

SOT-23-3L Plastic-Encapsulate MOSFETS

Features

- $V_{DS}=-30V$
- $I_D=-4.1A$
- $R_{DS(on)}@V_{GS}=-10V < 52m\Omega$
- $R_{DS(on)}@V_{GS}=-4.5V < 87m\Omega$
- Advanced trench technology
- Lead free product is acquired

Drain-source Voltage
-30 V
Drain Current
-4.1 Ampere

Applications

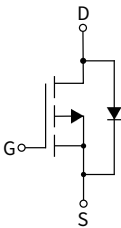
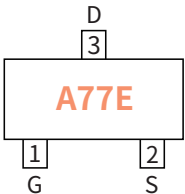
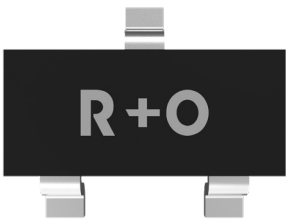
- Interfacing switching
- Load switching
- Power management

Mechanical Data

- Case: SOT-23-3L
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant,halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026

Function Diagram

SOT-23-3L



Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOT-23-3L	R1	0.0132	3000	30000	180000	7"

Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	VALUE
Drain-source Voltage		V_{DS}	V	-30
Gate-source Voltage		V_{GS}	V	± 20
Drain Current	$T_A=25^{\circ}C$ @ Steady State	I_D	A	-4.1
Pulsed Drain Current		I_{DM}	A	-20
Total Power Dissipation @ $T_A=25^{\circ}C$		P_D	mW	1400
Thermal Resistance Junction-to-Ambient @ Steady State		$R_{\theta JA}$	$^{\circ}C / W$	125
Junction and Storage Temperature Range		T_J, T_{STG}	$^{\circ}C$	-55 ~+150

● Static Parameter Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	Condition	UNIT	Min	Typ	Max
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V, I_D=-250\mu A$	V	-30	—	—
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-30V, V_{GS}=0V$	μA	—	—	-1.0
Gate-Body Leakage Current	I_{GSS}	$V_{GS}=\pm 20V, V_{DS}=0V$	nA	—	—	± 100
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250\mu A$	V	-1.0	-1.8	-3.0
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=-10V, I_D=-4.1A$	m Ω	—	43	52
		$V_{GS}=-4.5V, I_D=-3A$		—	64	87

● Dynamic Parameters (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	Condition	UNIT	Min	Typ	Max
Input Capacitance	C_{iss}	$V_{DS}=-15V$ $V_{GS}=0V$ $f=1MHz$	pF	—	700	—
Output Capacitance	C_{oss}			—	120	—
Reverse Transfer Capacitance	C_{rss}			—	75	—

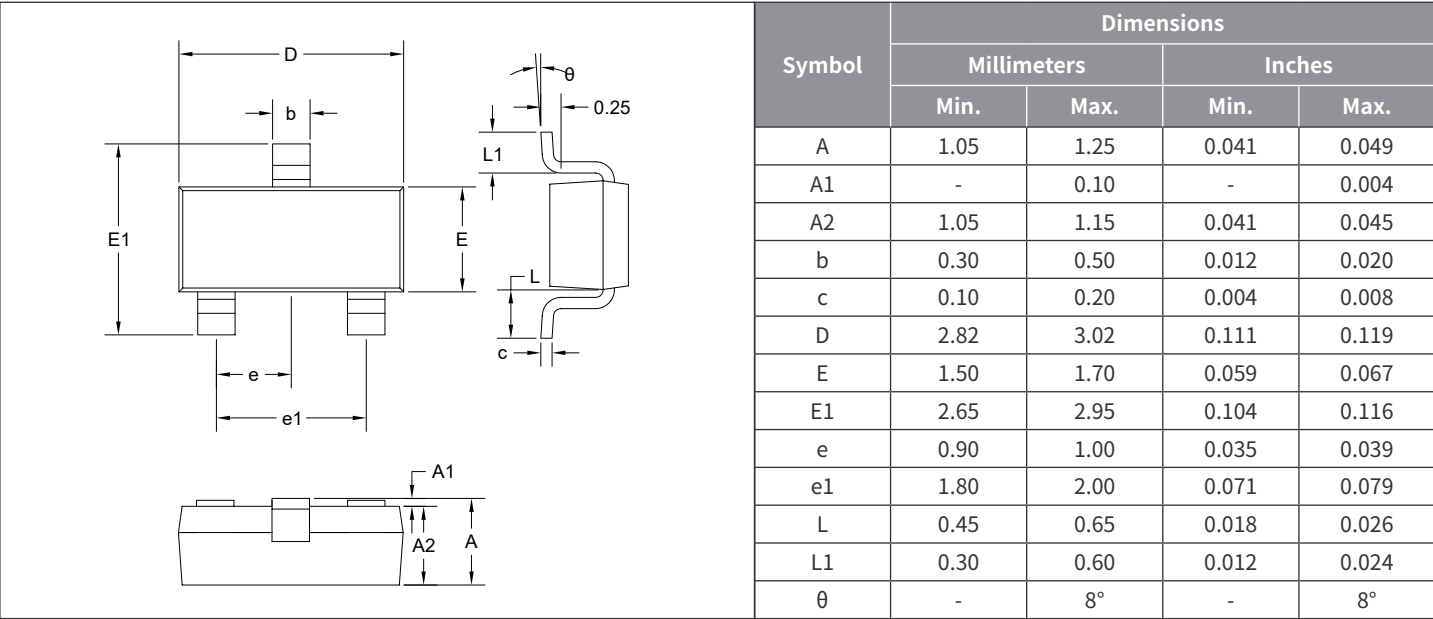
● Switching Parameters (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	Condition	UNIT	Min	Typ	Max
Total Gate Charge	Q_g	$V_{GS}=-4.5V$ $V_{DS}=-15V$ $I_D=-4A$	nC	—	14.3	—
Gate-Source Charge	Q_{gs}			—	7	—
Gate-Drain Charge	Q_{gd}			—	3.1	—
Turn-on Delay Time	$t_{D(on)}$	$V_{GS}=-10V$ $V_{DS}=-15V$ $R_G=3\Omega$ $I_D=-4A$	ns	—	8.6	—
Turn-on Rise Time	t_r			—	5	—
Turn-off Delay Time	$t_{D(off)}$			—	28.2	—
Turn-off fall Time	t_f			—	13.5	—

● Drian-Source Diode Characteristics

PARAMETER	SYMBOL	Condition	UNIT	Min	Typ	Max
Diode Forward Voltage	V_{SD}	$I_S=-1A, V_{GS}=0V$	V	—	—	-1.0
Maximum Body-Diode Continuous Current	I_S	—	A	—	—	-4.1
Reverse Recovery Time	t_{rr}	$I_F=4A, di/dt=100A/\mu S$	nS	—	27	—
Reverse Recovery Charge	Q_{rr}		nC	—	15	—

Package Outline Dimensions (SOT-23-3L)



Suggested Pad Layout

