



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

5LP01SS — P-Channel Silicon MOSFET — General-Purpose Switching Device Applications

Features

- Low ON-resistance
- Ultrahigh-speed switching
- 2.5V drive
- Halogen free compliance

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		-50	V
Gate-to-Source Voltage	V _{GSS}		±10	V
Drain Current (DC)	I _D		-0.07	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	-0.28	A
Allowable Power Dissipation	P _D		0.15	W
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

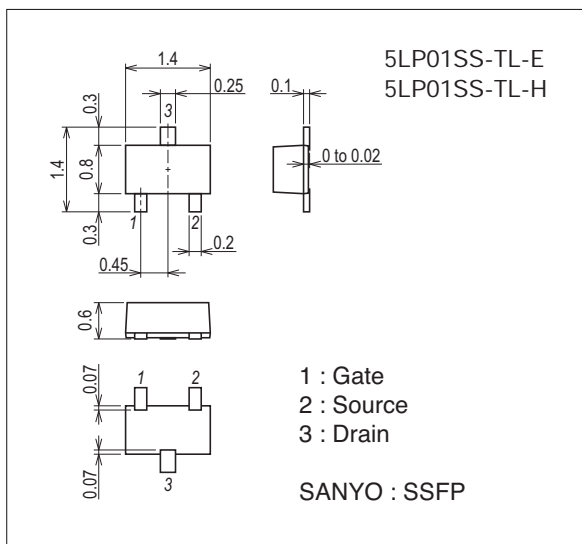
This product is designed to "ESD immunity < 200V**", so please take care when handling.

* Machine Model

Package Dimensions

unit : mm (typ)

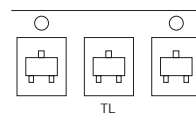
7029A-003



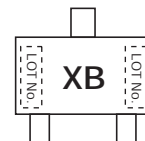
Product & Package Information

- Package : SSFP
- JEITA, JEDEC : SC-81
- Minimum Packing Quantity : 8,000 pcs./reel

