

P-Channel Silicon MOSFET

SCH1334 — General-Purpose Switching Device Applications

Features

- Low ON-resistance
- High-speed switching
- 1.8V drive
- Halogen free compliance
- Protection diode in

Specifications

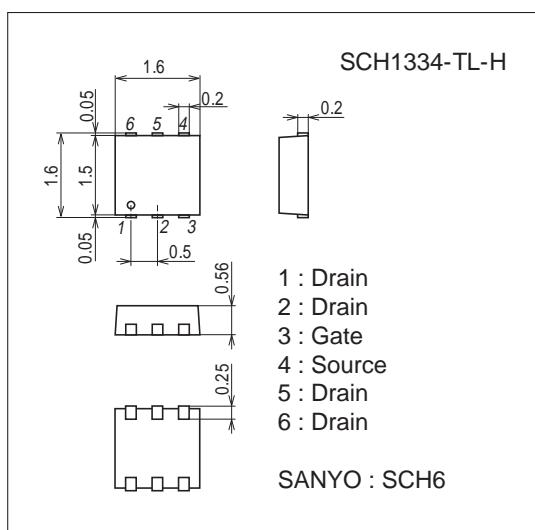
Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		-12	V
Gate-to-Source Voltage	V_{GSS}		± 10	V
Drain Current (DC)	I_D		-1.6	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu s$, duty cycle $\leq 1\%$	-6.4	A
Allowable Power Dissipation	P_D	When mounted on ceramic substrate (900mm ² x 0.8mm)	0.8	W
Channel Temperature	T_{ch}		150	°C
Storage Temperature	T_{stg}		-55 to +150	°C

Package Dimensions

unit : mm (typ)

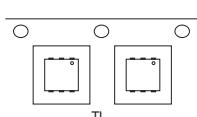
7028-002



Product & Package Information

- Package : SCH6
- JEITA, JEDEC : SOT-563
- Minimum Packing Quantity : 5,000 pcs/reel

