Dynamic Characteristics (T_J = 25°C unless otherwise stated)						
PARAMETER		TEST CONDITIONS	MIN	TYP	MAX	UNIT
C_{ISS}	Input Capacitance	V_{DS} = 100 V, V_{GS} = 0 V		100	140	pF
C_{RSS}	Reverse Transfer Capacitance			0.4	0.6	
C_{OSS}	Output Capacitance			64	85	
R_G	Gate Resistance			0.6		Ω
Q_G	Total Gate Charge	V_{DS} = 100 V, V_{GS} = 5 V, I_D = 3 A		1	1.3	nC
Q_{GS}	Gate-to-Source Charge	V_{DS} = 100 V, I_D = 3 A		0.3		
Q_{GD}	Gate-to-Drain Charge			0.2	0.35	
$Q_{G(TH)}$	Gate Charge at Threshold			0.2		
Q_{OSS}	Output Charge	V_{DS} = 100 V, V_{GS} = 0 V		10	13	
Q_{RR}	Source-Drain Recovery Charge			0		

All measurements were done with substrate connected to source.
Note 2: $C_{OSS(ER)}$ is a fixed capacitance that gives the same stored energy as C_{OSS} while V_{DS} is rising from 0 to 50% BV_{DSS}.
Note 3: $C_{OSS(TR)}$ is a fixed capacitance that gives the same charging time as C_{OSS} while V_{DS} is rising from 0 to 50% BV_{DSS}.