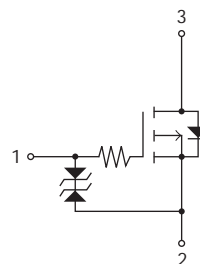
Packing Type: TL



Marking



Electrical Connection

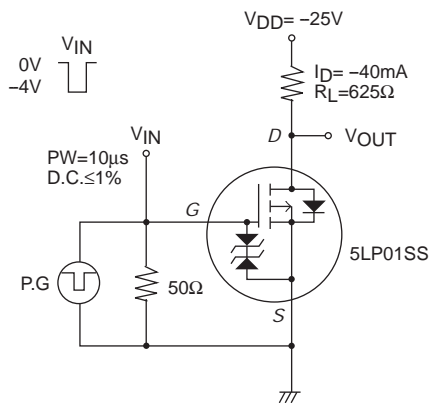


5LP01SS

Electrical Characteristics at Ta=25°C

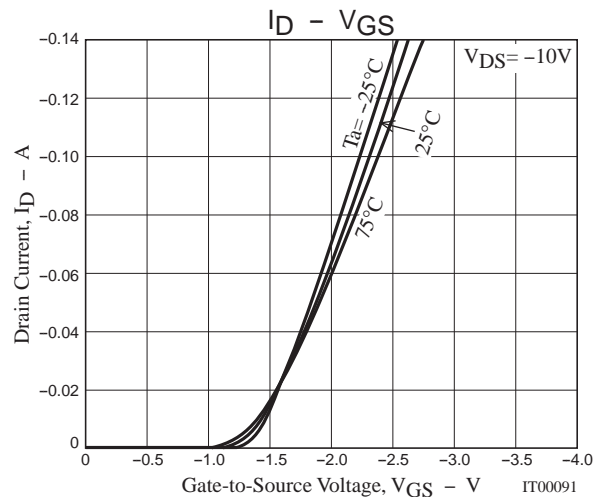
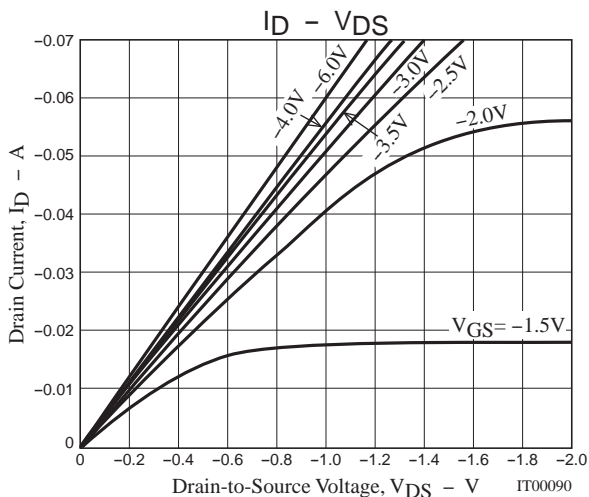
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V(BR)DSS	ID = -1mA, VGS=0V	-50			V
Zero-Gate Voltage Drain Current	IDSS	VDS = -50V, VGS=0V			-1	μA
Gate-to-Source Leakage Current	IGSS	VGS=±8V, VDS=0V			±10	μA
Cutoff Voltage	VGS(off)	VDS = -10V, ID = -100μA	-0.4		-1.4	V
Forward Transfer Admittance	yfs	VDS = -10V, ID = -40mA	70	100		mS
Static Drain-to-Source On-State Resistance	RDS(on)1	ID = -40mA, VGS = -4V		18	23	Ω
	RDS(on)2	ID = -20mA, VGS = -2.5V		20	28	Ω
	RDS(on)3	ID = -5mA, VGS = -1.5V		30	60	Ω
Input Capacitance	Ciss			7.4		pF
Output Capacitance	Coss	VDS = -10V, f=1MHz		4.2		pF
Reverse Transfer Capacitance	Crss			1.3		pF
Turn-ON Delay Time	td(on)	See specified Test Circuit.		20		ns
Rise Time	tr			35		ns
Turn-OFF Delay Time	td(off)			160		ns
Fall Time	tf			150		ns
Total Gate Charge	Qg				1.40	
Gate-to-Source Charge	Qgs	VDS = -10V, VGS = -10V, ID = -70mA		0.16		nC
Gate-to-Drain "Miller" Charge	Qgd			0.23		nC
Diode Forward Voltage	VSD	IS = -70mA, VGS=0V		-0.85	-1.2	V