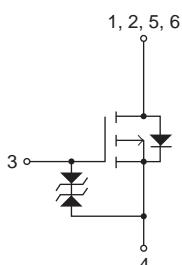
Packing Type : TL



Marking



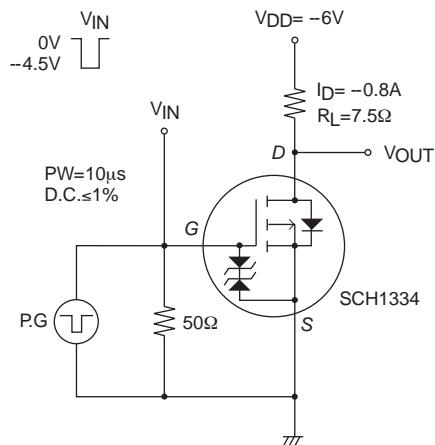
Electrical Connection



Electrical Characteristics at $T_a=25^\circ\text{C}$

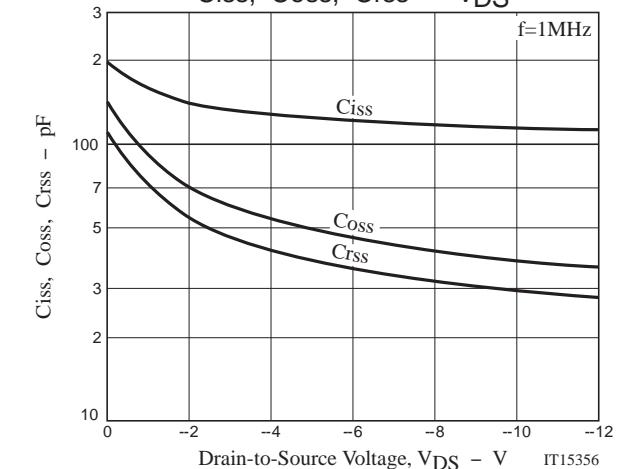
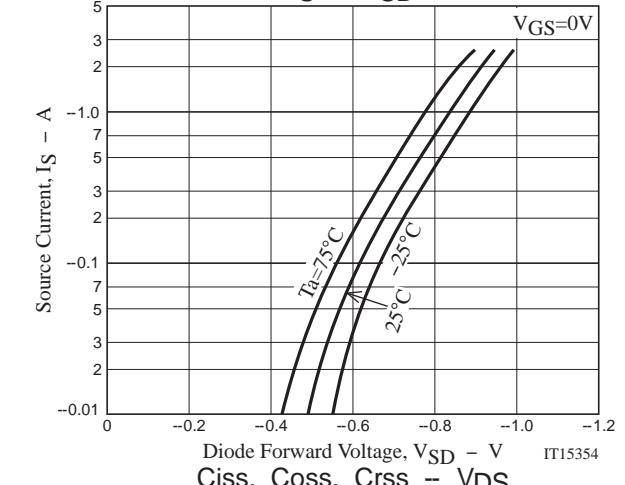
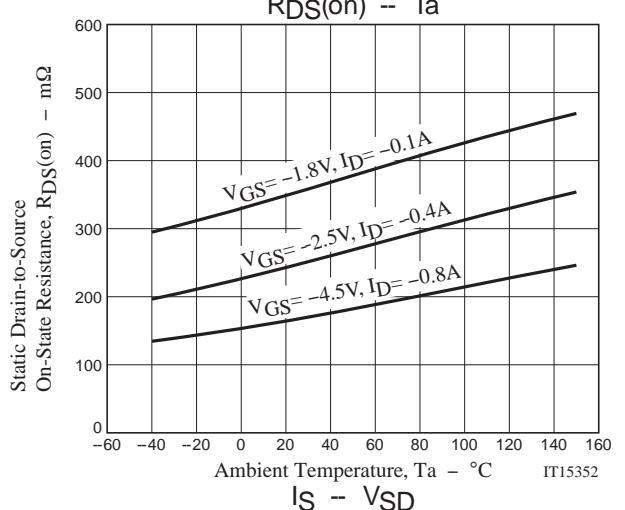
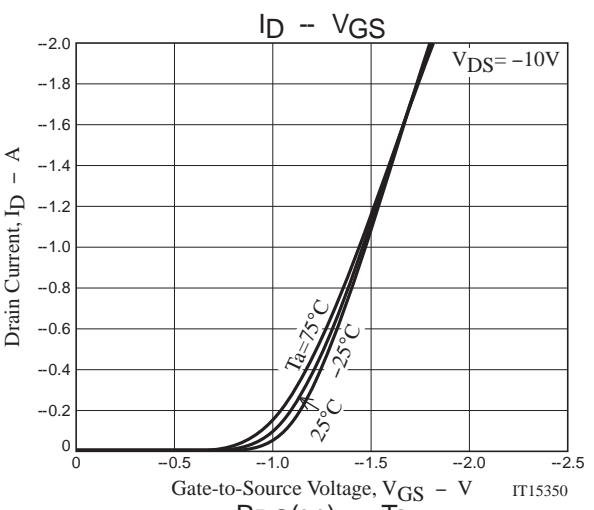
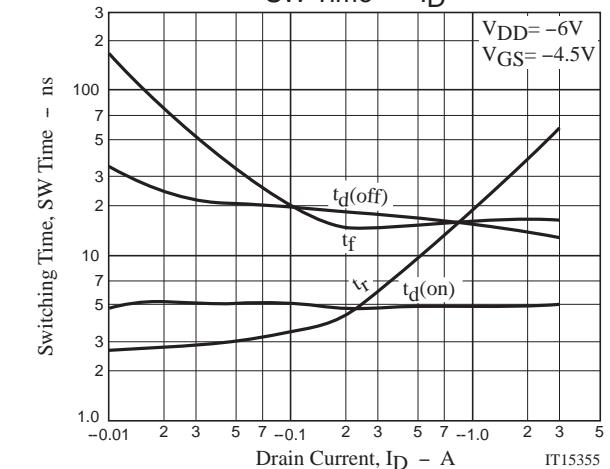
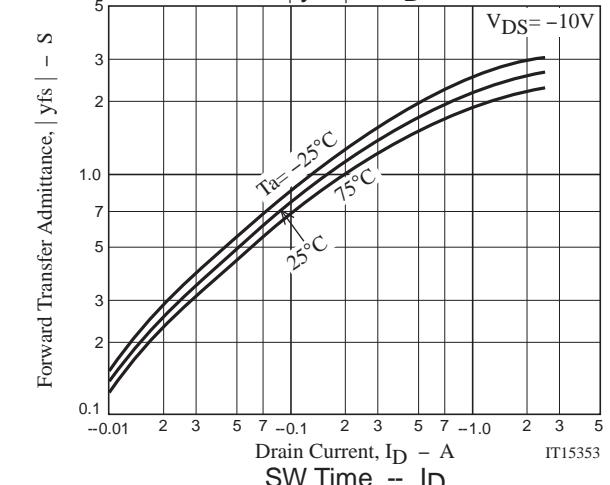
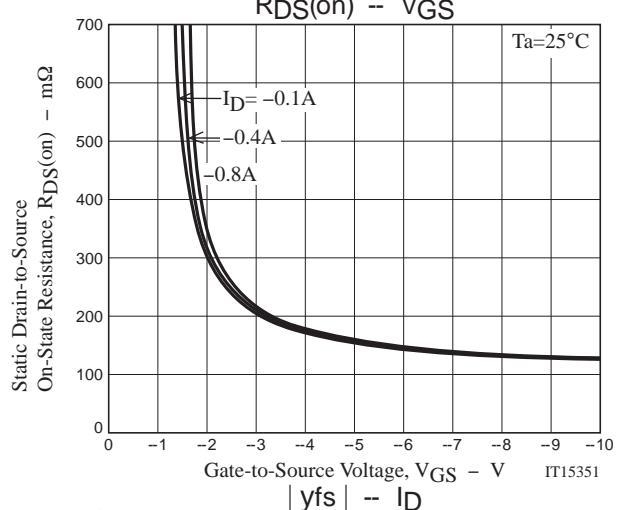
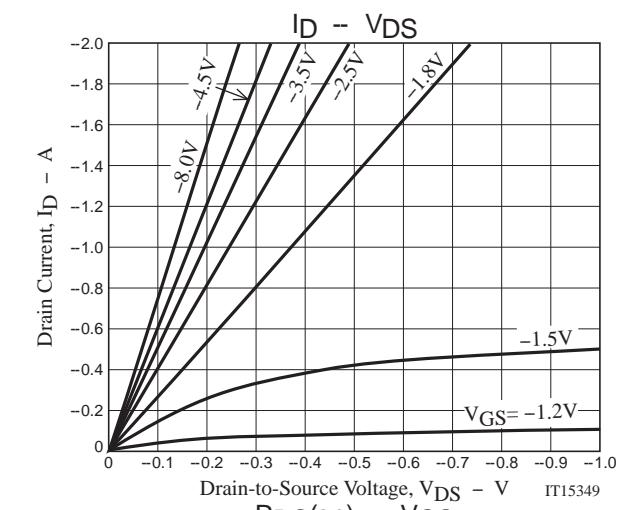
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V(\text{BR})_{\text{DSS}}$	$I_D=-1\text{mA}, V_{GS}=0\text{V}$	-12			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-12\text{V}, V_{GS}=0\text{V}$			-10	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 8\text{V}, V_{DS}=0\text{V}$			± 10	μA
Cutoff Voltage	$V_{GS(\text{off})}$	$V_{DS}=-6\text{V}, I_D=-1\text{mA}$	-0.4		-1.3	V
