

Dual N-channel Power MOSFET: 12V, 1.3mohm, 37.3A

Product Summary

VSSS	VGSS	RSS(ON) TYP/MAX	IS MAX
12V	± 8V	1.00/1.30 mΩ@VGS=4.5V 1.10/1.45 mΩ@VGS=3.8V 1.25/2.00 mΩ@VGS=3.1V 1.60/3.20 mΩ@VGS=2.5V	37.3A

Marking Symbol Code

❖ Laser Marking Device Code: IG



GS : Gostone
IG : Marking Device Code
D : Factory Code
Y : Year Code
W : Week Code
L : LOT Code
O: Pin#1 Identifier

Form

❖ Tape & Reel Embossed Type: 5,000pcs / reel

Absolute Maximum Rating (Ta=25°C)

Parameter	Symbol	Rating	Unit
Source to Source Voltage	VSS	12	V
Gate to Source Voltage	VGS	±8	V
Source Current	DC	IS1 *1	18.7 A
	DC	IS2 *2	37.3 A
	Pulse	ISP *2*3	149 A
Total Dissipation	DC	PD1 *1	0.48 W
	DC	PD2 *2	1.92 W
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55 to +150	°C

Thermal Characteristic (Ta=25°C)

Parameter	Symbol	Rating	Unit
Thermal Resistance	Rth *1	260	°C/W
	Rth *2	65	°C/W

Note *1 Mounted on FR4 board (25.4mm x 25.4mm x t1.0mm)

with minimum copper pad (50.6mm², 36μm thickness copper)

Note *2 Mounted on FR4 board (25.4mm x 25.4mm x t1.0mm)

with maximum copper pad (618.4mm², 36μm thickness copper)

Note *3 t=10μs, duty cycle ≤ 1%

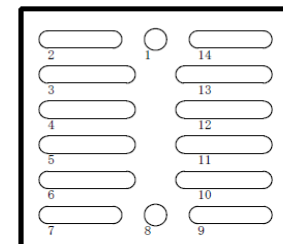
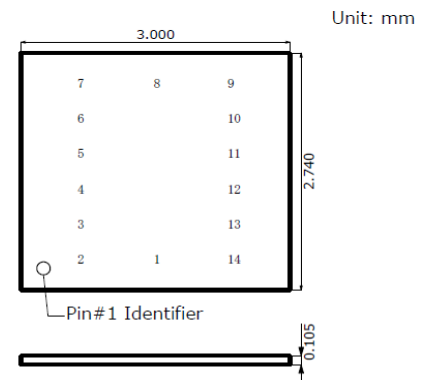
Features

- ❖ CSP (Chip Size Package)
- ❖ Halogen-Free / RoHS Compliant
- ❖ 2.5V Drive Low Source-Source On-State Resistance
- ❖ Gate Resistor Installed Common-Drain Type MOSFET
- ❖ ESD Protection Diode Installed (Gate-Source)

