Dynamic Characteristics (T_J = 25°C unless otherwise stated)						
PARAMETER		TEST CONDITIONS	MIN	TYP	MAX	UNIT
C_{ISS}	Input Capacitance	V_{DS} = 20 V, V_{GS} = 0 V		220	300	pF
C_{RSS}	Reverse Transfer Capacitance			6.5	9.5	
C_{OSS}	Output Capacitance			150	210	
R_G	Gate Resistance			0.4		Ω
Q_G	Total Gate Charge	V_{DS} = 20 V, V_{GS} = 5 V, I_D = 10 A		2	2.5	nC
Q_{GS}	Gate-to-Source Charge	V_{DS} = 20 V, I_D = 10 A		0.7		
Q_{GD}	Gate-to-Drain Charge			0.3	0.5	
$Q_{G(TH)}$	Gate Charge at Threshold			0.5		
Q_{OSS}	Output Charge	V_{DS} = 20 V, V_{GS} = 0 V		4	6	
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

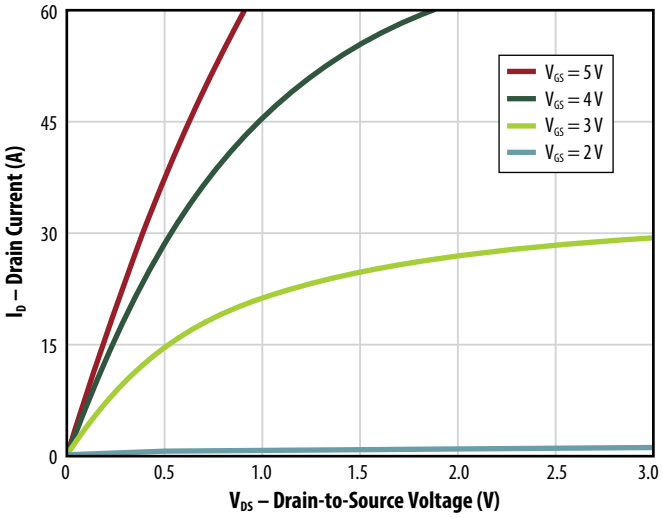


Figure 2: Transfer Characteristics

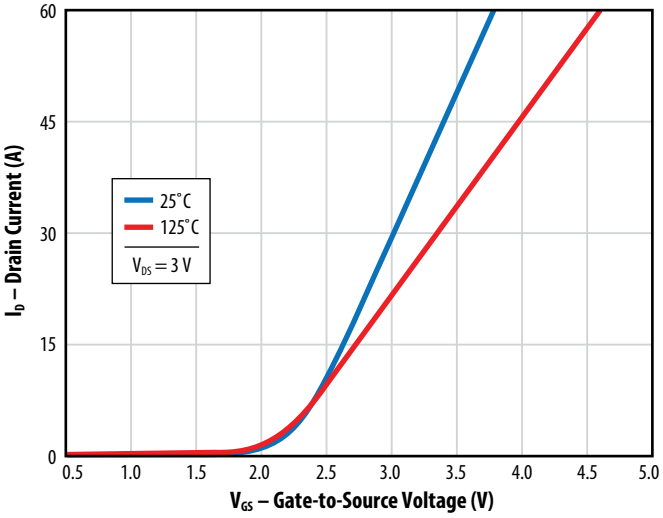


Figure 3: $R_{DS(on)}$ vs. V_{GS} for Various Drain Currents

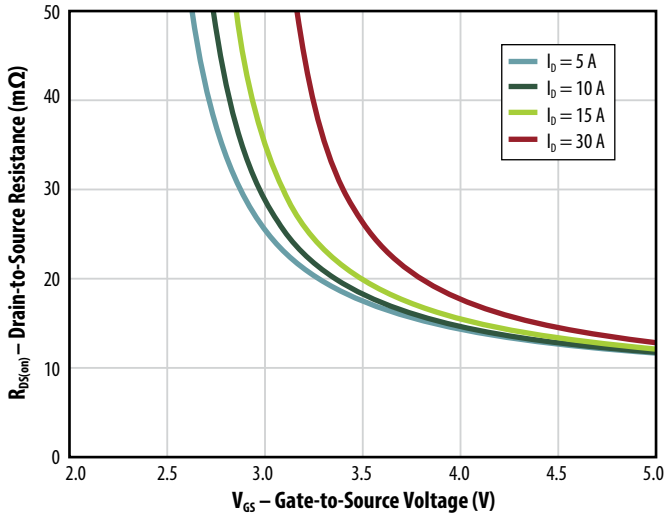


Figure 4: $R_{DS(on)}$ vs. V_{GS} for Various Temperatures

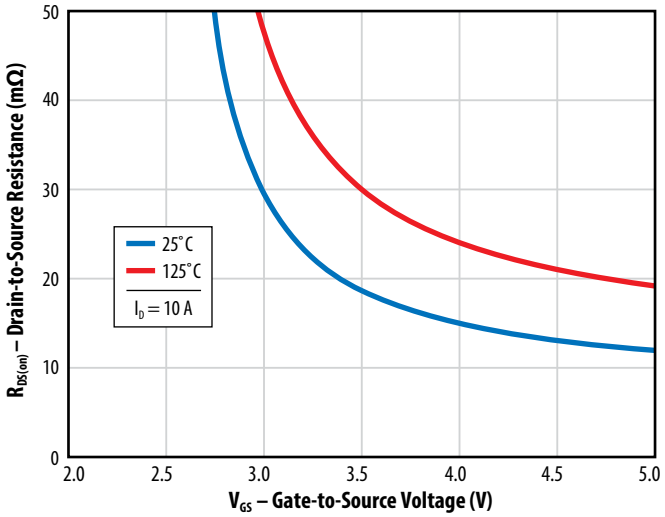


Figure 5a: Capacitance

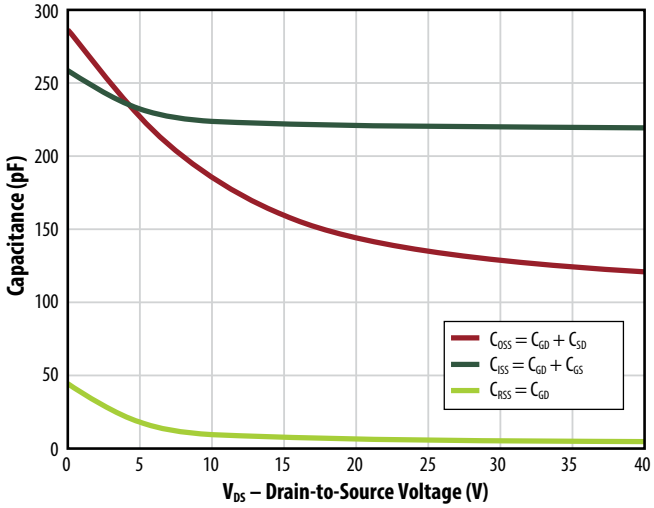