Forward Transfer Admittance	$ y_{\text{fs}} $	$V_{DS}=-6\text{V}, I_D=-0.8\text{A}$	1.2	2.1		S
Static Drain-to-Source On-State Resistance	$R_{DS(\text{on})1}$	$I_D=-0.8\text{A}, V_{GS}=-4.5\text{V}$		165	215	$\text{m}\Omega$
	$R_{DS(\text{on})2}$	$I_D=-0.4\text{A}, V_{GS}=-2.5\text{V}$		245	345	$\text{m}\Omega$
	$R_{DS(\text{on})3}$	$I_D=-0.1\text{A}, V_{GS}=-1.8\text{V}$		370	560	$\text{m}\Omega$
Input Capacitance	C_{iss}	$V_{DS}=-6\text{V}, f=1\text{MHz}$		120		pF
Output Capacitance	C_{oss}			46		pF
Reverse Transfer Capacitance	C_{rss}			36		pF
Turn-ON Delay Time	$t_{\text{d(on)}}$	See specified Test Circuit.		4.9		ns
Rise Time	t_r			17.5		ns
Turn-OFF Delay Time	$t_{\text{d(off)}}$			16.0		ns
Fall Time	t_f			16.5		ns
Total Gate Charge	Q_g	$V_{DS}=-6\text{V}, V_{GS}=-4.5\text{V}, I_D=-1.6\text{A}$		1.6		nC
Gate-to-Source Charge	Q_{gs}			0.27		nC
Gate-to-Drain "Miller" Charge	Q_{gd}			0.43		nC
Diode Forward Voltage	V_{SD}	$I_S=-1.6\text{A}, V_{GS}=0\text{V}$		-0.88	-1.2	V

