

## SOT-23-6L

- $V_{DS}$  -20V
- $I_D$  -5.4A
- $R_{DS(ON)}$  ( at  $V_{GS}=-4.5V$ ) <40m $\Omega$
- $R_{DS(ON)}$  ( at  $V_{GS}=-2.5V$ ) <55m $\Omega$

- Low  $R_{DS(on)}$  & FOM
- Extremely low switching loss
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Part no. with suffix "Q" means AEC-Q101 qualified
- Halogen Free

- Power management
- Portable equipment

( $T_A=25^\circ C$  unless otherwise noted)

Drain-source Voltage		$V_{DS}$	-20	V
Gate-source Voltage		$V_{GS}$	$\pm 12$	V
Drain Current	$T_A=25$	$I_D$	-5.4	A
	$T_A=100$		-4.0	
Pulsed Drain Current <sup>A</sup>		$I_{DM}$	-20	A
Total Power Dissipation <sup>C</sup>	$T_A=25$	$P_D$	1.25	W
	$T_A=100$		0.5	
Junction and Storage Temperature Range		$T_J, T_{STG}$	-55~+150	

Thermal Resistance Junction-to-Ambient <sup>D</sup>		Steady-State	$R_{\theta JA}$	80	100	/W
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(Example)

YJJ2305CHQ	F2	2305C	3000	30000	120000	7" reel
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unless otherwise noted)

	$V_{GS} = 0V, I_D = -250\mu A$	-20	-	-	V
	$V_{DS} = -20V, V_{GS} = 0V$	-	-	-1	$\mu A$
	$V_{GS} = \pm 12V, V_{DS} = 0V$			-100	nA
	$V_{DS} = V_{GS}, I_D = -250\mu A$	-0.4	-0.65	-1.0	V
	$V_{GS} = -4.5V, I_D = -5.4A$		30	40	m $\Omega$
	$V_{GS} = -2.5V, I_D = -4A$		39	55	m $\Omega$
	$I_S = -5.4A, V_{GS} = 0V$		-0.8	-1.2	V
	$f = 1MHz$	-	13	-	$\Omega$
	$V_{DS} = -10V, V_{GS} = 0V, f = 1MHz$	-	770	-	pF
		-	115	-	
		-	98	-	