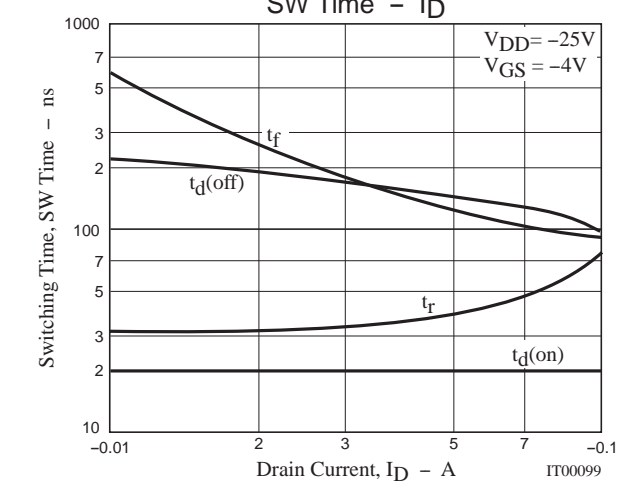
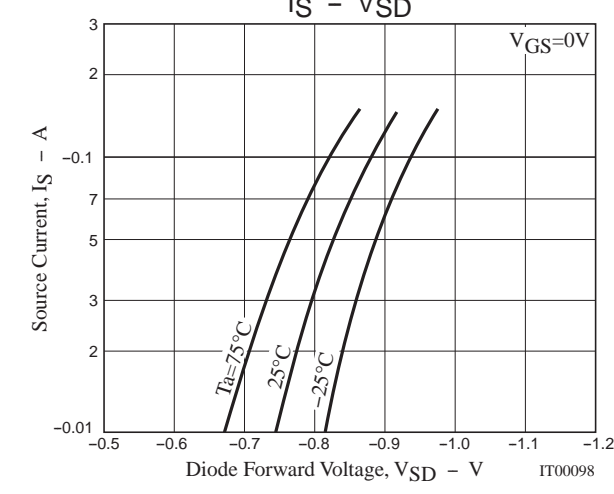
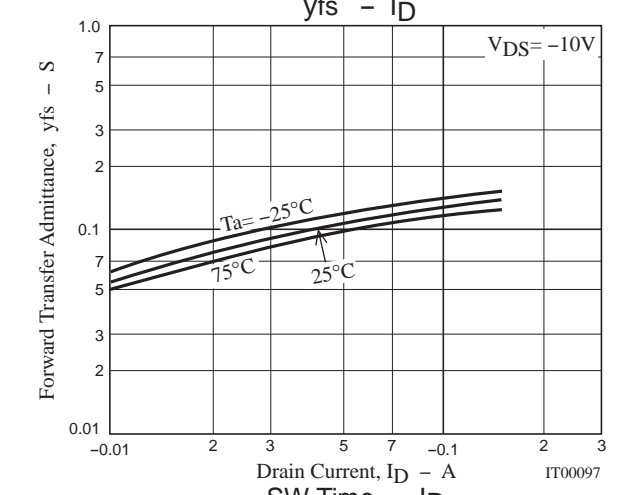
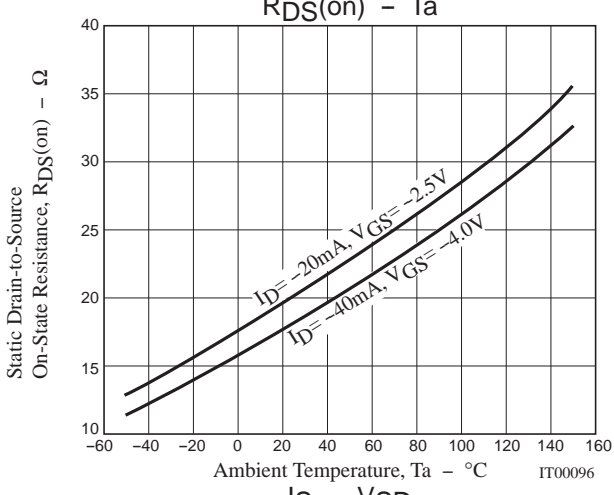
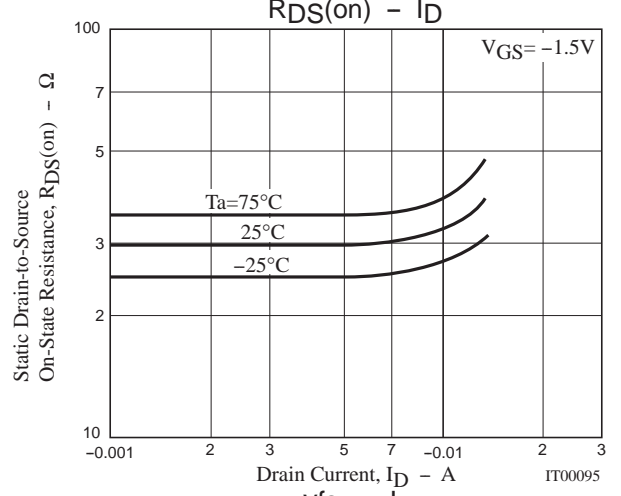
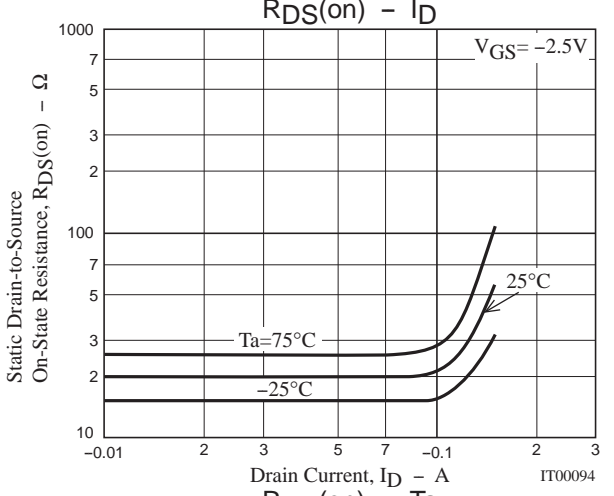
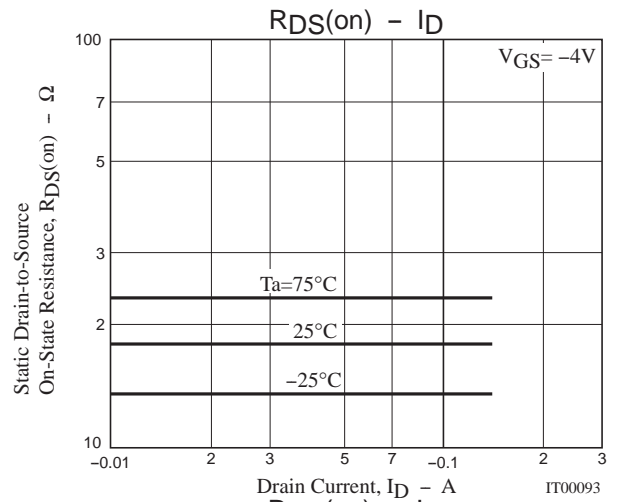
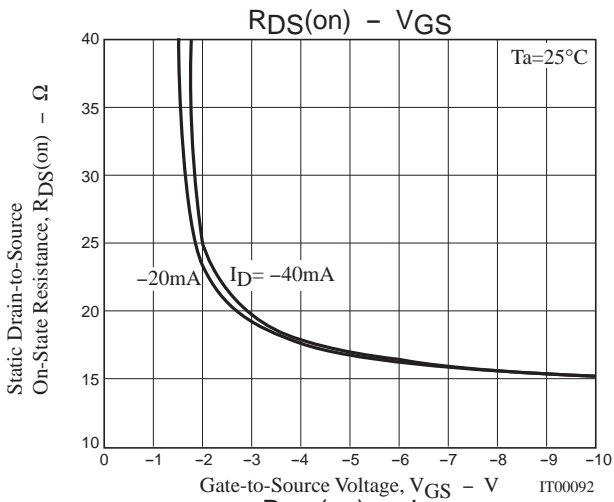
Switching Time Test Circuit



