

Dynamic Characteristics ($T_J = 25^\circ\text{C}$ unless otherwise stated)

PARAMETER		TEST CONDITIONS	MIN	TYP	MAX	UNIT
C_{ISS}	Input Capacitance	$V_{GS} = 0\text{ V}, V_{DS} = 50\text{ V}$		770	900	pF
C_{OSS}	Output Capacitance			430	650	
C_{RSS}	Reverse Transfer Capacitance			10	15	
R_G	Gate Resistance			0.3		Ω
Q_G	Total Gate Charge	$V_{DS} = 50\text{ V}, V_{GS} = 5\text{ V}, I_D = 25\text{ A}$		7.5	9	nC
Q_{GS}	Gate-to-Source Charge	$V_{DS} = 50\text{ V}, I_D = 25\text{ A}$		2.4		
Q_{GD}	Gate-to-Drain Charge			1.2	2	
$Q_{G(TH)}$	Gate Charge at Threshold			1.6		
Q_{OSS}	Output Charge	$V_{GS} = 0\text{ V}, V_{DS} = 50\text{ V}$		31	45	
Q_{RR}	Source-Drain Recovery Charge			0		

All measurements were done with substrate shorted to source.

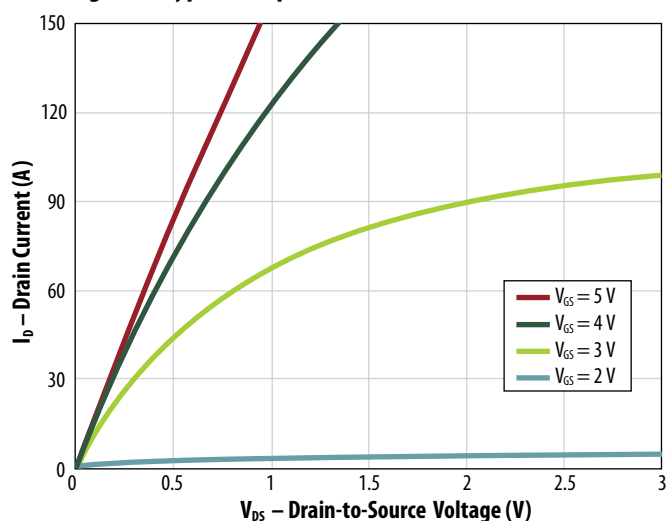
Figure 1: Typical Output Characteristics at 25°C 

