SOT-23-3L**


Y: Year Code A: Process Code



**ST2341M**

P Channel Enhancement Mode MOSFET

-3.5A**ABSOLUTE MAXIMUM RATINGS** (Ta = 25°C Unless otherwise noted)

Parameter	Symbol	Typical	Unit
Drain-Source Voltage	V _{DSS}	-20	V
Gate-Source Voltage	V _{GSS}	±12	V
Continuous Drain Current (T _J =150°C)	I _D	T _A =25°C -3.5	A
		T _A =70°C -2.8	
Pulsed Drain Current	I _{DM}	-12	A
Continuous Source Current (Diode Conduction)	I _S	-1.0	A
Power Dissipation	P _D	T _A =25°C 1.25	W
		T _A =70°C 0.80	
Operation Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{STG}	-55/150	°C
Thermal Resistance-Junction to Ambient	R _{θJA}	140	°C/W



ST2341M



P Channel Enhancement Mode MOSFET

-3.5A

ELECTRICAL CHARACTERISTICS (Ta = 25°C Unless otherwise noted)

Parameter	Symbol	Condition	Min	Typ	Max	Unit	
Static							
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=-250\mu A$	-20			V	
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250\mu A$	-0.35		-0.9	V	
Gate Leakage Current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$			± 100	nA	
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-20V, V_{GS}=0V$			-1	uA	
		$V_{DS}=-20V, V_{GS}=0V$ $T_J=55^\circ C$			-10		
On-State Drain Current	$I_{D(on)}$	$V_{DS}\leq -5V, V_{GS}=-4.5V$	-6			A	
Drain-source On-Resistance	$R_{DS(on)}$	$V_{GS}=-4.5V, I_D=-3.3A$		47		mΩ	
		$V_{GS}=-2.5V, I_D=-2.8A$		66			
		$V_{GS}=-1.8V, I_D=-2.3A$		00			
Forward Transconductance	g_{fs}	$V_{DS}=-5V, I_D=-4V$		3.0		S	
Diode Forward Voltage	V_{SD}	$I_S=-1A, V_{GS}=0V$		-0.8	-1.2	V	
Dynamic							
Total Gate Charge	Q_g	$V_{DS}=-6V$ $V_{GS}=-4.5V$ $I_D=-3.3A$		8.0	13	nC	
Gate-Source Charge	Q_{gs}			1.2			
Gate-Drain Charge	Q_{gd}			2.2			
Input Capacitance	C_{iss}	$V_{DS}=-6.0V$ $V_{GS}=0V$ $F=1MHz$		700		pF	
Output Capacitance	C_{oss}			160			
Reverse Transfer Capacitance	C_{rss}			120			
Turn-On Time	$t_{d(on)}$ t_r	$V_{DD}=-6V$ $R_L=6\Omega$ $I_D=-1.0A$ $V_{GEN}=-4.5V$ $R_G=6\Omega$		15	25	nS	
					35		55
Turn-Off Time	$t_{d(off)}$ t_f				60		90
					40		40