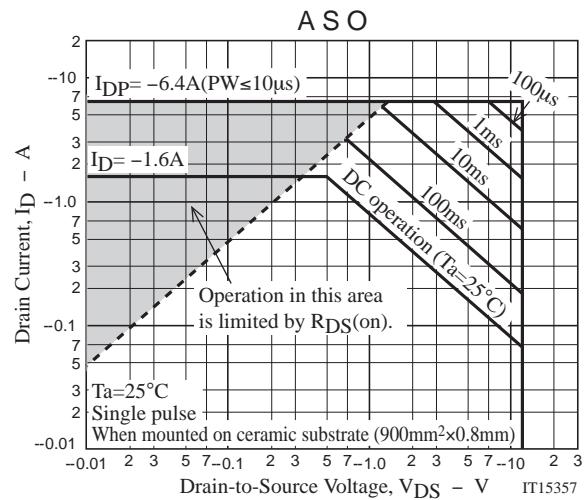
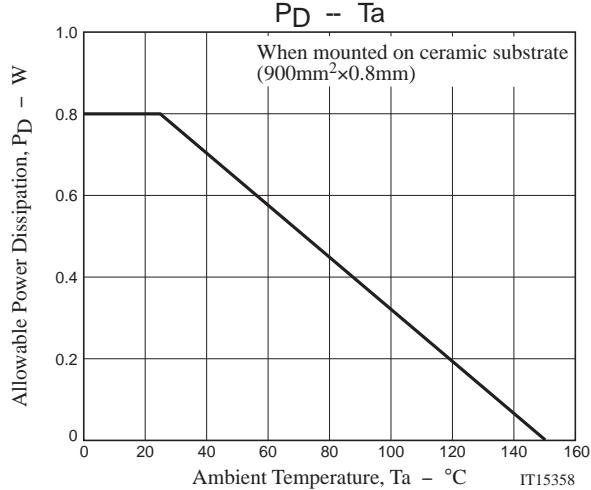
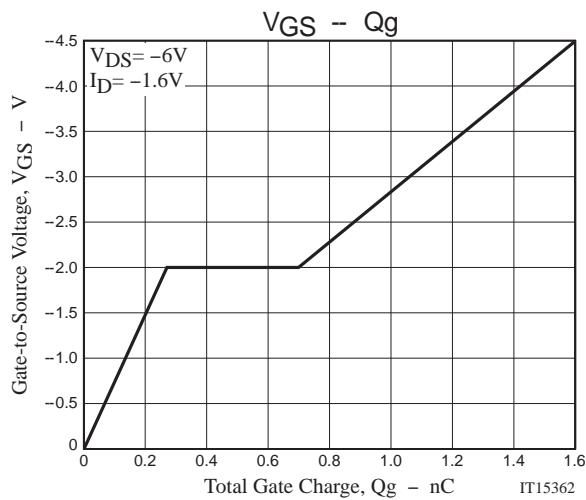
Switching Time Test Circuit