Application

- ❖ Lithium-Ion Secondary Battery Protection Circuits

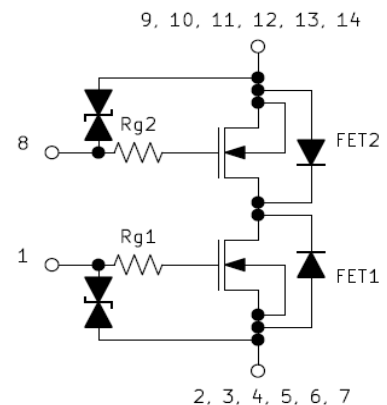
Pin Assignment

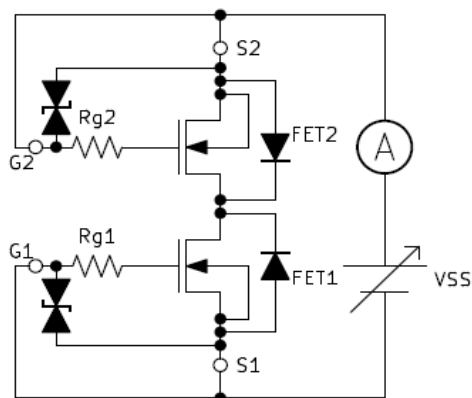
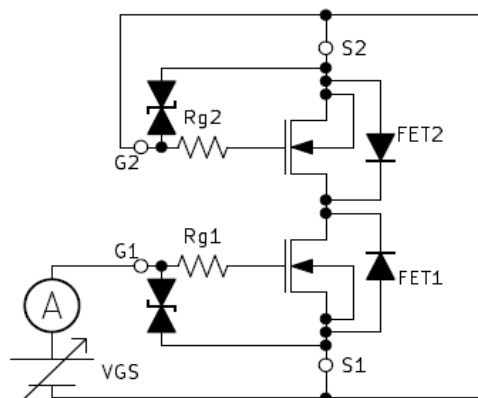
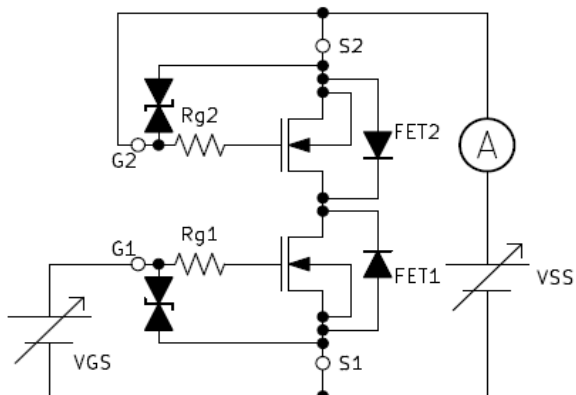
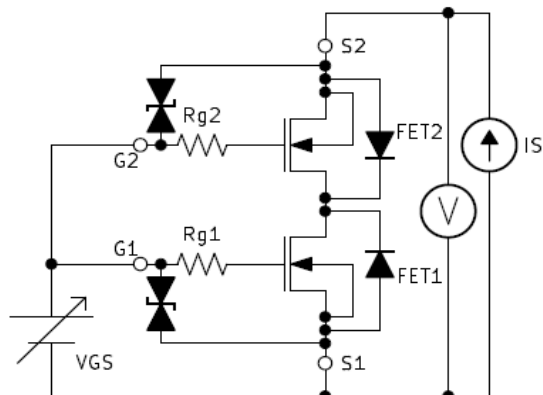
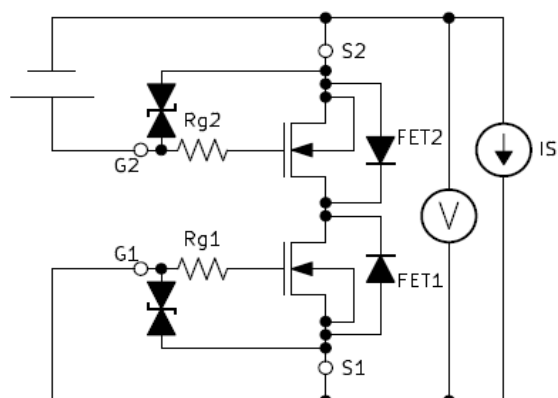