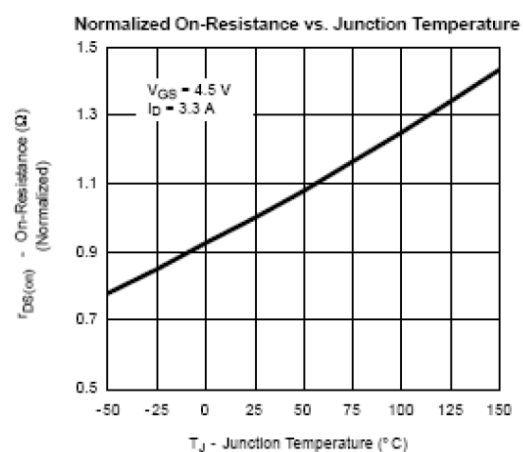
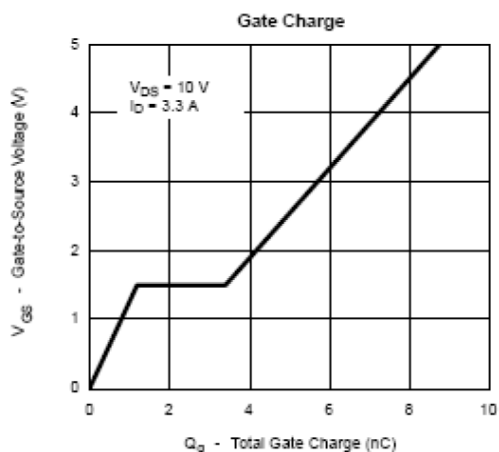
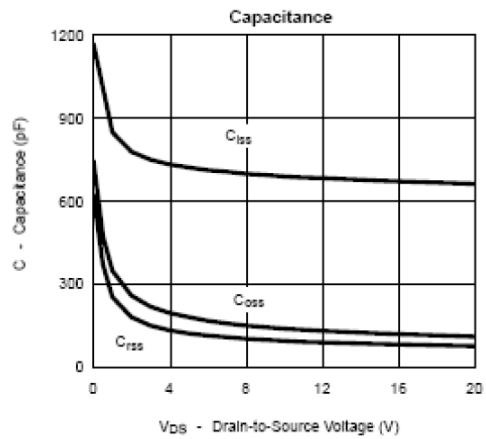
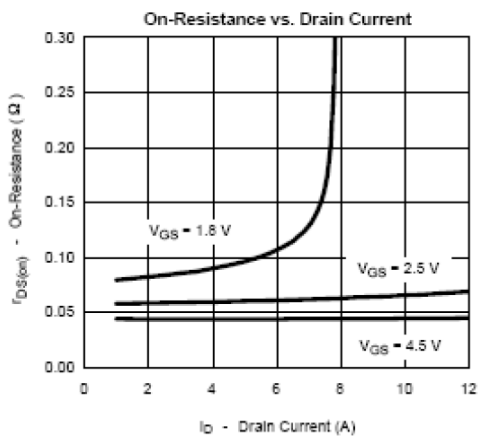
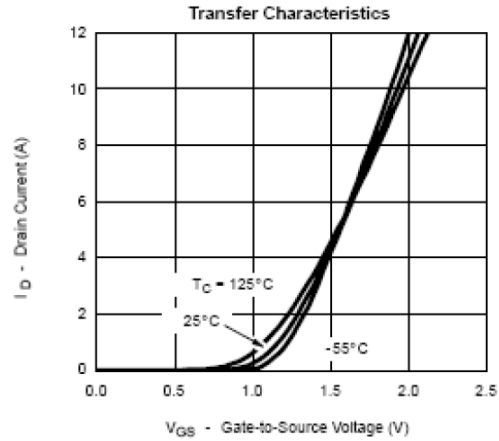
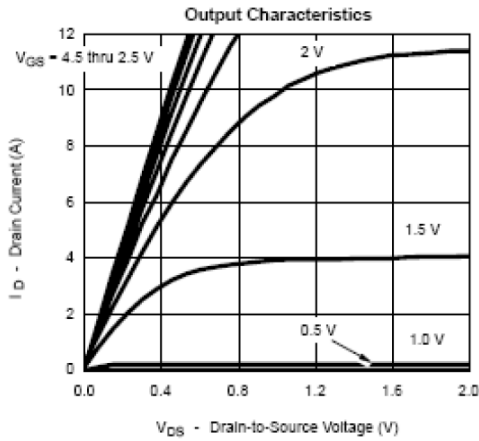