Figure 1: Typical Output Characteristics at 25°C

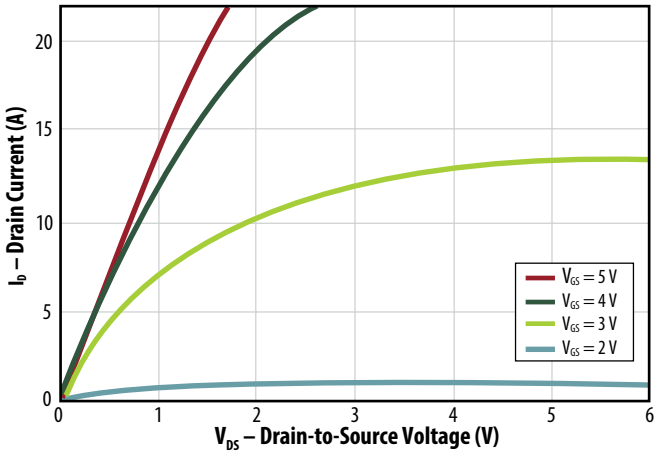


Figure 2: Transfer Characteristics

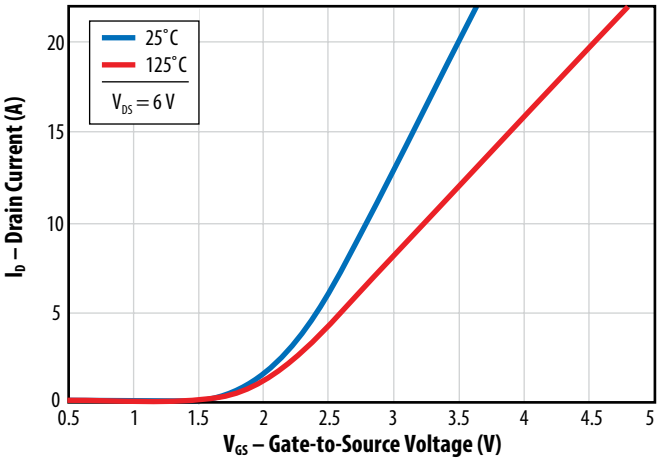


Figure 3: $R_{DS(on)}$ vs. V_{GS} for Various Drain Currents

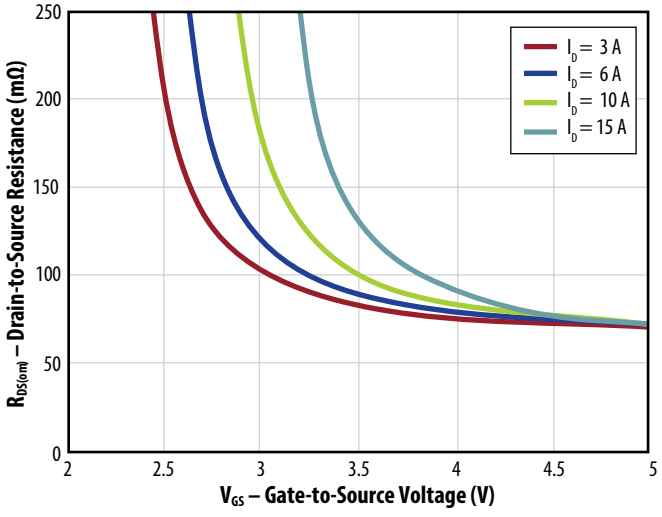


Figure 4: $R_{DS(on)}$ vs. V_{GS} for Various Temperatures

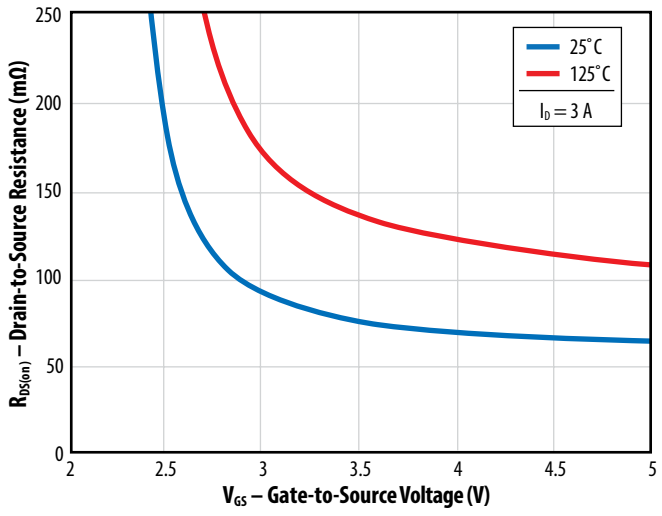


Figure 5a: Capacitance (Linear Scale)

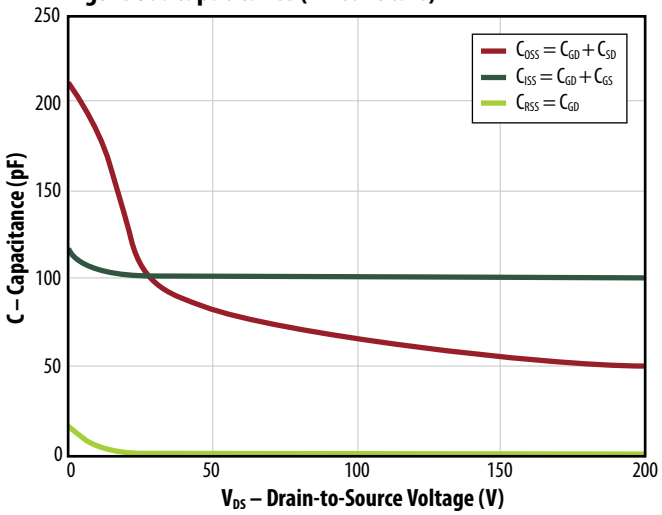


Figure 5b: Capacitance (Log Scale)