$V_{GS} = -10V, V_{DS} = -10V, I_D = -1A$

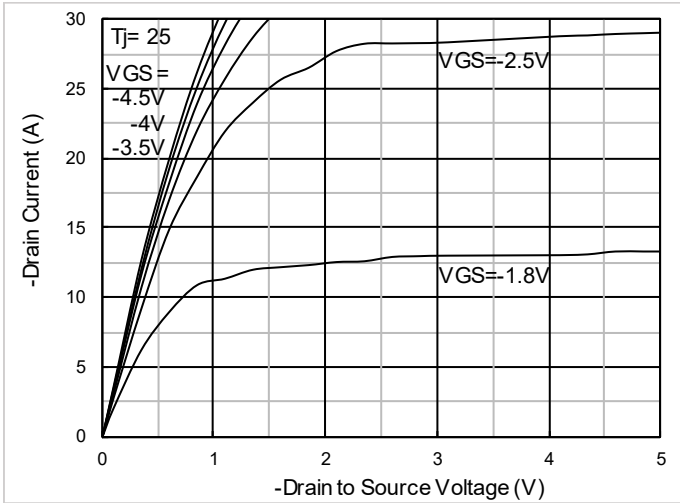


Figure 1. Output Characteristics

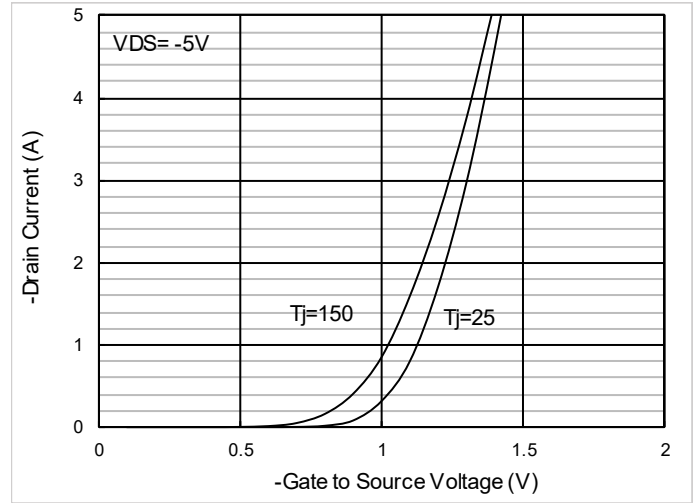


Figure 2. Transfer Characteristics

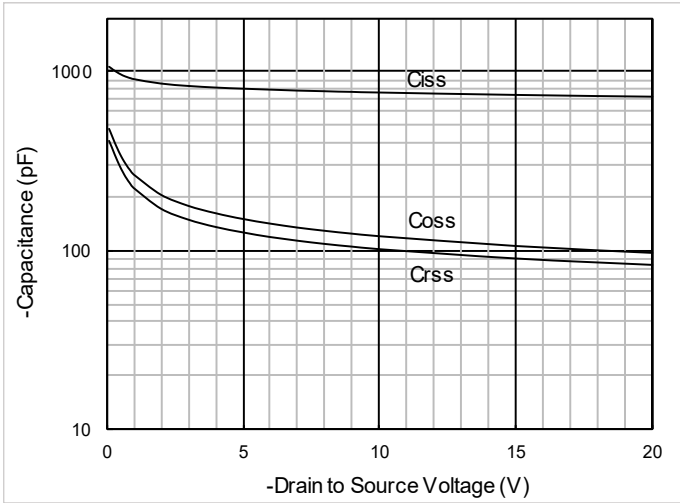


Figure 3. Capacitance Characteristics

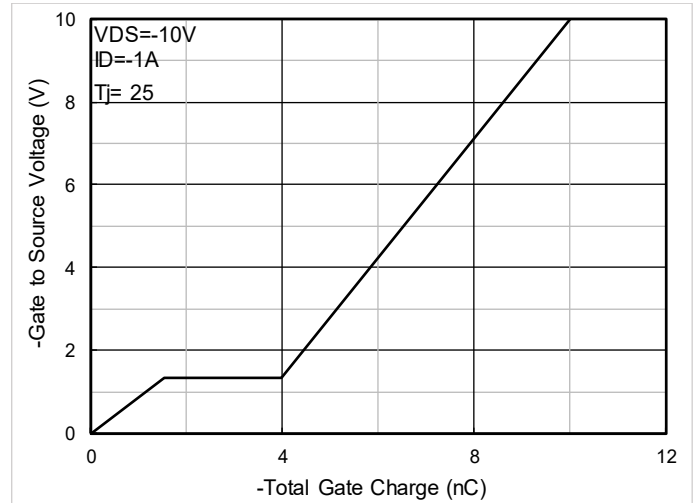


Figure 4. Gate Charge

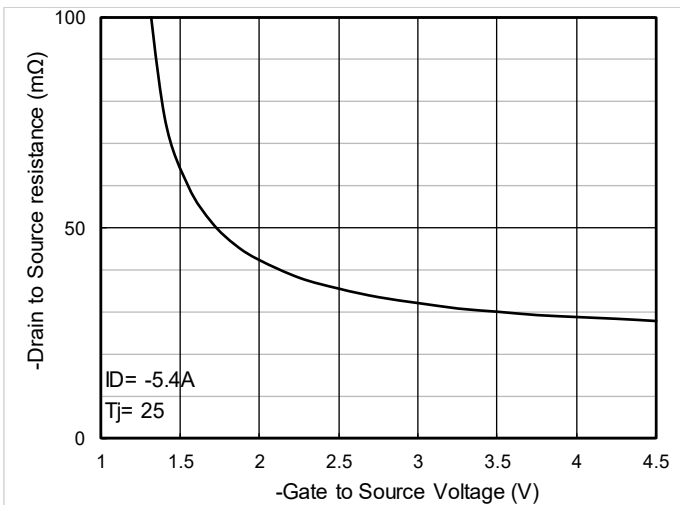


Figure 5. On-Resistance vs Gate to Source Voltage

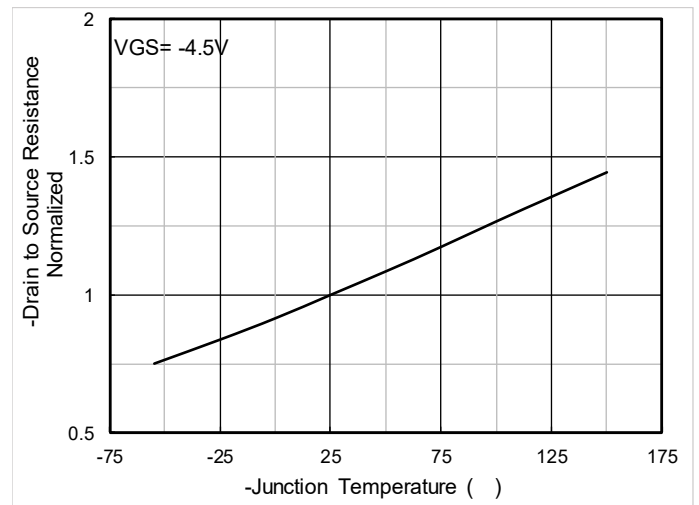


Figure 6. Normalized On-Resistance