Figure 2: Transfer Characteristics

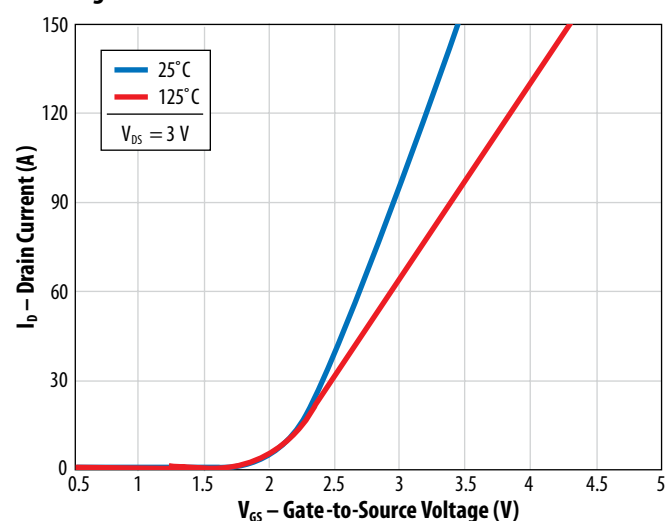
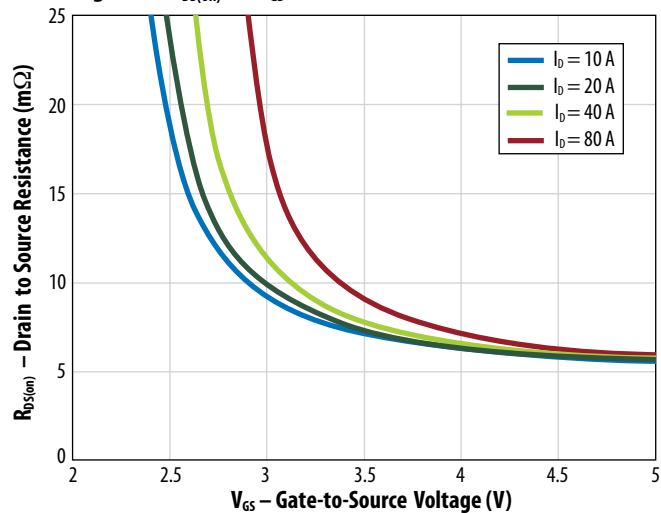
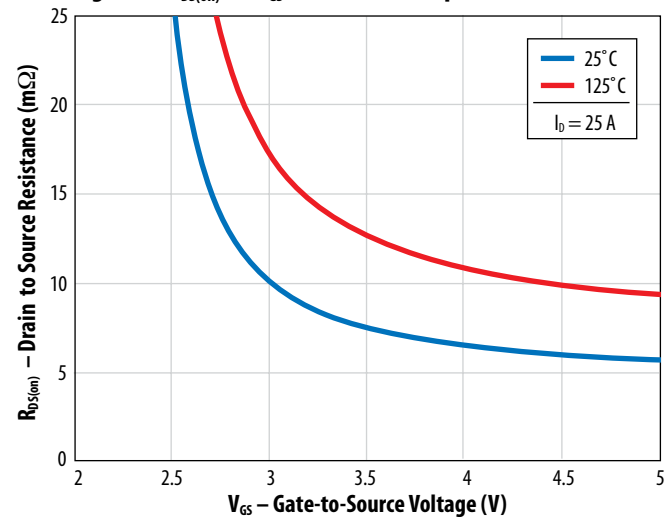
Figure 3: $R_{DS(on)}$ vs. V_{GS} for Various CurrentsFigure 4: $R_{DS(on)}$ vs. V_{GS} for Various Temperatures

Figure 5a: Capacitance (Linear Scale)

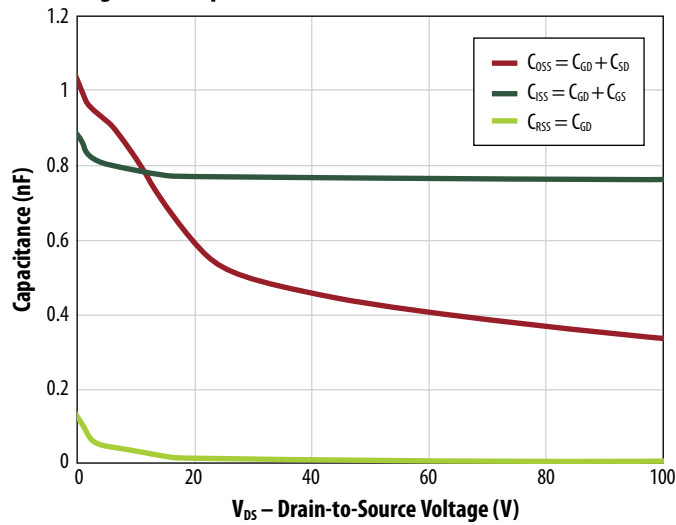


Figure 5b: Capacitance (Log Scale)