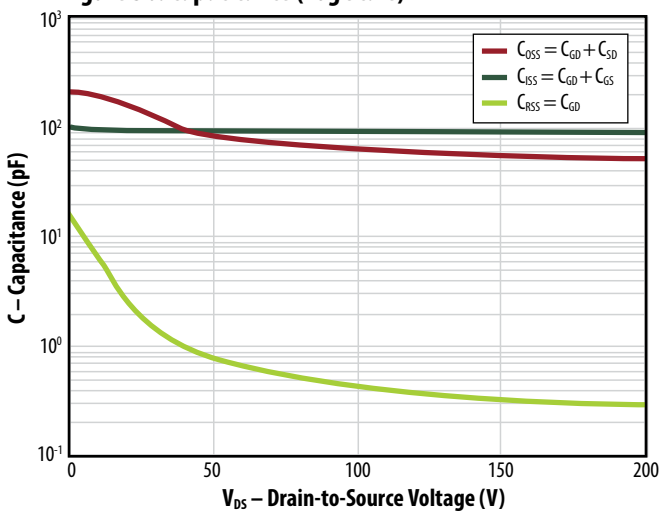


Figure 6: Gate Charge

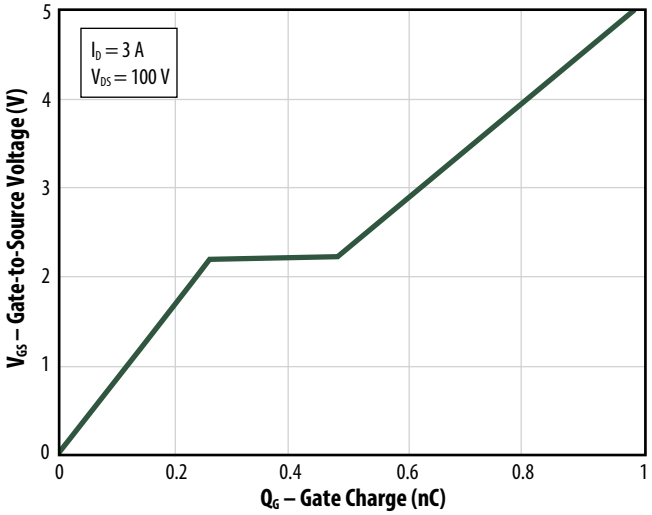


Figure 7: Reverse Drain-Source Characteristics

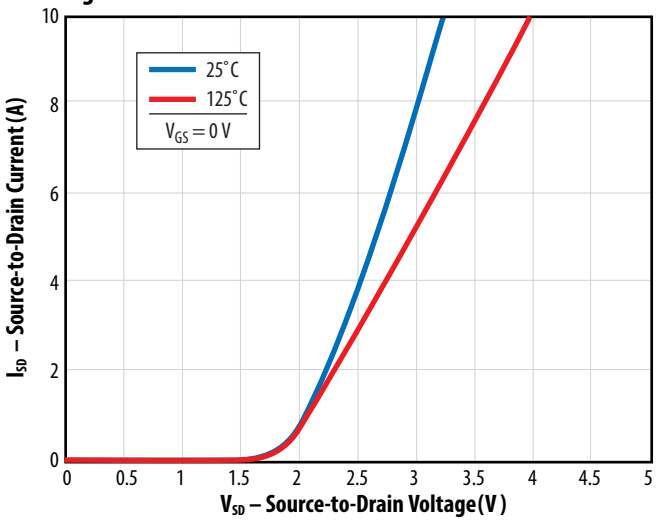


Figure 8: Normalized On Resistance vs. Temperature

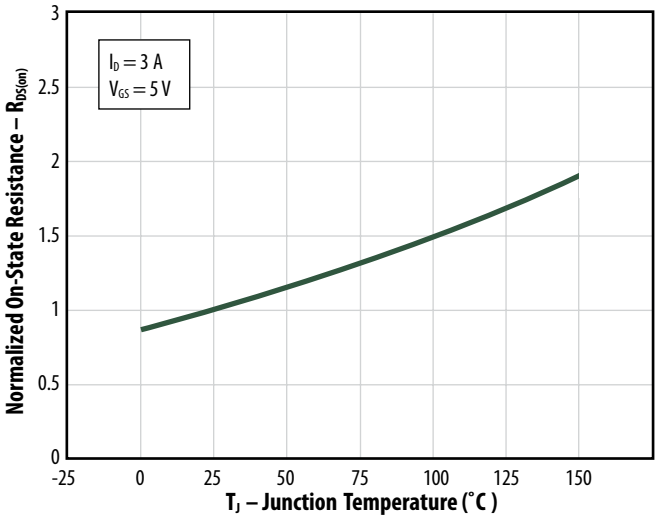
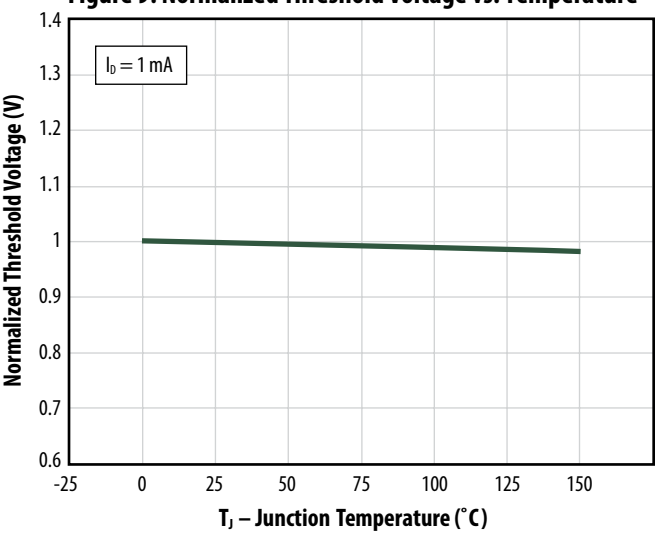


Figure 9: Normalized Threshold Voltage vs. Temperature



All measurements were done with substrate shortened to source.

