

**100V 8.3m N-Ch Power MOSFET****Features**

- Ultra-low $R_{DS(ON)}$
- Low Gate Charge
- 100% UIS Tested, 100% R_g Tested
- Pb-free Lead Plating
- Halogen-free and RoHS-compliant

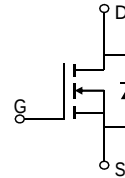
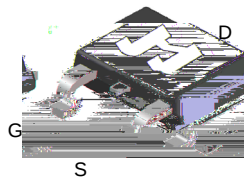
Product Summary

Parameter	Value	Unit
V_{DS}	100	V
$V_{GS(th)}_{Typ}$	1.9	V
I_D # Q_g 9	70	A
5 6 2 1 B 7 1 S # Q_g 9	8.3	m
$R_{DS(ON)}_{Typ}$ (@ $V_{GS} = 4.5V$)	10.8	m

Applications

- Power Management in Telecom., Industrial Automation, CE
- Current Switching in DC/DC & AC/DC Sub-systems
- Motor Driving in Power Tool, E-vehicle, Robotics

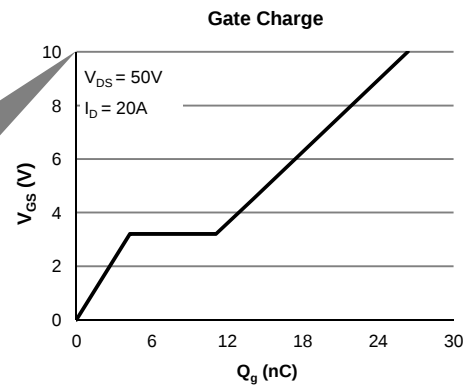
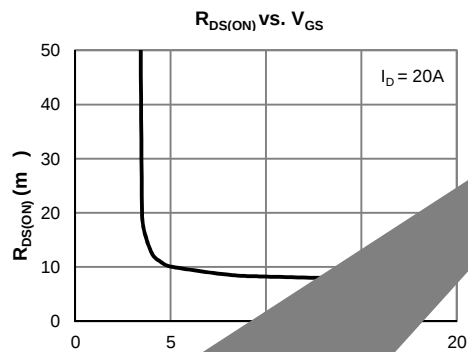
TO-252-3L Top View

**Ordering Information**

Device	Package	# of Pins	Marking	MSL	T_J (°C)	Media	Quantity (pcs)
JMSL1010AK-13	TO-252-3L	3	SL1010A	1	-55 to 150	13-inch Reel	2500

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

Parameter	Symbol	Value	Unit
'UDLQ WR 6RXUFH 9ROWDJH	V_{DS}		V
*DWH WR 6RXUFH 9ROWDJH		"	
$7_{\&}$ f &	I_D		\$
$7_{\&}$ f &			
\$YDODQFKH &XUUHQW			
\$YDODQFKH (QHUI\			
3RZHU 'LVVL SDWLRO	3		:
$7_{\&}$ f &			
-XQFWLRQ 6WRUDJH 7HPSHUDWXUH 5DQJH			WR





	Symbol	Min.	Typ.	Max.	Unit
Gate Threshold Voltage	$V_{(BR)DSS}$	100			V
	$V_{DS}^V = 80V, V_{GS} = 0V$			1.0	
	$T_J = 55^{\circ}C$			5.0	
	I_{GSS}			± 100	nA
	$V_{GS(th)}$	1.2	1.9	2.5	V
			8.3	10.0	m
			10.8	13.5	m
	g_{FS}		57		S
	V_{SD}		0.7	1.0	V
	I_S			89	A
	C_{iss}		1535		pF
	C_{oss}		335		pF
	C_{rss}		8.2		pF
	R_g		1.8		
	Q_g		26		nC
	Q_g		14		nC
	Q_{gs}		4.3		nC
	Q_{gd}		6.8		nC
	$t_{D(on)}$		7.5		ns
	t_r		15.8		ns
	$t_{D(off)}$		31		ns
	t_f		28		ns
	t_{rr}		43		ns
	Q_{rr}		35		nC

Thermal Performance

	Symbol	Typ.	Max.	Unit
Thermal Resistance, Junction-to-Ambient	R_{JA}	42	51	$^{\circ}C/W$
Thermal Resistance, Junction-to-Case	R_{JC}	1.1	1.4	$^{\circ}C/W$

Notes:

1. Computed continuous current assumes the condition of T_{J_Max} while the actual continuous current depends on the thermal & electro-mechanical
2. This single-pulse measurement was taken under $T_{J_Max} = 150^{\circ}C$.
3. This single-pulse measurement was taken under the following condition [L = 100 H, $V_{GS} = 10V$, $V_{DD} = 50V$] while its value is limited by
4. The power dissipation P_D is based on $T_{J_Max} = 150^{\circ}C$.
5. This value is guaranteed by design hence io

Typical Electrical & Thermal Characteristics





TO-252-3L Package Information

