



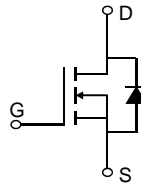
60V 4.6m N-Ch Power MOSFET

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 (@ $V_{GS} = 10V$) ⁽¹⁾	93	A
$R_{DS(ON_Typ)}$ (@ $V_{GS} = 10V$)	4.6	m
$R_{DS(ON_Typ)}$ (@ $V_{GS} = 4.5V$)	6.0	m

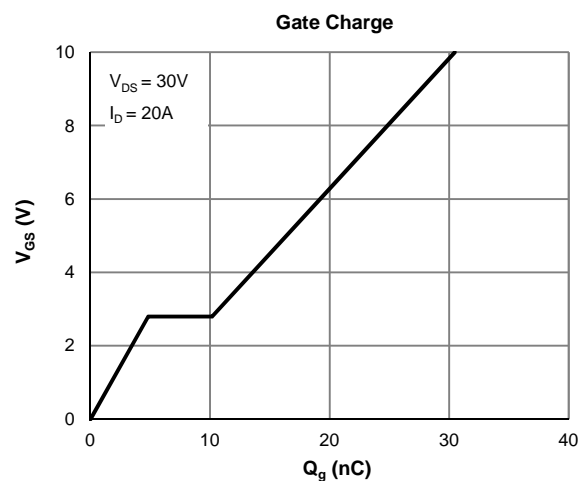
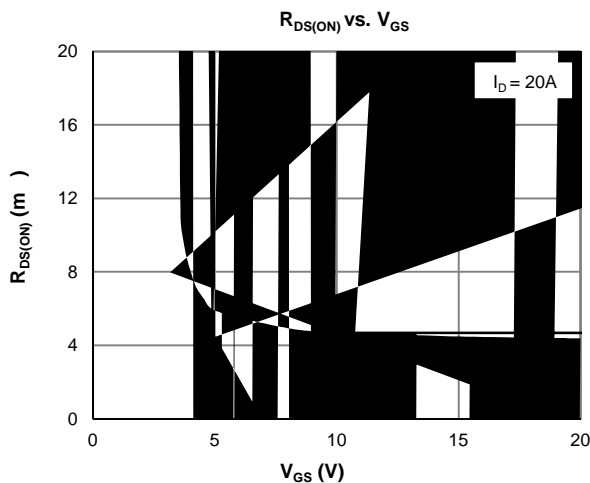


Ordering Information

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}	± 20	V
Continuous Drain Current ⁽¹⁾	I_D	$T_C = 25^\circ C$	93
		$T_C = 100^\circ C$	66
Pulsed Drain Current ⁽²⁾	I_{DM}	373	A
Avalanche Current ⁽³⁾	I_{AS}	25	A
Avalanche Energy ⁽³⁾	E_{AS}	94	mJ
Power Dissipation ⁽⁴⁾	P_D	$T_C = 25^\circ C$	100
		$T_C = 100^\circ C$	50
Junction & Storage Temperature Range	T_J, T_{STG}	-55 to 175	°C



	Symbol	Min.	Typ.	Max.	Unit
Gate Threshold Voltage	$V_{(BR)DSS}$	60			V
				1.0	A
				5.0	A
	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
	Symbol				Unit
	R_{JA}				°C/W
	R_{JC}				°C/W

Notes:

Typical Electrical & Thermal Characteristics



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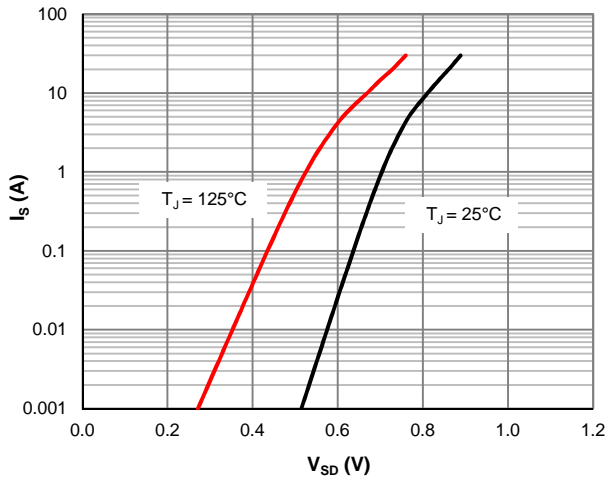