FET1: 2,3,4,5,6,7: Source1, 1: Gate1

FET2: 9,10,11,12,13,14: Source2, 8: Gate2

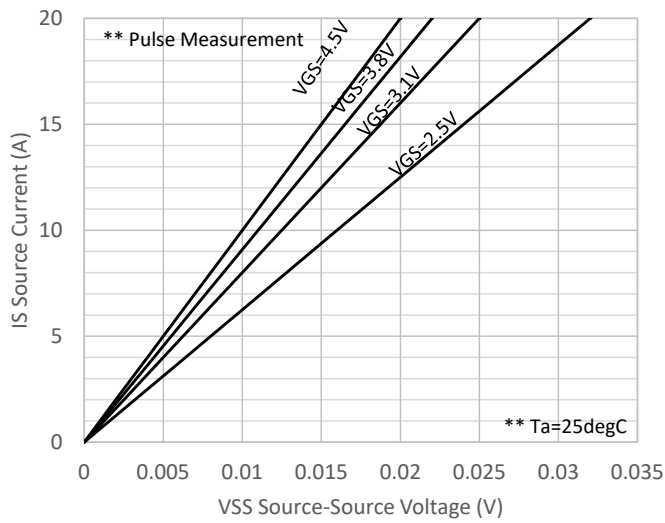
Equivalent circuit



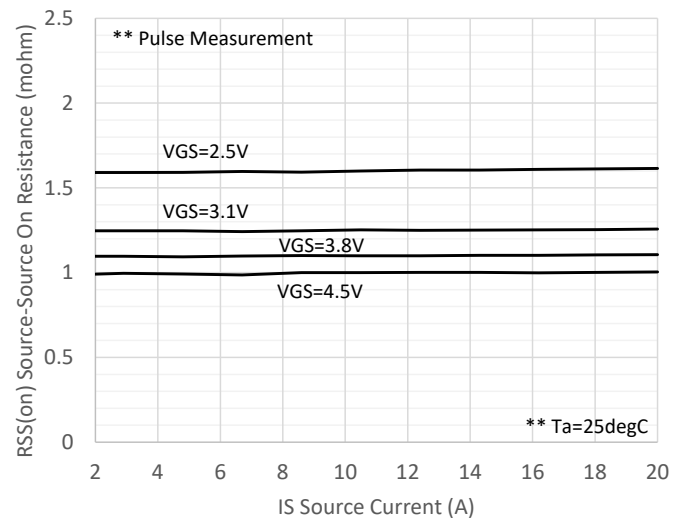
Test Circuit for FET1
**Test Circuit 1
VGSS/ISS**