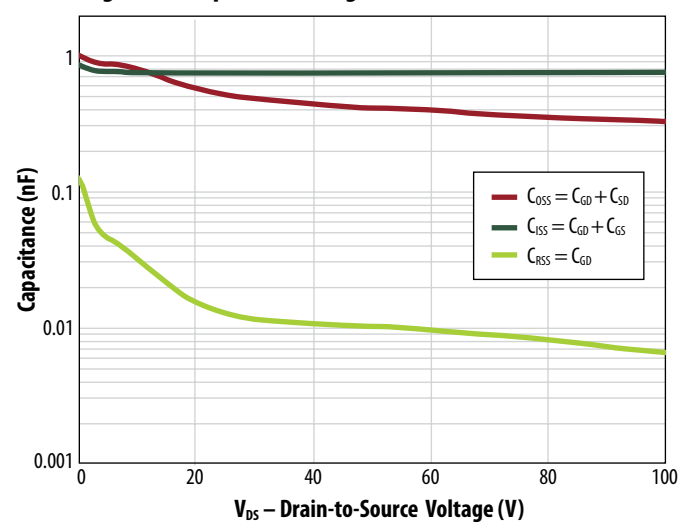


Figure 6: Gate Charge

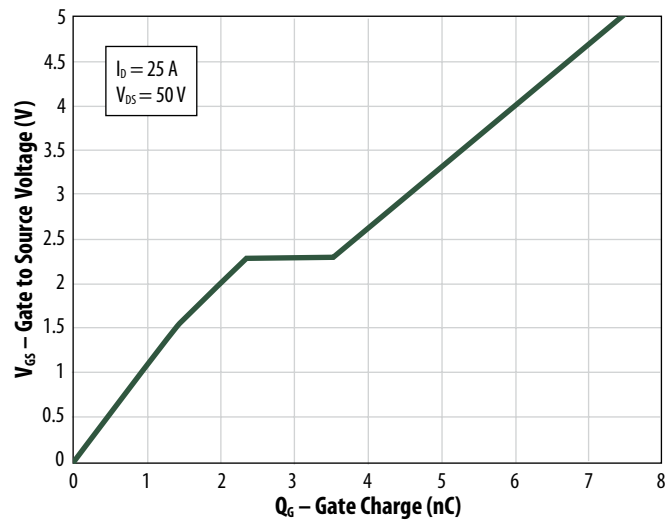


Figure 7: Reverse Drain-Source Characteristics

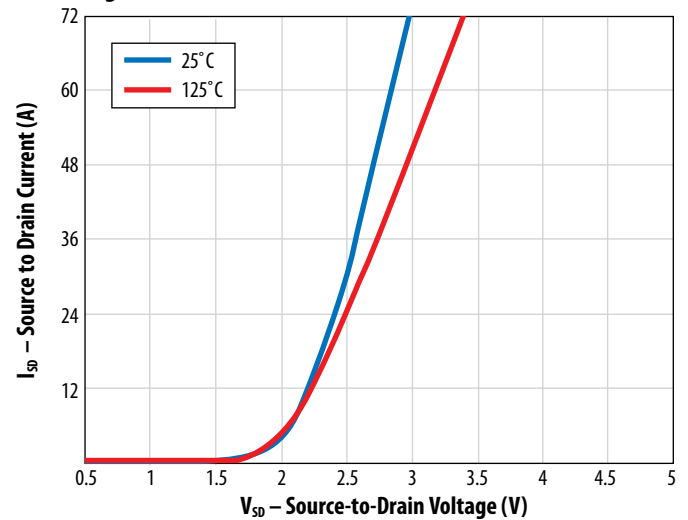


Figure 8: Normalized On Resistance vs. Temperature

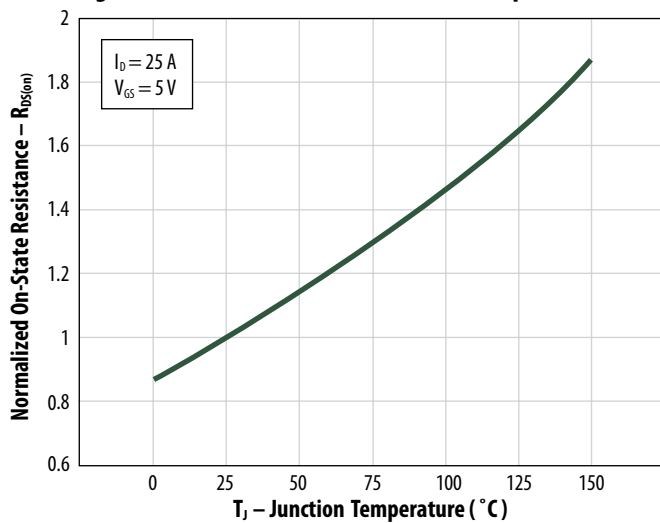
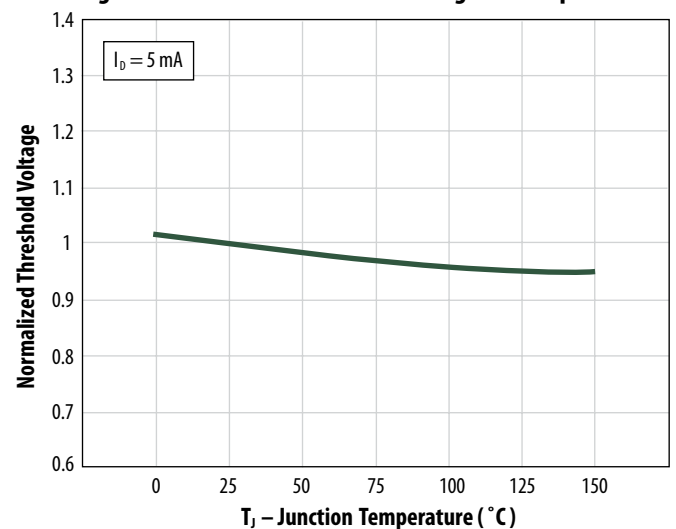


Figure 9: Normalized Threshold Voltage vs. Temperature



All measurements were done with substrate shorted to source.

