



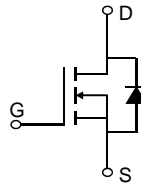
60V 4.6m N-Ch Power MOSFET

Features

- Ultra-low ON-resistance,  $R_{DS(ON)}$
- Low Gate Charge,  $Q_g$
- 100% UIS and  $R_g$  Tested
- Pb-free Lead Plating
- Halogen-free and RoHS-compliant
- AEC-Q101 Qualified for Automotive Applications

Product Summary

Parameter	Value	Unit
$V_{DS}$	60	V
$V_{GS(th\_Typ)}$	1.6	V
$I_D$ (@ $V_{GS} = 10V$ ) <sup>(1)</sup>	93	A
$R_{DS(ON\_Typ)}$ (@ $V_{GS} = 10V$ )	4.6	m
$R_{DS(ON\_Typ)}$ (@ $V_{GS} = 4.5V$ )	6.0	m

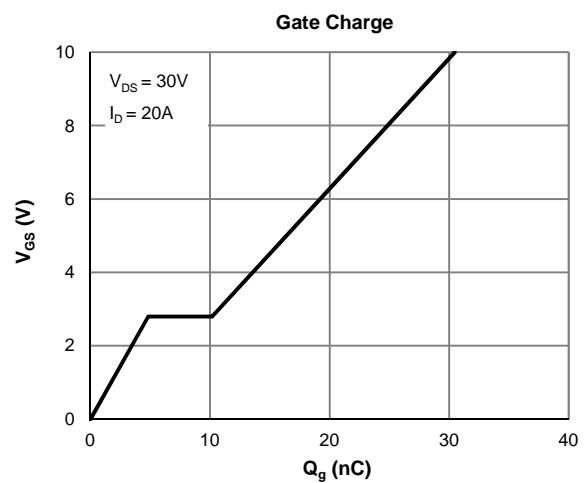
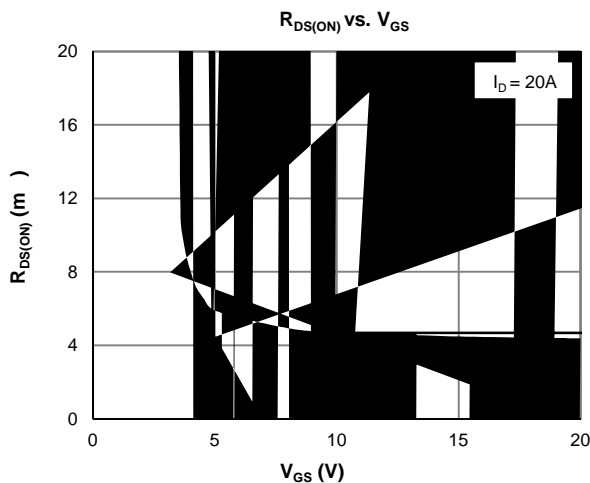


Ordering Information

Device	Package	# of Pins	Marking	MSL	$T_J$ (°C)	Media	Quantity (pcs)
JMSL0606AKQ-13	TO-252-3L	3	SL0606A	1	-55 to 175	13-inch Reel	2500

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

Parameter	Symbol	Value	Unit
Drain-to-Source Voltage	$V_{DS}$	60	V
Gate-to-Source Voltage	$V_{GS}$	$\pm 20$	V
Continuous Drain Current <sup>(1)</sup>	$I_D$	$T_C = 25^\circ C$	93
		$T_C = 100^\circ C$	66
Pulsed Drain Current <sup>(2)</sup>	$I_{DM}$	373	A
Avalanche Current <sup>(3)</sup>	$I_{AS}$	25	A
Avalanche Energy <sup>(3)</sup>	$E_{AS}$	94	mJ
Power Dissipation <sup>(4)</sup>	$P_D$	$T_C = 25^\circ C$	100
		$T_C = 100^\circ C$	50
Junction & Storage Temperature Range	$T_{J\_STG}$	-55 to 175	°C



	Symbol	Min.	Typ.	Max.	Unit
Gate Threshold Voltage	$V_{(BR)DSS}$	60			V
				1.0	
				5.0	
	$I_{GSS}$			±100	nA
	$V_{GS(th)}$	1.2	1.6	2.5	V
			4.6	5.8	m
			6.0	7.5	m
		$g_{FS}$		85	S
	$V_{SD}$		0.7	1.0	V
	$I_S$			100	A
	$C_{iss}$		2122		pF
	$C_{oss}$		440		pF
	$C_{rSS}$		4.4		pF
	$R_g$		1.4		
	$Q_g$		32		nC
	$Q_g$		14.0		nC
	$Q_{gs}$		4.8		nC
	$Q_{gd}$		5.4		nC
	$t_{D(on)}$		8.0		ns
	$t_r$		5.1		ns
	$t_{D(off)}$		38		ns
	$t_f$		14.8		ns
	$t_{rr}$		37		ns
	$Q_{rr}$		43		nC
	<b>Symbol</b>				<b>Unit</b>
	$R_{JA}$				°C/W
	$R_{JC}$				°C/W

Notes:

Typical Electrical & Thermal Characteristics



Typical Electrical & Thermal Characteristics

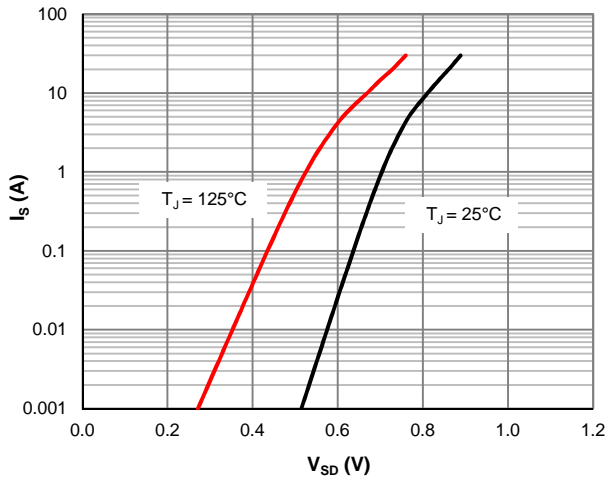


Figure 7: Body-Diode Characteristics

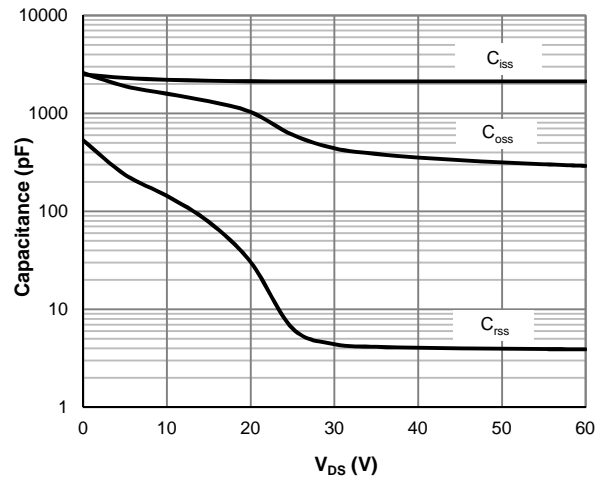


Figure 8: Capacitance Characteristics

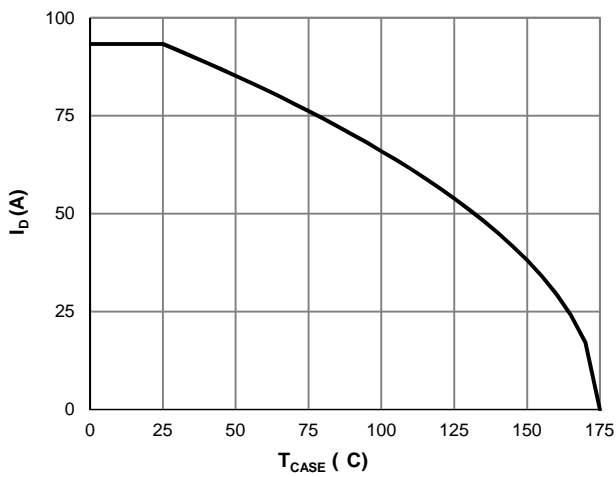


Figure 9: Current De-rating

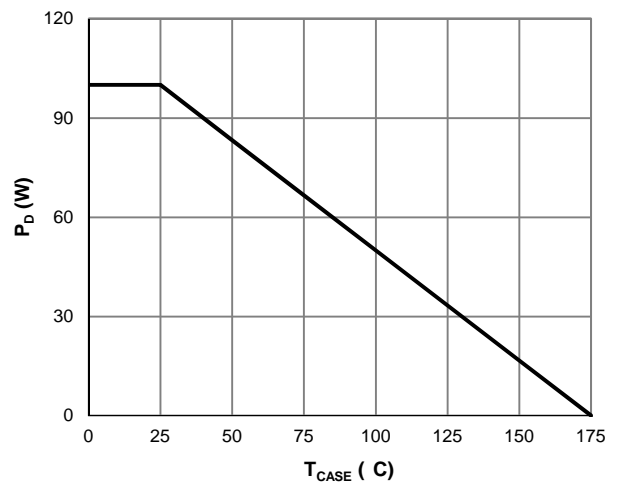
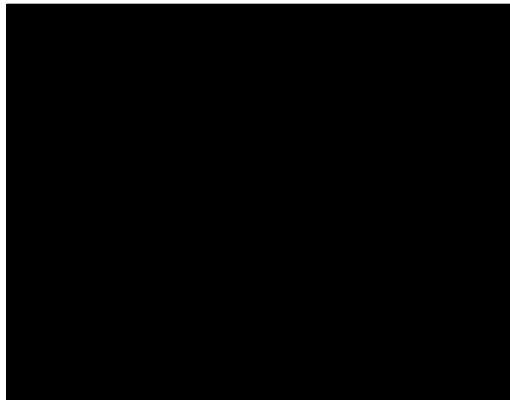


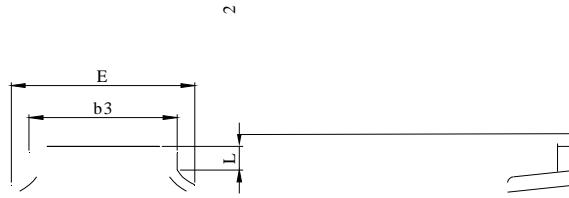
Figure 10: Power De-rating







TO-252-3L Package Information



Top View



Side View

Bottom View



Front View

DIM.	MILLIMETER		
	MIN.	NOM.	MAX.
A	2.18	2.30	2.39
A1	0	-	0.13
b	0.64	0.76	0.89
c	0.40	0.50	0.61
c1	0.46	0.50	0.58
D	5.97	6.10	6.23
D1	5.05	--	--
E	6.35	6.60	6.73
E1	4.32	--	--
b3	5.21	5.38	5.55
e	2.29 BSC		
H	9.40	10.00	10.40
L	0.89	--	1.27
L2	1.40	--	1.78
V1	7° REF		
V2	0°	-	6°