Figure 5b: Capacitance

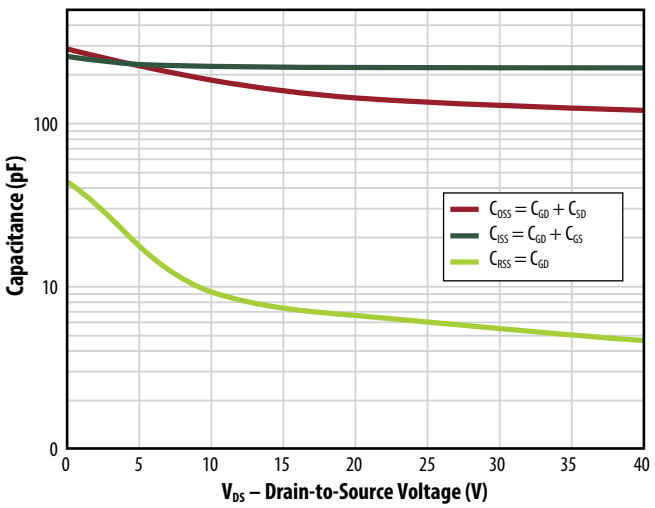


Figure 6: Gate Charge

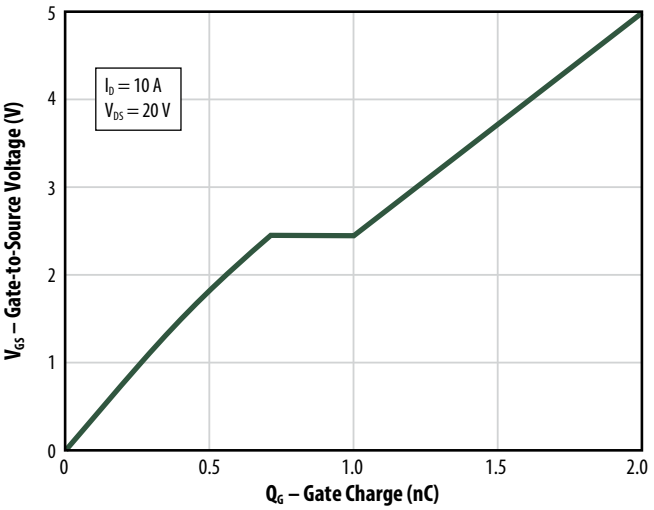


Figure 7: Reverse Drain-Source Characteristics

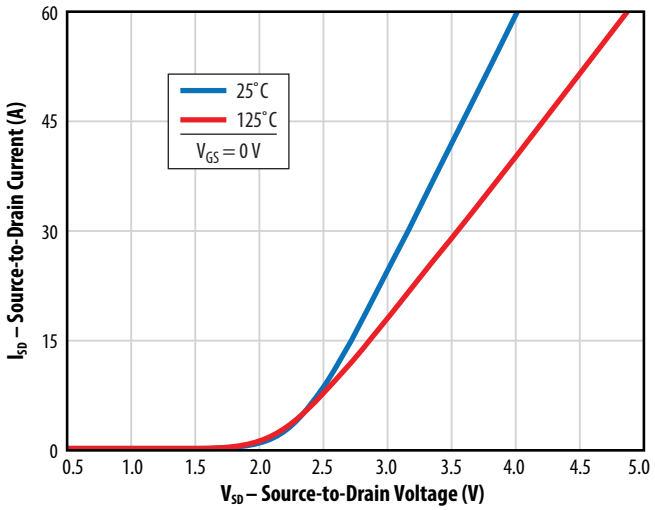


Figure 8: Normalized On Resistance vs. Temperature

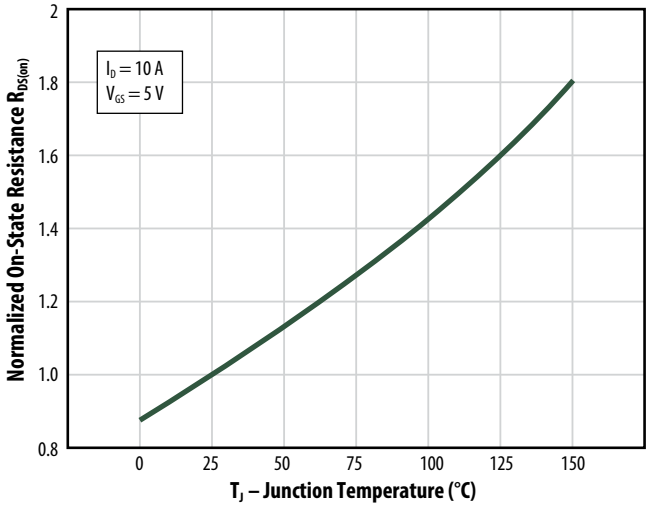
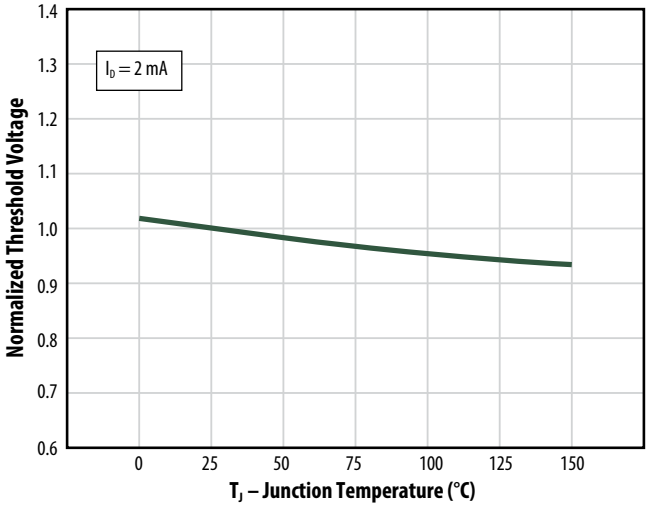


Figure 9: Normalized Threshold Voltage vs. Temperature



All measurements were done with substrate shortened to source.