Figure 10: Gate Current

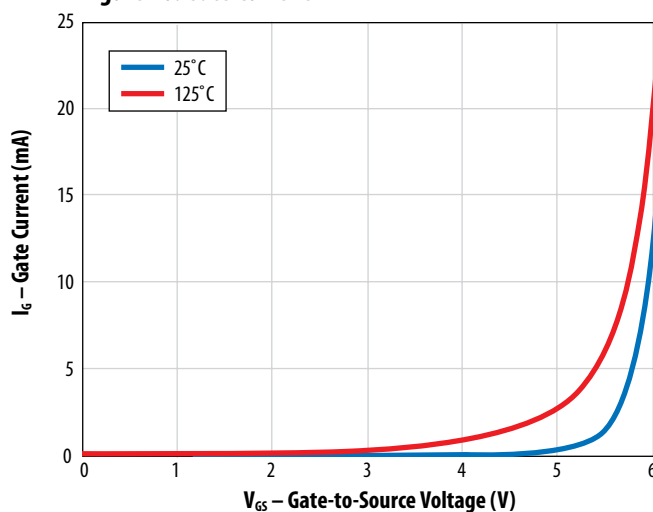


Figure 11: Transient Thermal Response Curves

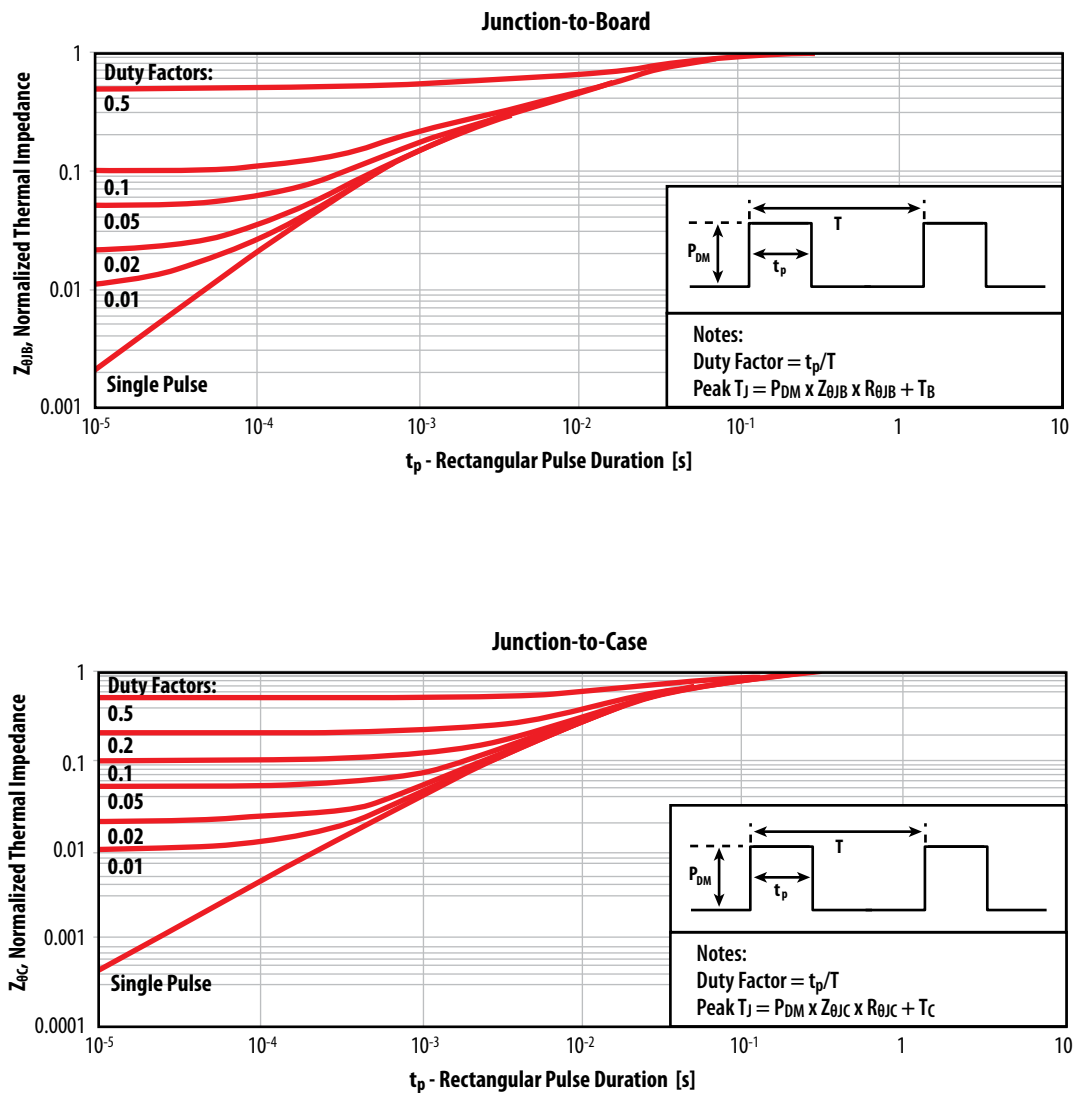
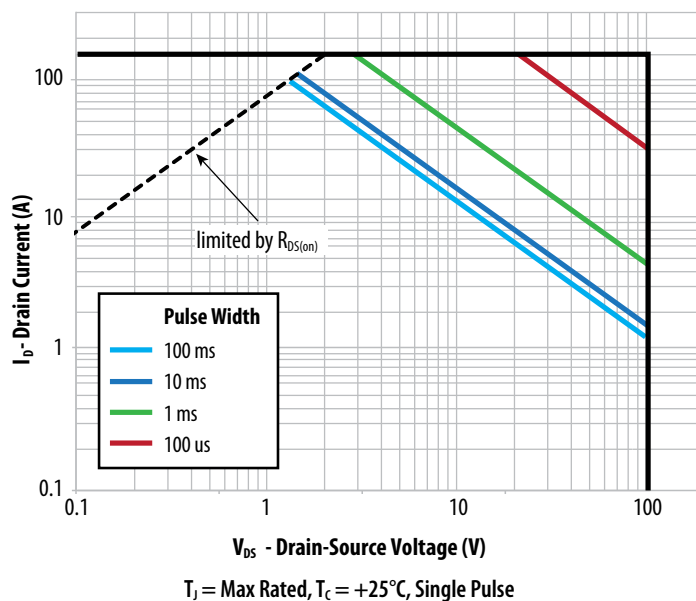
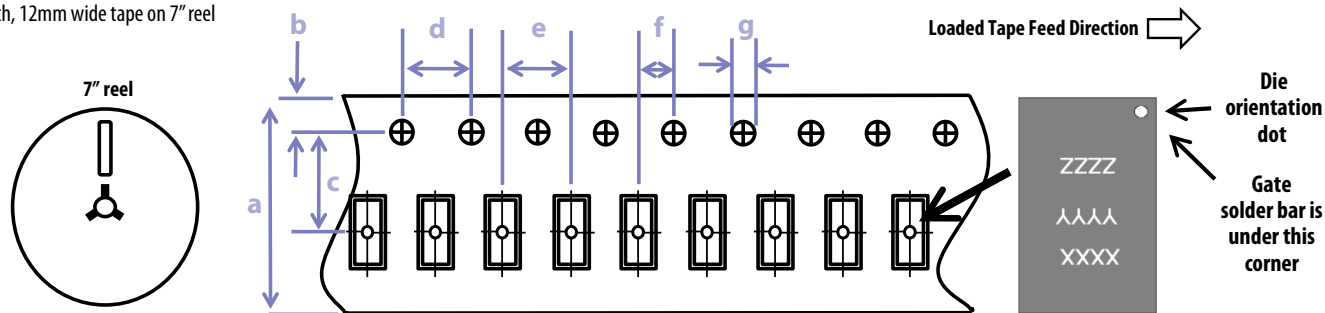