**Test Circuit 2
IGSS/1/2**

**Test Circuit 3
Vth**

**Test Circuit 4
RSS(on)**

**Test Circuit 5
VF(S-S)**




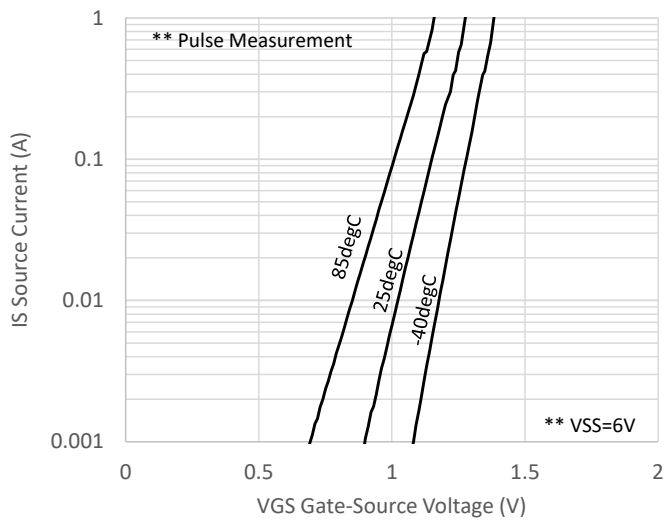
IS to VSS



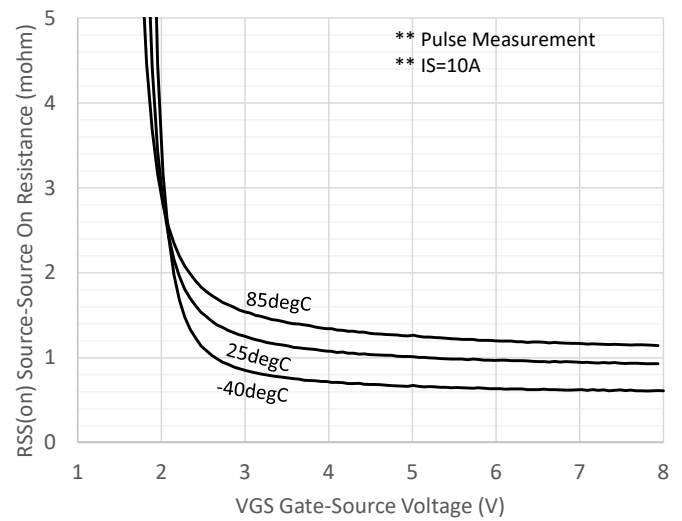
RSS(on) to IS



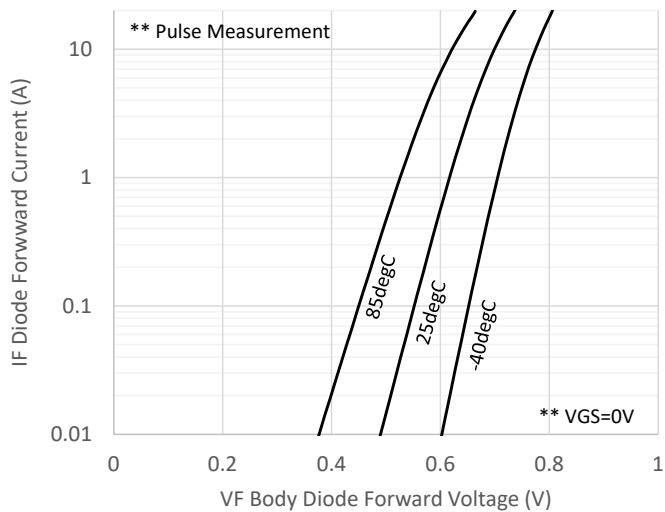
IS to VGS