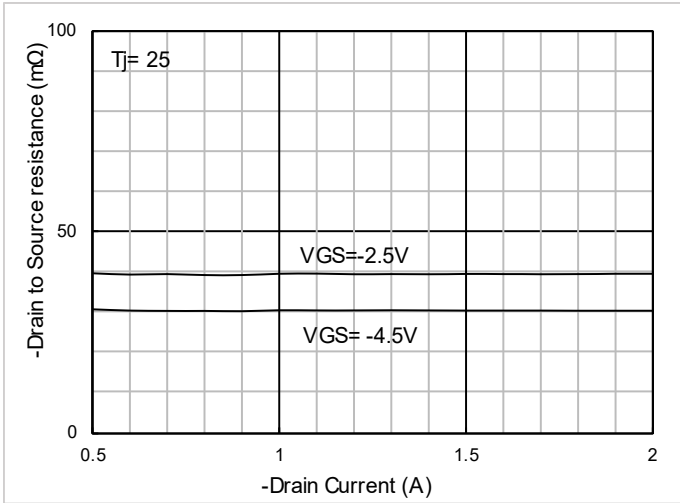


Figure 7.  $R_{DS(on)}$  VS Drain Current

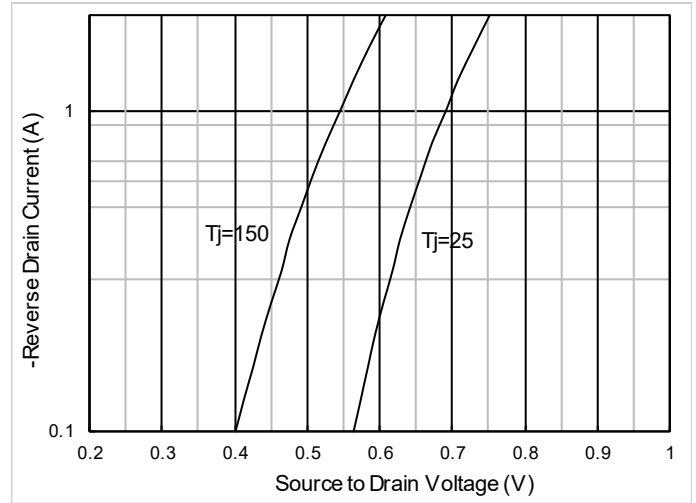


Figure 8. Forward characteristics of reverse diode

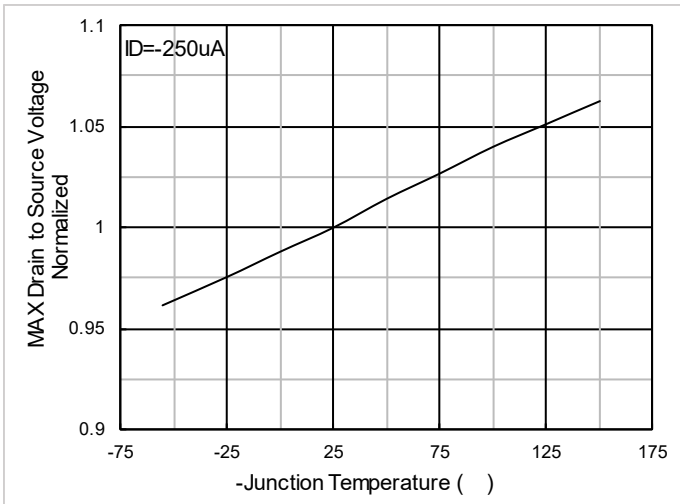


Figure 9. Normalized breakdown voltage

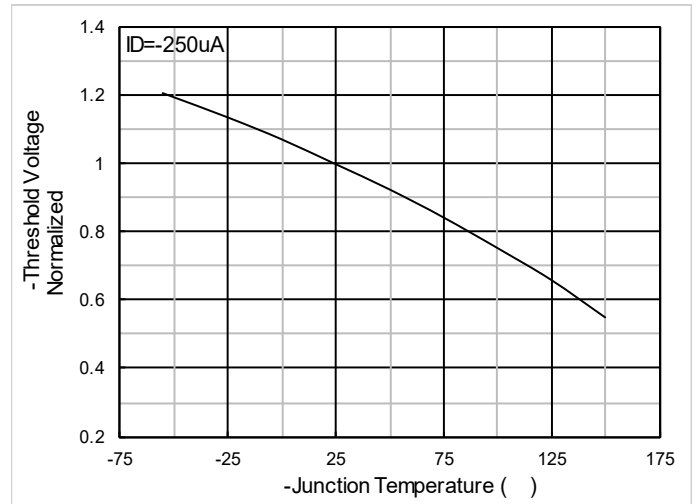


Figure 10. Normalized Threshold voltage

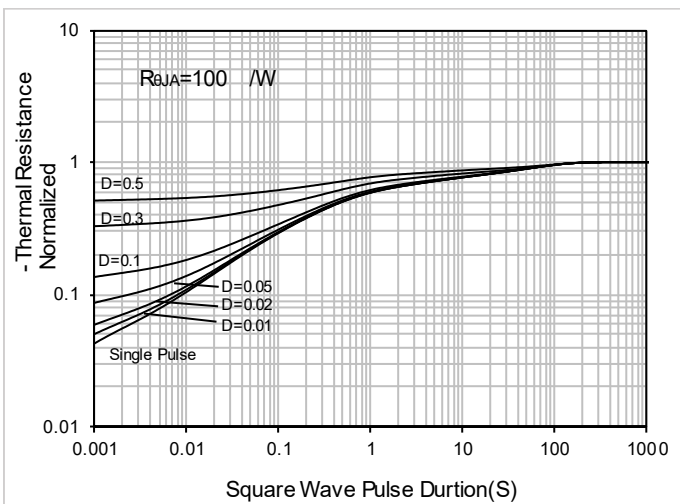


Figure 11. Maximum Transient Thermal Impedance

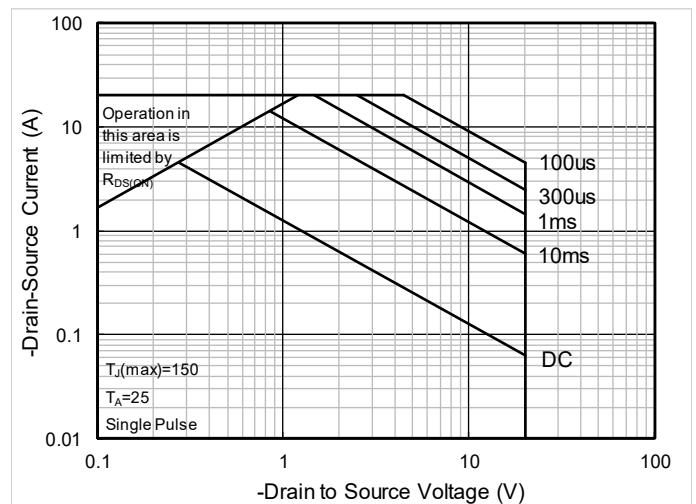
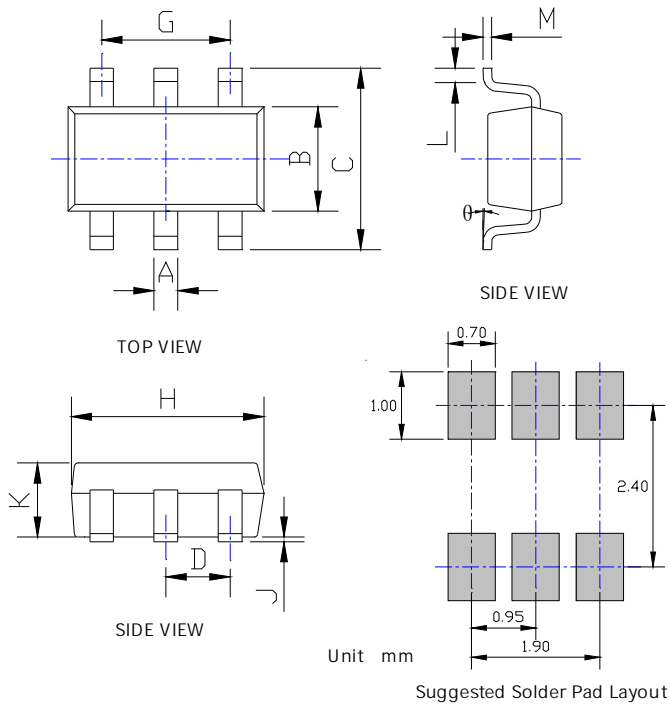


Figure 12. Safe Operation Area



SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.012	0.020	0.300	0.500
B	0.059	0.067	1.500	1.700
C	0.104	0.116	2.650	2.950
D	0.037BSC		0.950BSC	
G	0.075BSC		1.900BSC	
H	0.111	0.119	2.820	3.020
J	0.000	0.004	0.000	0.100
K	0.041	0.045	1.050	1.150
L	0.012	0.024	0.300	0.600
M	0.004	0.008	0.100	0.200
$\theta$	0°	8°	0°	8°

- Note:**
1. Controlling dimension: in millimeters.
  2. General tolerance: +/-0.05mm.
  3. The pad layout is for reference purposes only.



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