Figure 12: Safe Operating Area



TAPE AND REEL CONFIGURATION

4mm pitch, 12mm wide tape on 7" reel

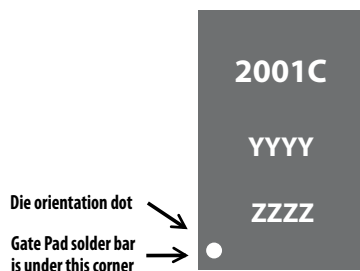


	EPC2001C (note 1)		
Dimension (mm)	target	min	max
a	12.0	11.7	12.3
b	1.75	1.65	1.85
c (note 2)	5.50	5.45	5.55
d	4.00	3.90	4.10
e	4.00	3.90	4.10
f (note 2)	2.00	1.95	2.05
g	1.5	1.5	1.6

Note 1: MSL1 (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.

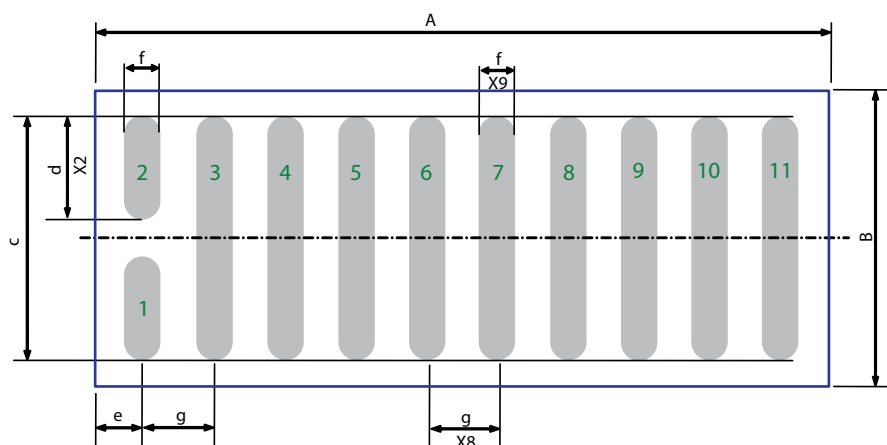
DIE MARKINGS



Part Number	Laser Markings		
	Part # Marking Line 1	Lot _Date Code Marking line 2	Lot _Date Code Marking Line 3
EPC2001C	2001	YYYY	ZZZZ