Figure 10: Gate Current

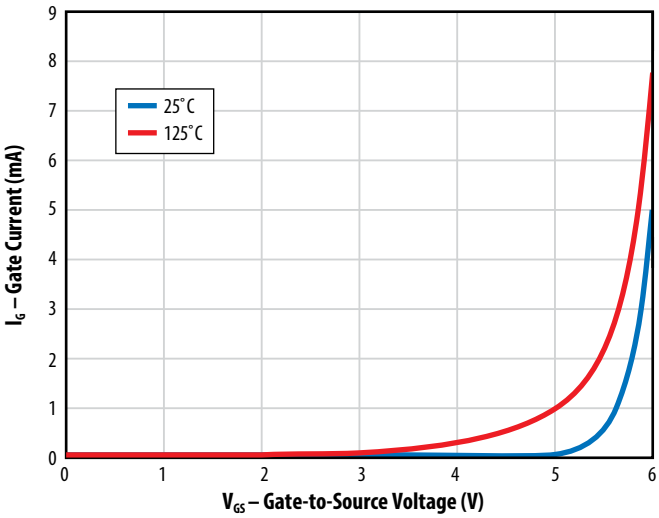
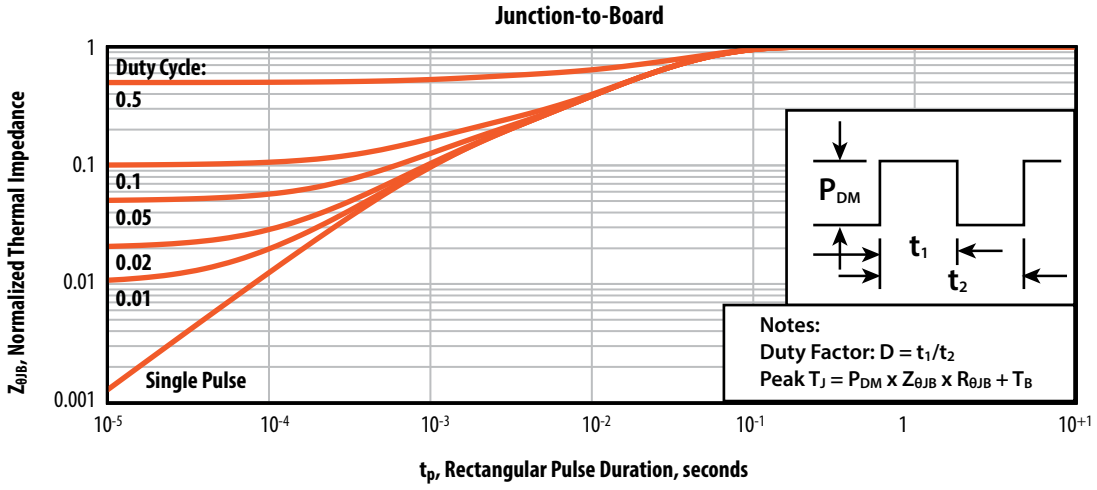