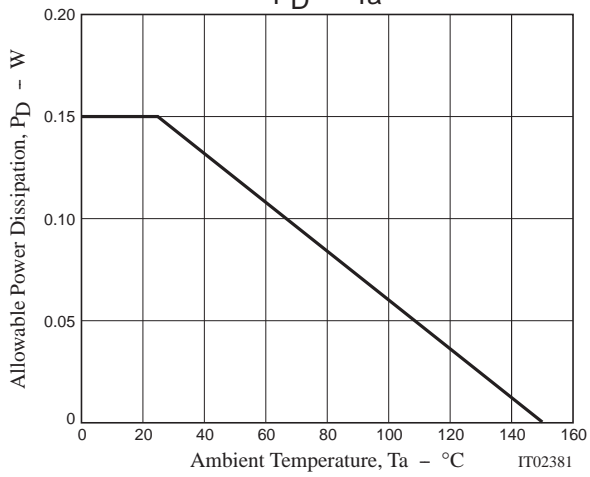
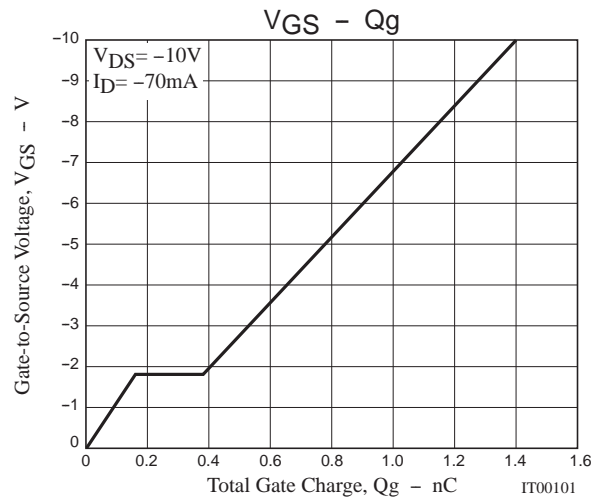
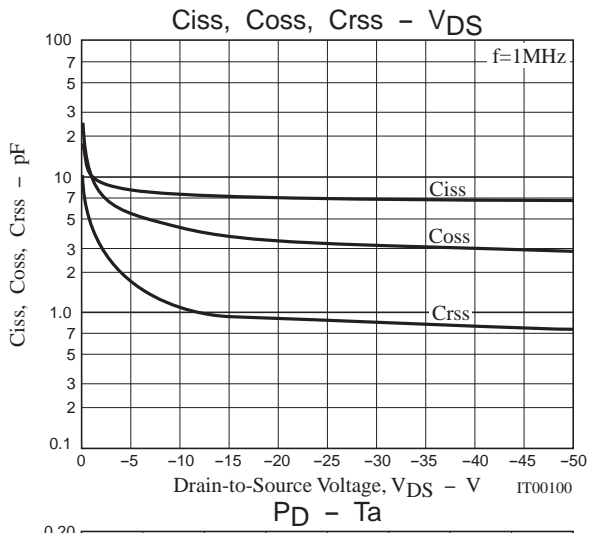
Ordering Information