Figure 10: Gate Current

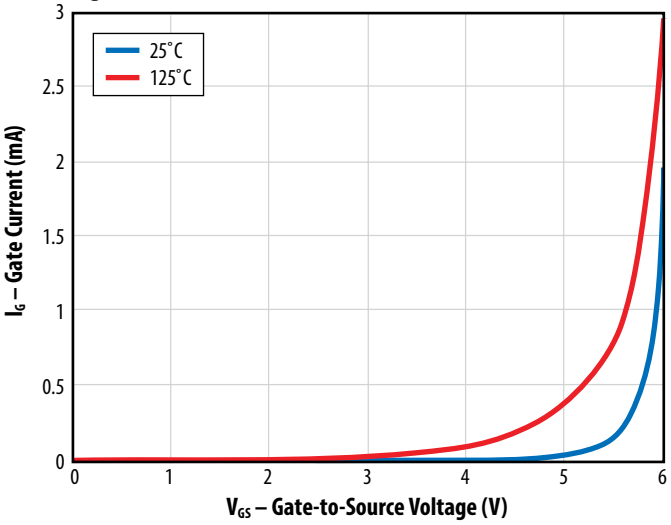
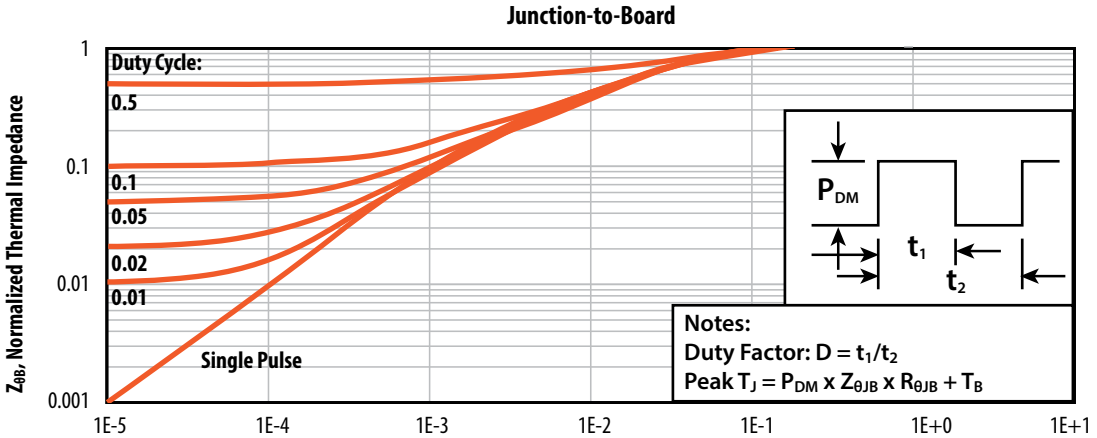