Figure 7: Body-Diode Characteristics

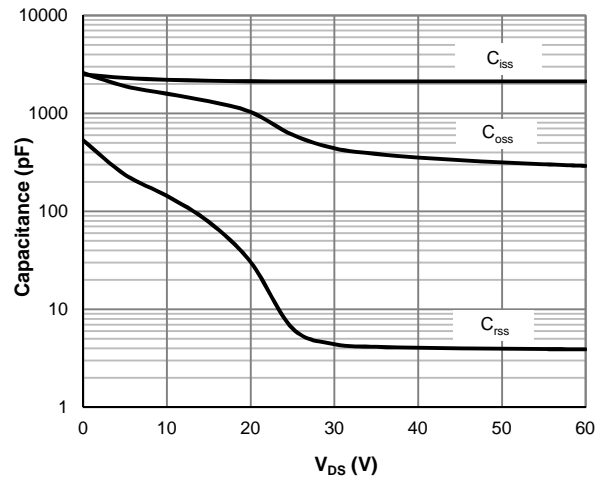


Figure 8: Capacitance Characteristics

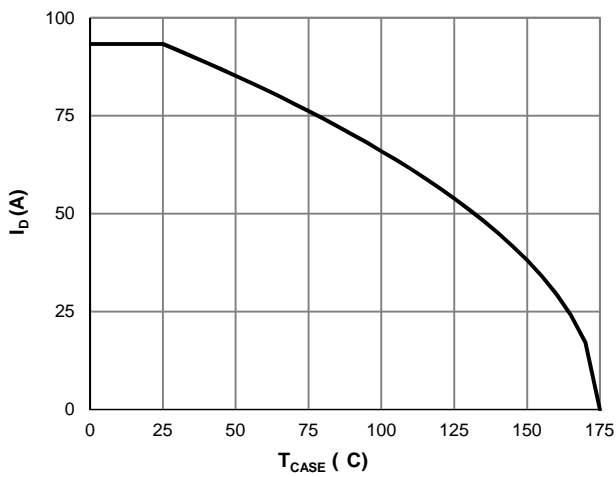


Figure 9: Current De-rating

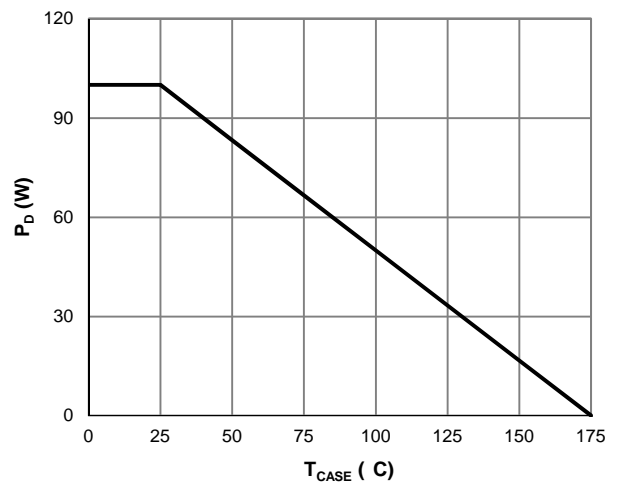
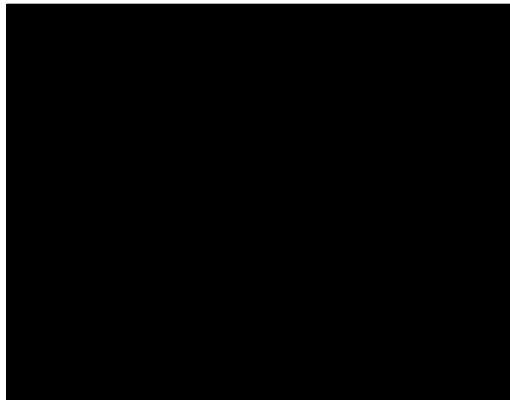


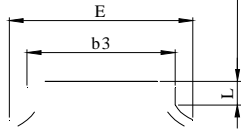
Figure 10: Power De-rating







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°