Ordering Information

Device	Package	Shipping	memo
SCH1334-TL-H	SCH6	5,000pcs./reel	Pb Free and Halogen Free



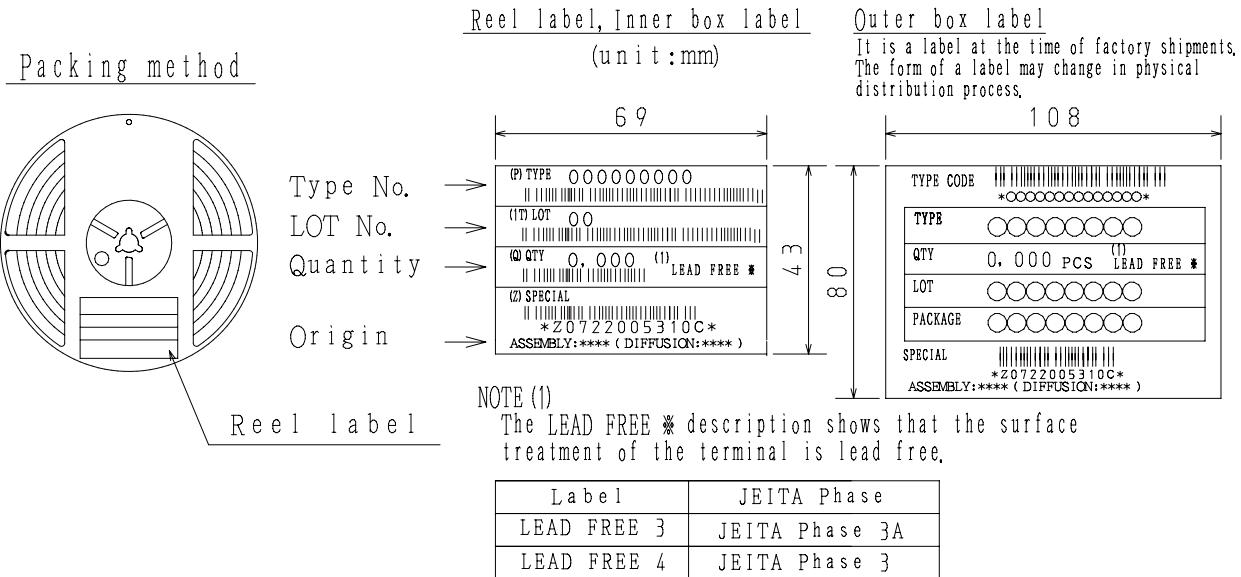
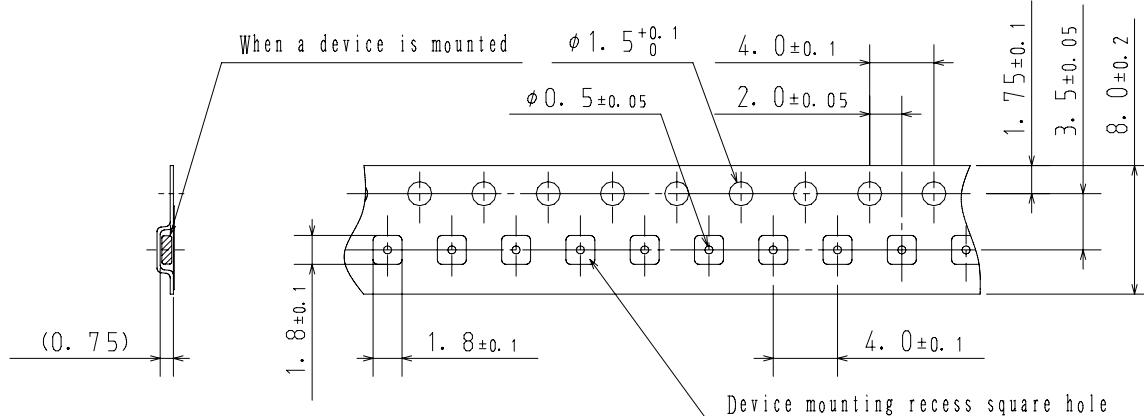
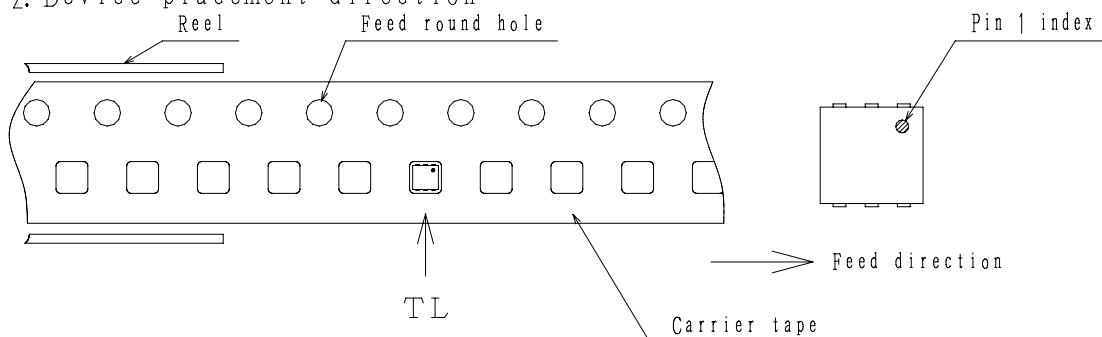