Figure 11: Transient Thermal Response Curves



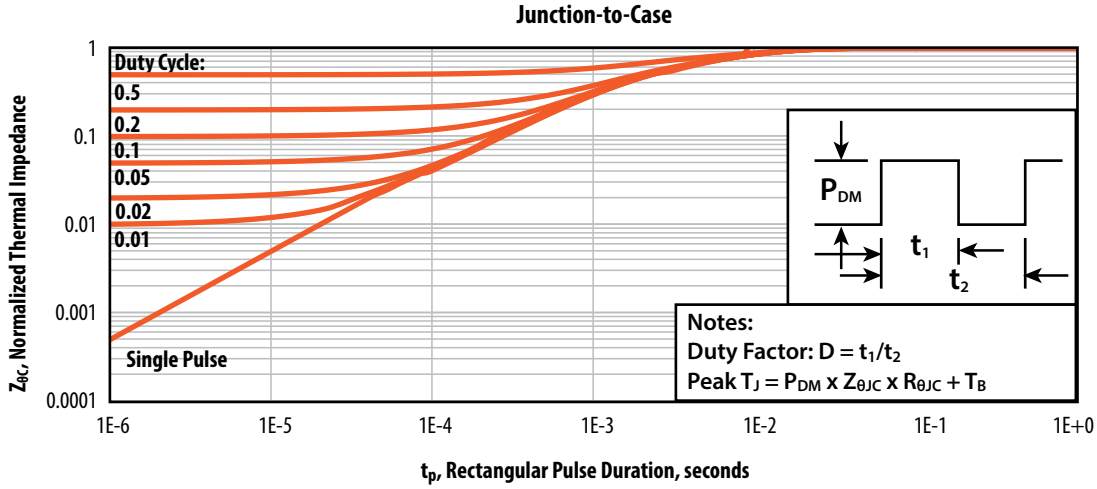
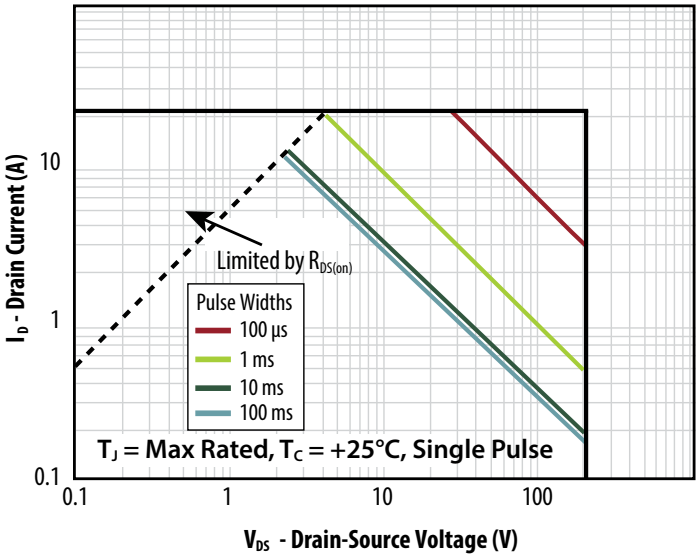
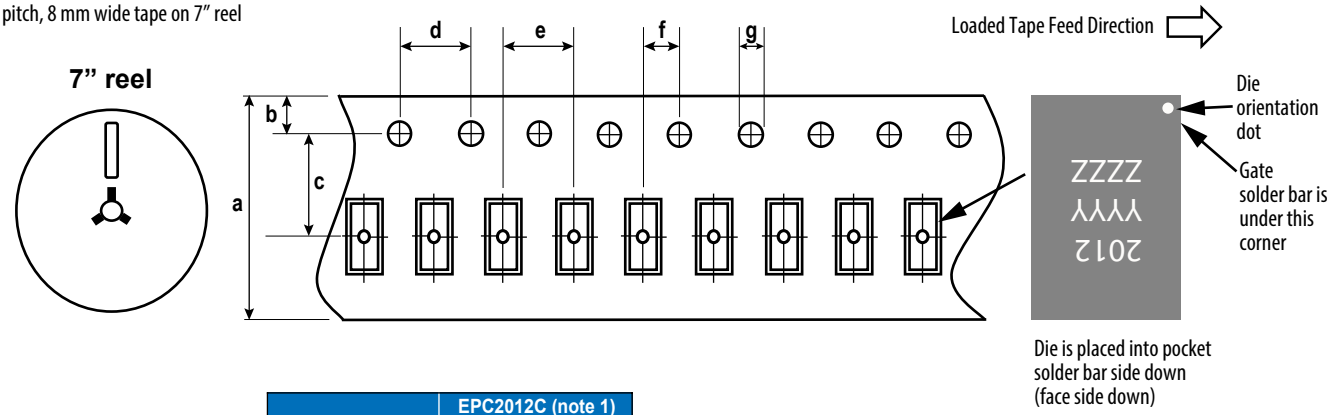


Figure 12: Safe Operating Area



TAPE AND REEL CONFIGURATION

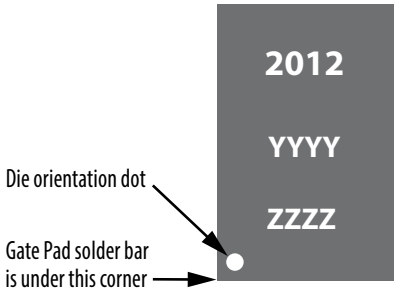
4 mm pitch, 8 mm wide tape on 7" reel



	EPC2012C (note 1)		
Dimension (mm)	target	min	max
a	8.00	7.90	8.30
b	1.75	1.65	1.85
c (note 2)	3.50	3.45	3.55
d	4.00	3.90	4.10
e	4.00	3.90	4.10
f (note 2)	2.00	1.95	2.05
g	1.5	1.5	1.6

Note 1: MSL 1 (moisture sensitivity level 1) classified according to IPC/JEDEC industry standard.
Note 2: Pocket position is relative to the sprocket hole measured as true position of the pocket, not the pocket hole.