Figure 11: Transient Thermal Response Curves



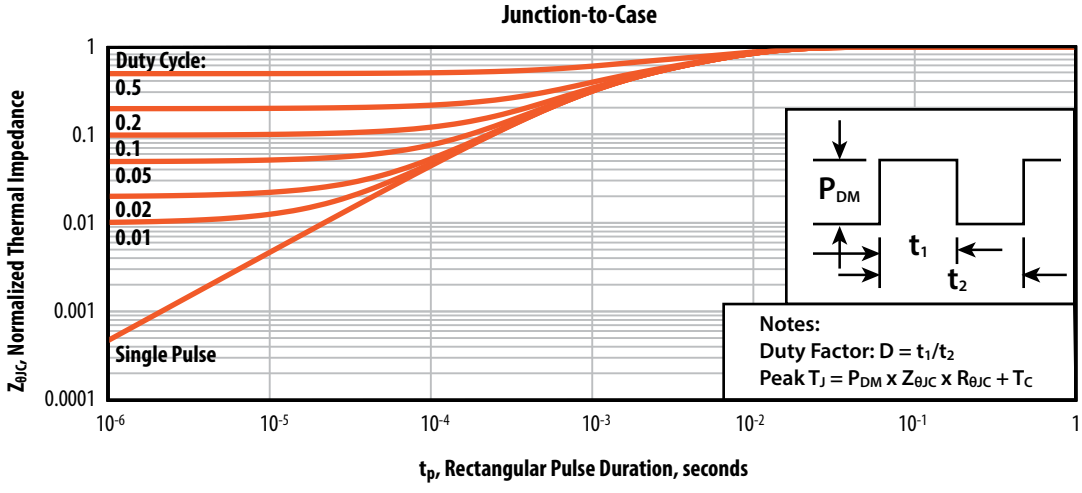
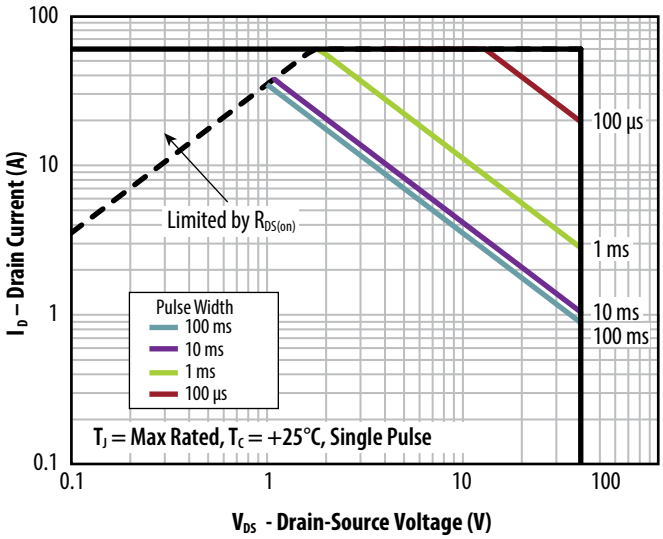
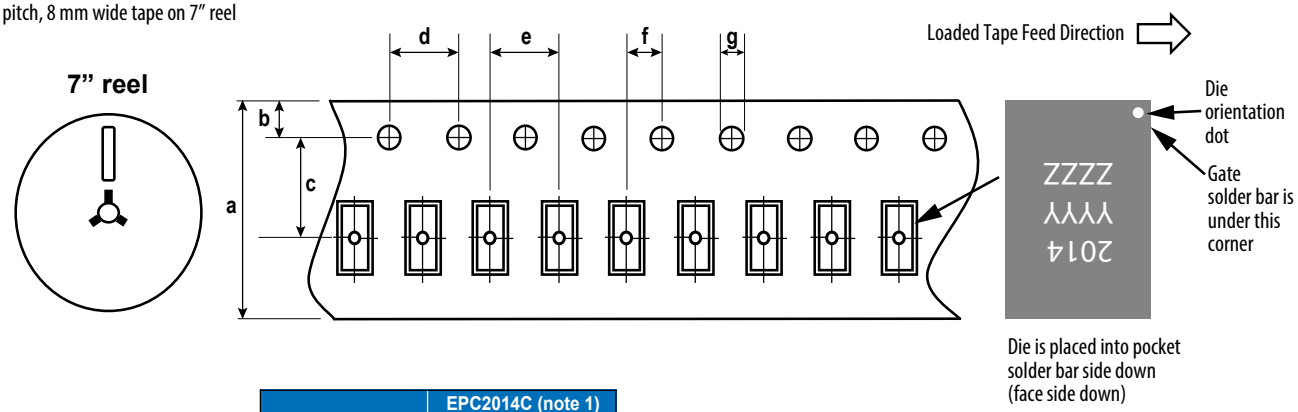


Figure 12: Safe Operating Area



TAPE AND REEL CONFIGURATION

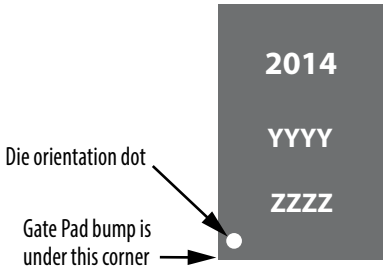
4 mm pitch, 8 mm wide tape on 7" reel



	EPC2014C (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.