Taping Specification

SCH1334-TL-H

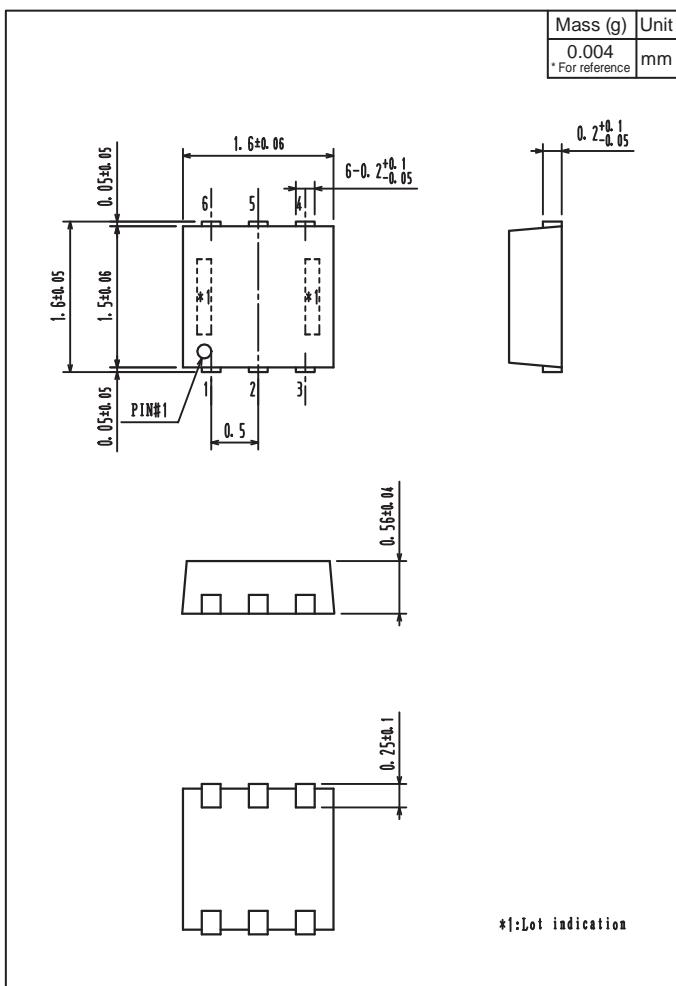
1. Packing Format

Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
SCH6	SCH6	5,000	25,000	150,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

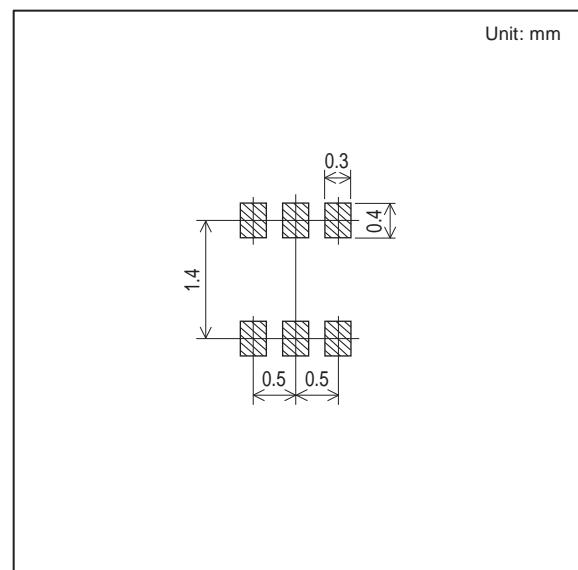
**2. Taping configuration****2-1. Carrier tape size (unit:mm)****2-2. Device placement direction**

Outline Drawing

SCH1334-TL-H



Land Pattern Example



Note on usage : Since the SCH1334 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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