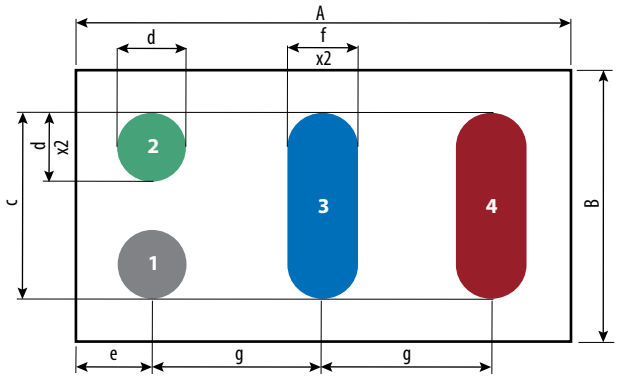
DIE MARKINGS



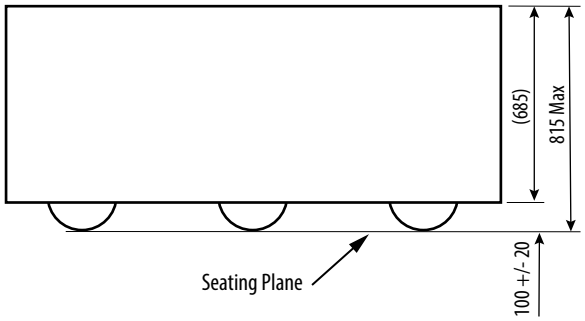
Part Number	Laser Markings		
	Part # Marking Line 1	Lot_Date Code Marking line 2	Lot_Date Code Marking Line 3
EPC2012C	2012	YYYY	ZZZZ

DIE OUTLINE

Solder Bar View



Side View



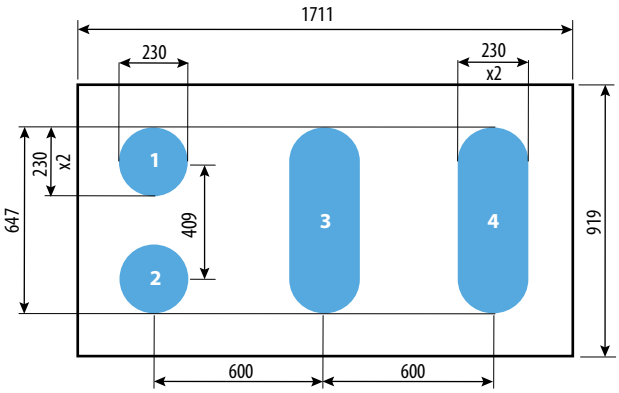
DIM	MICROMETERS		
	MIN	Nominal	MAX
A	1681	1711	1741
B	889	919	949
c	662	667	672
d	245	250	255
e	230	245	260
f	245	250	255
g	600	600	600

Pad no. 1 is Gate;
Pad no. 2 is Substrate;*
Pad no. 3 is Drain;
Pad no. 4 is Source

*Substrate pin should be connected to Source

RECOMMENDED LAND PATTERN

(units in µm)



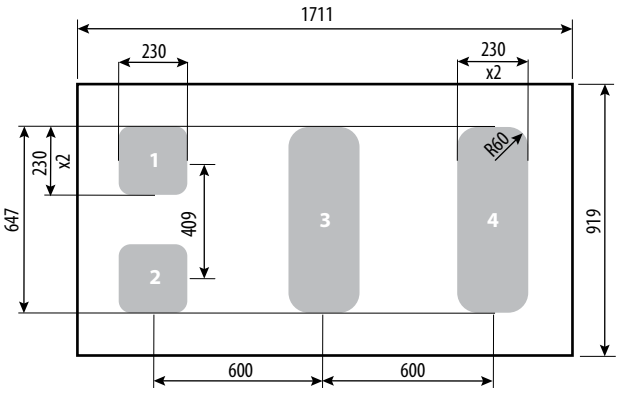
The land pattern is solder mask defined.

Pad no. 1 is Gate;
Pad no. 2 is Substrate;*
Pad no. 3 is Drain;
Pad no. 4 is Source

*Substrate pin should be connected to Source

RECOMMENDED STENCIL DRAWING

(units in µm)



Recommended stencil should be 4 mil (100 µm) thick, must be laser cut , opening per drawing. The corner has a radius of R60.

Intended for use with SAC305 Type 3 solder, reference 88.5% metals content.

Additional assembly resources available at https://www.epc-co.com/epc/DesignSupport/AssemblyBasics.aspx