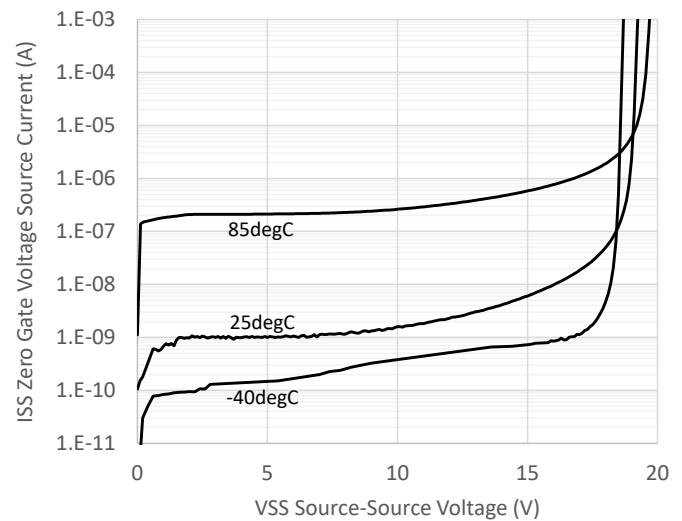
RSS(on) to VGS

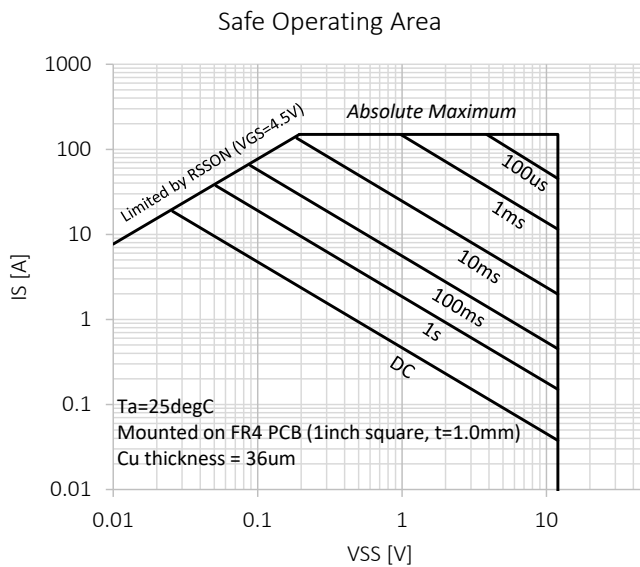
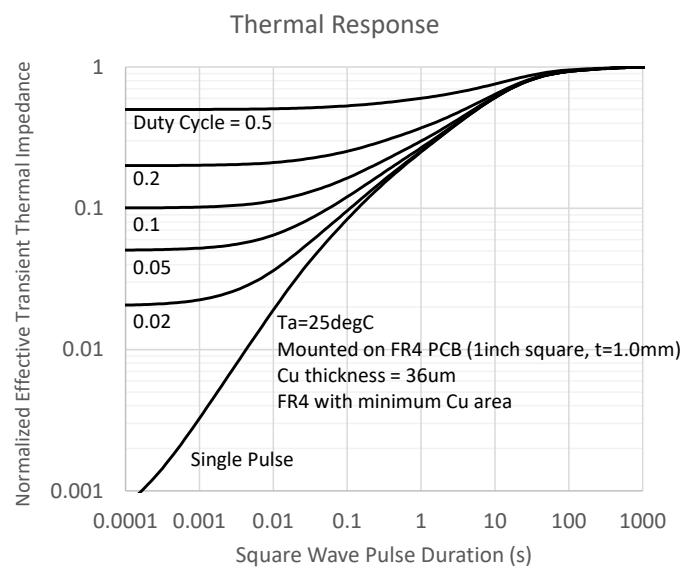
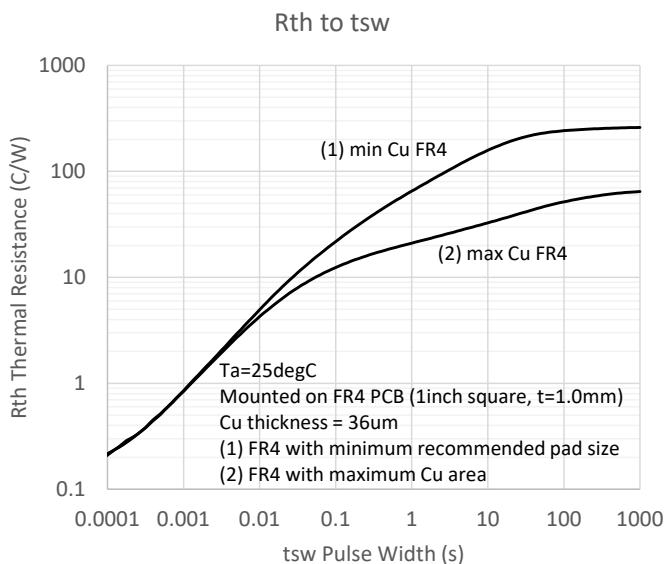
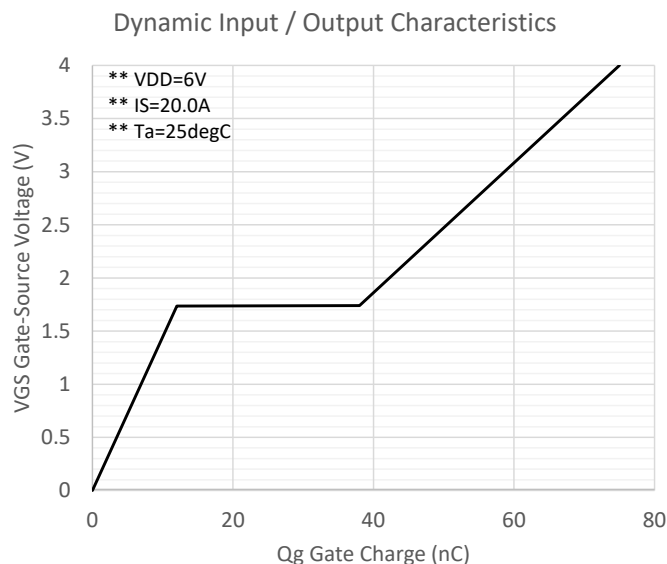
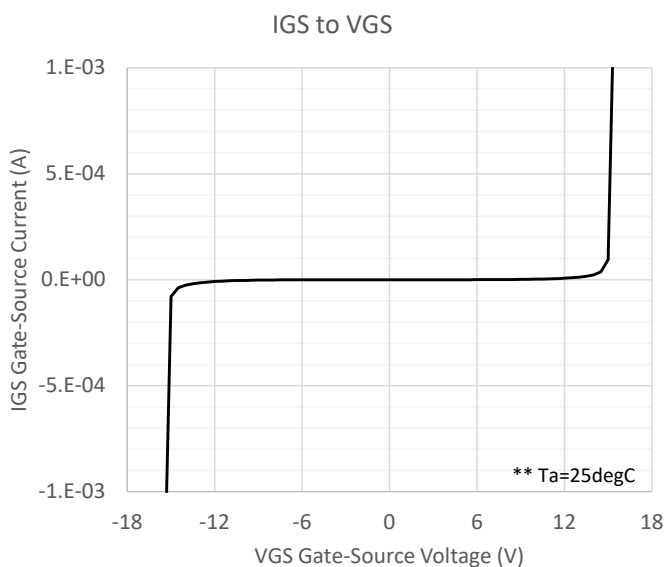
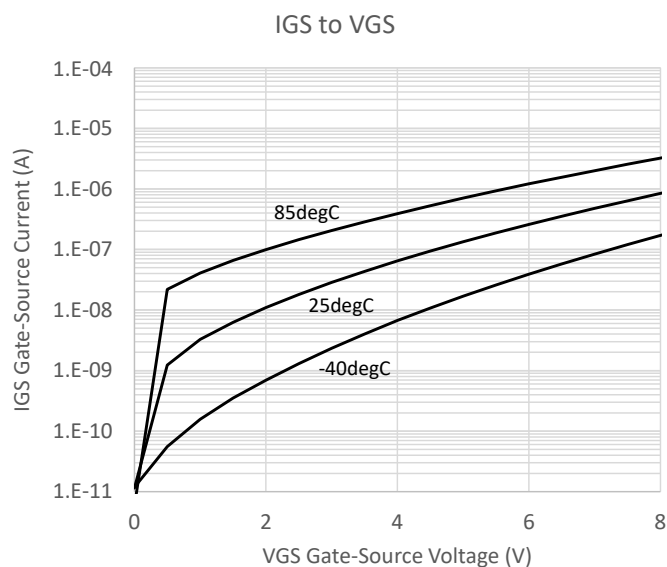