ST2341M 
Lead-free

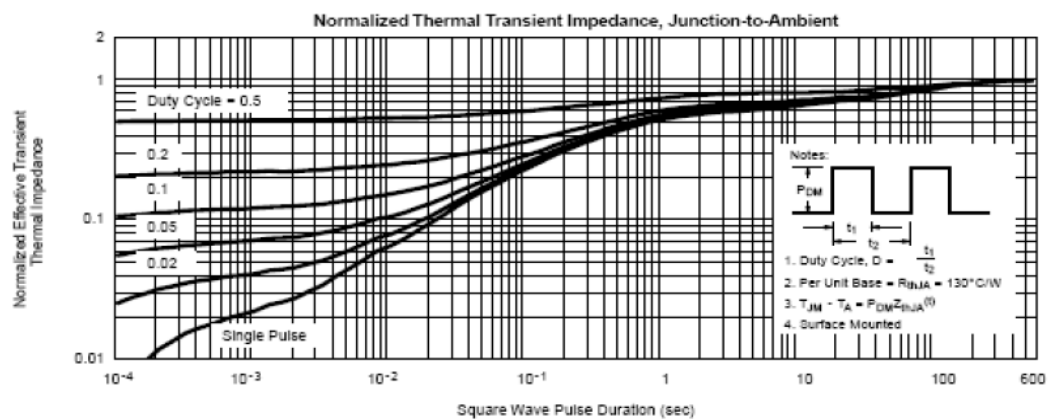
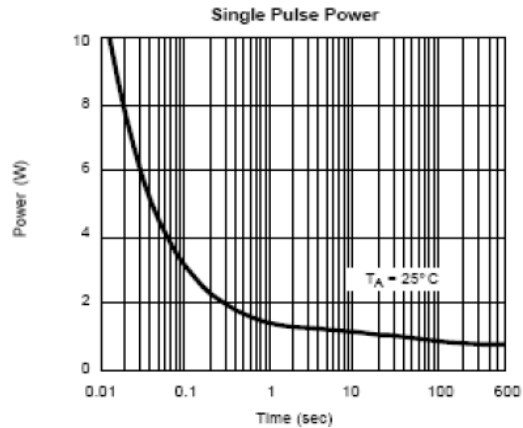
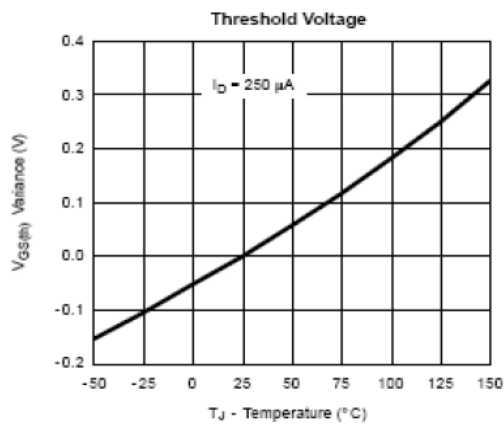
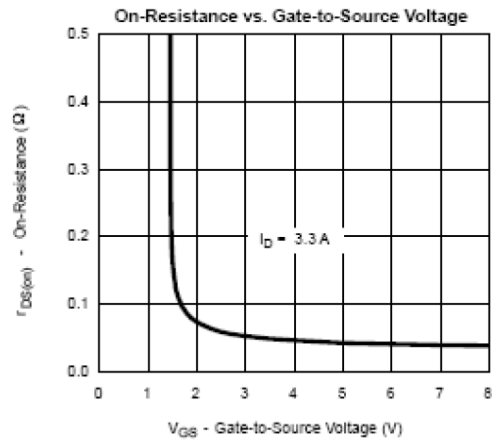
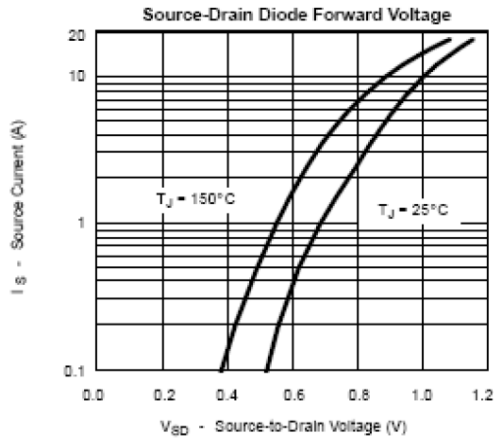
P Channel Enhancement Mode MOSFET

-3.5A

TYPICAL CHARACTERISTICS (25°C Unless noted)



TYPICAL CHARACTERISTICS (25°C Unless noted)



SOT-23-3L PACKAGE OUTLINE

STANSON TECHNOLOGY
 120 Bentley Square, Mountain View, Ca 94040 USA
 www.stansontech.com



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	0.400	0.012	0.016
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	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.700REF		0.028REF	
L1	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°