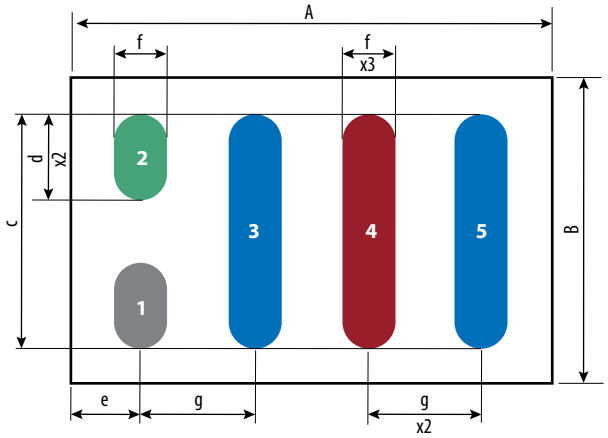
DIE MARKINGS



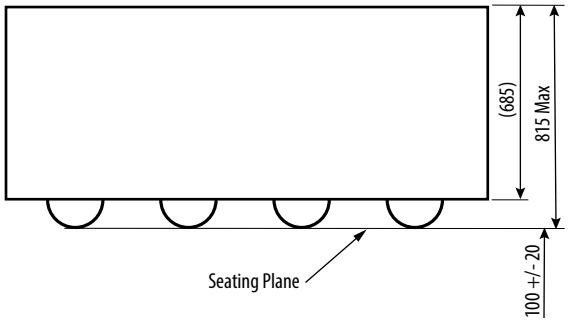
Part Number	Laser Markings		
	Part # Marking Line 1	Lot_Date Code Marking line 2	Lot_Date Code Marking Line 3
EPC2014C	2014	YYYY	ZZZZ

DIE OUTLINE

Solder Bar View



Side View



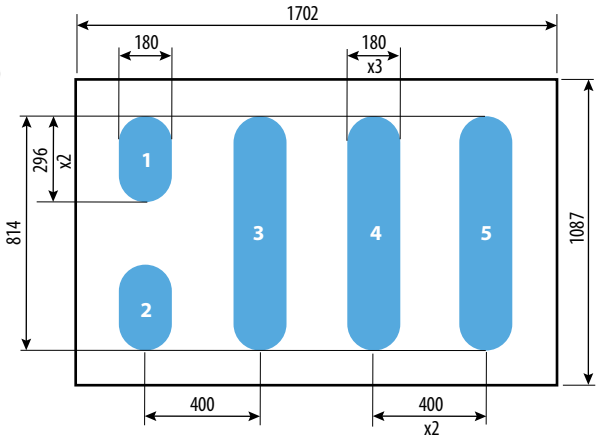
DIM	MICROMETERS		
	MIN	Nominal	MAX
A	1672	1702	1732
B	1057	1087	1117
c	829	834	839
d	311	316	321
e	235	250	265
f	195	200	205
g	400	400	400

Pad no. 1 is Gate;
Pad no. 2 is Substrate;*
Pads no. 3 and 5 are Drain;
Pad no. 4 is Source

*Substrate pin should be connected to Source

RECOMMENDED LAND PATTERN

(measurements in µm)



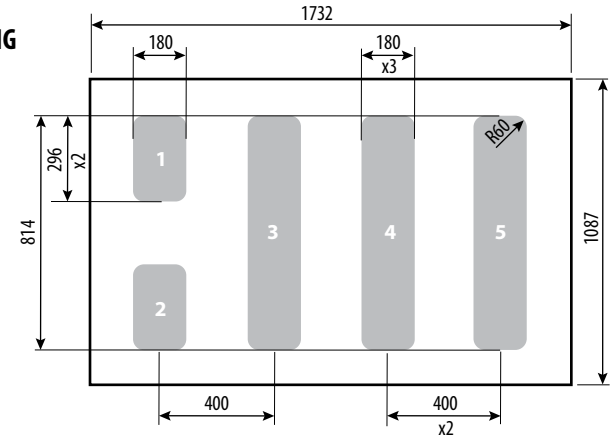
The land pattern is solder mask defined
Solder mask is 10 µm smaller per side than bump

Pad no. 1 is Gate;
Pad no. 2 is Substrate;*
Pads no. 3 and 5 are 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