IF to VF



ISS to VSS

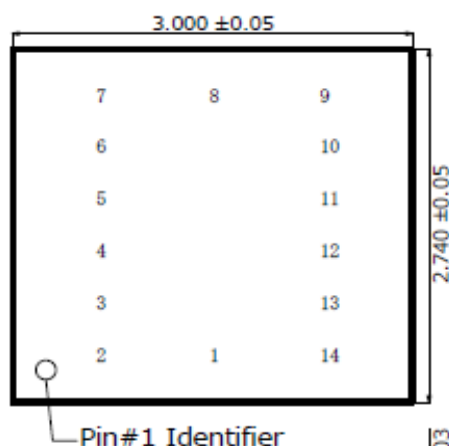




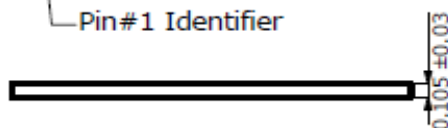
Package outline dimensions

Unit: mm

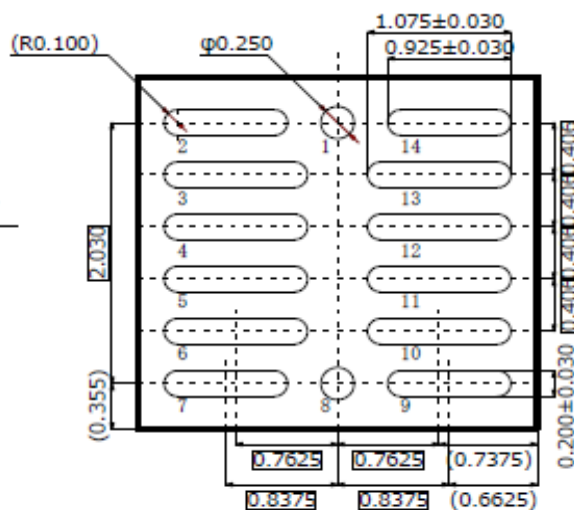
Top View



Front View



Bottom View

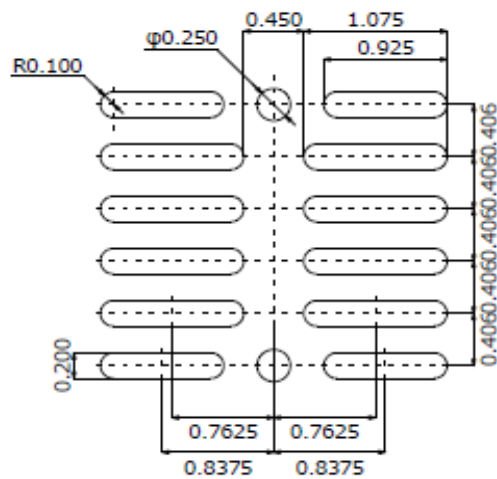
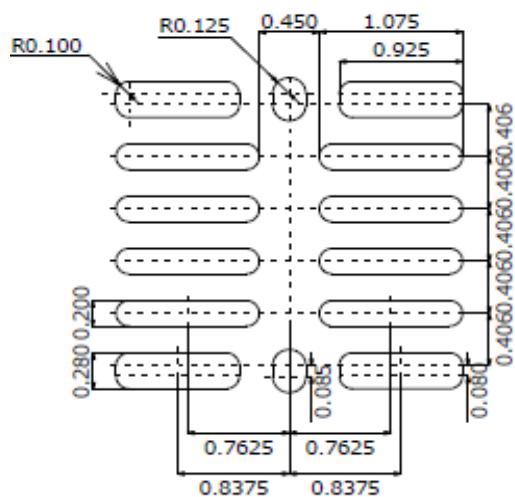