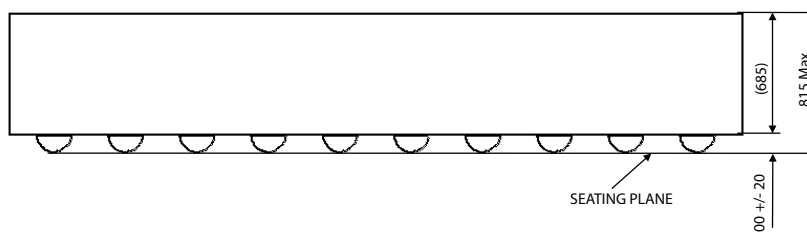
DIE OUTLINE

Solder Bar View

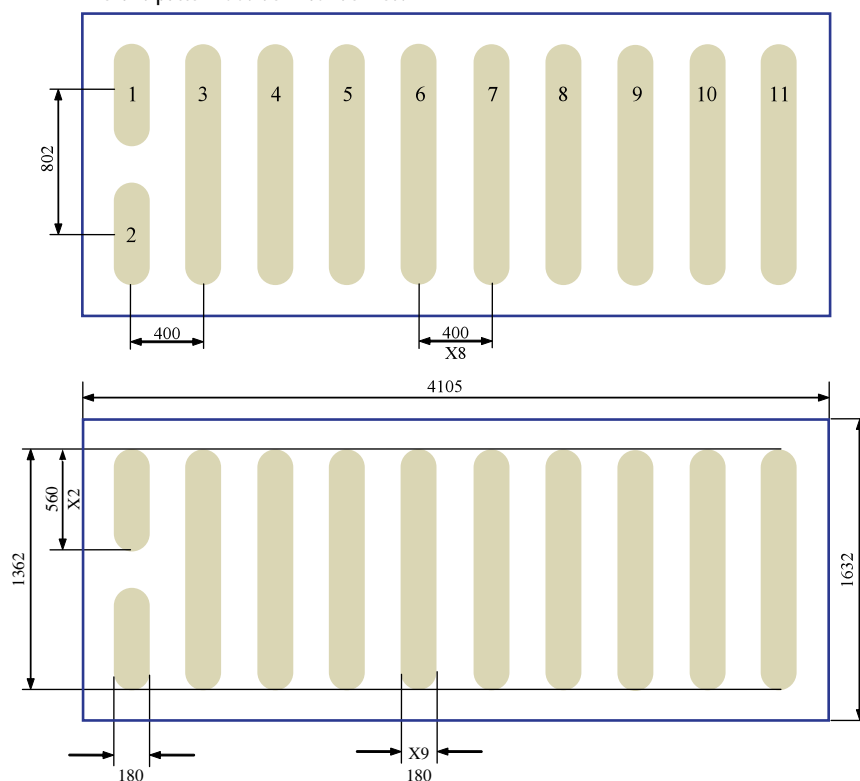


DIM	MICROMETERS		
	MIN	Nominal	MAX
A	4075	4105	4135
B	1602	1632	1662
c	1379	1382	1385
d	577	580	583
e	235	250	265
f	195	200	205
g	400	400	400

Side View

**RECOMMENDED
LAND PATTERN**(units in μm)

The land pattern is solder mask defined.



Pad no. 1 is Gate;

Pads no. 3, 5, 7, 9, 11 are Drain;

Pads no. 4, 6, 8, 10 are Source;

Pad no. 2 is Substrate.

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U.S. Patents 8,350,294; 8,404,508; 8,431,960; 8,436,398

Information subject to
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