(Reference) Board Land Pattern

Unit: mm

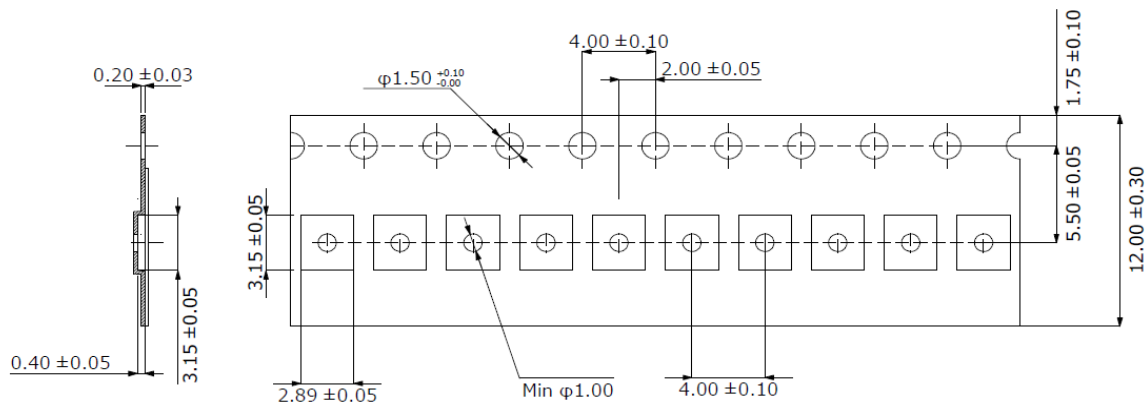
(Reference) Stencil Mask Pattern

Unit: mm

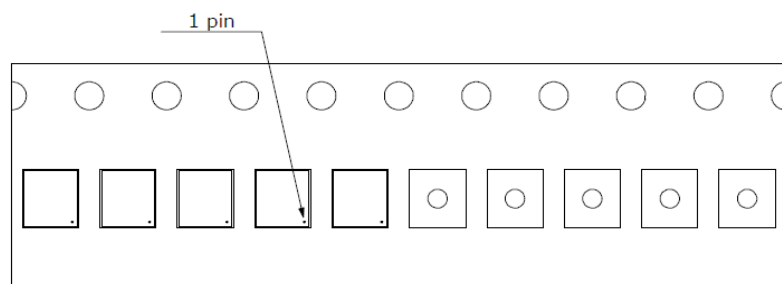


Form

Tape & Reel Embossed Type: 8,000pcs / reel
 Factory PKG Code: WLCSP3.00x2.74_14
 Tape Width: 12mm, Pitch: 4mm, Reel Size:
 7inch



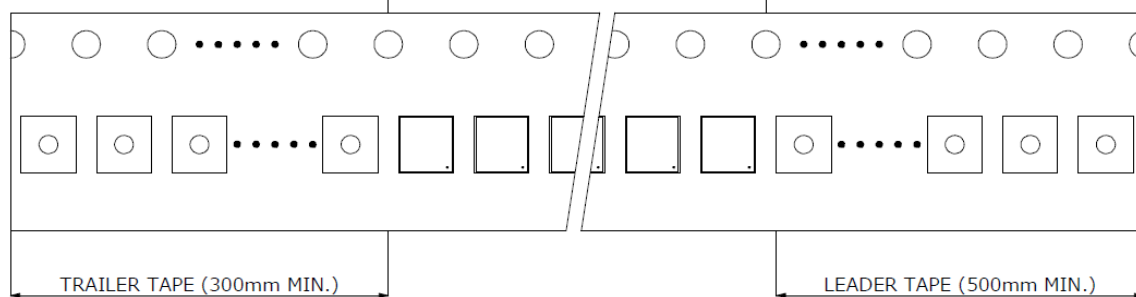
1pin Direction



Tape end

COMPONENTS TAPE (ORIENTATION IN POCKET)

Leader part



Feeding Direction

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