Device	Package	Shipping	memo
5LP01SS-TL-E	SSFP	8,000pcs./reel	Pb Free
5LP01SS-TL-H	SSFP	8,000pcs./reel	Pb Free and Halogen Free





5LP01SS



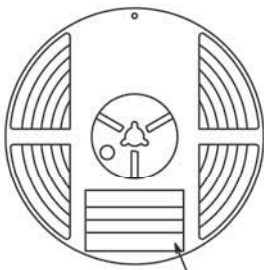
5LP01SS

Embossed Taping Specification 5LP01SS-TL-E, 5LP01SS-TL-H

1. Packing Format

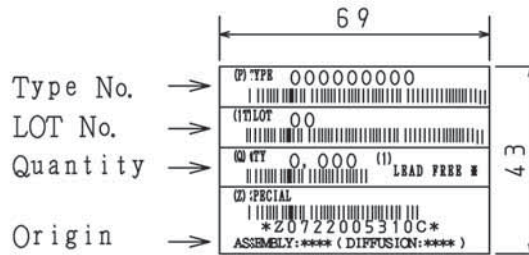
Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
SSFP	SSFP	8,000	40,000	240,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimension::mm (external) 440×195×210

Packing method

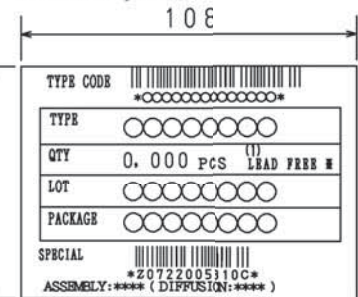


Reel label

Reel label, Inner box label
(unit:mm)



Outer box label
It is a label at the time of factory shipments. The form of a label may change in physical distribution process.



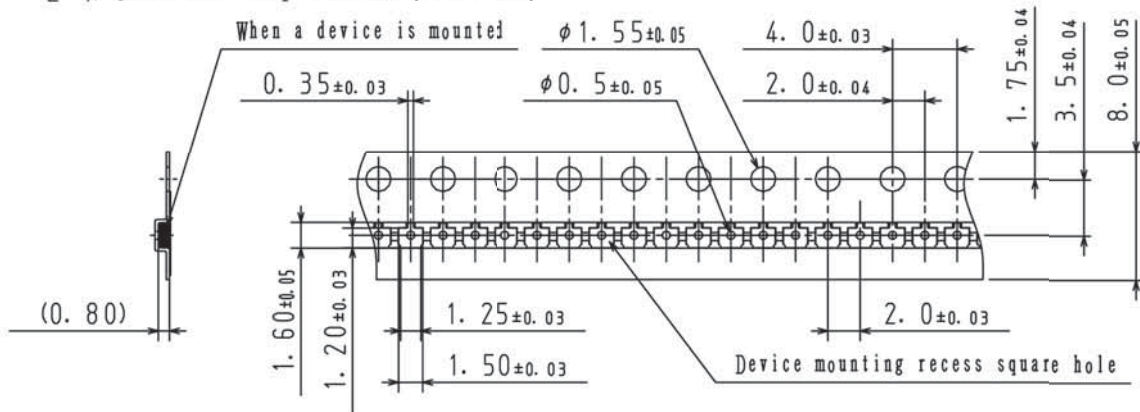
NOTE (1)

The LEAD FREE * description shows that the surface treatment of the terminal is lead free.

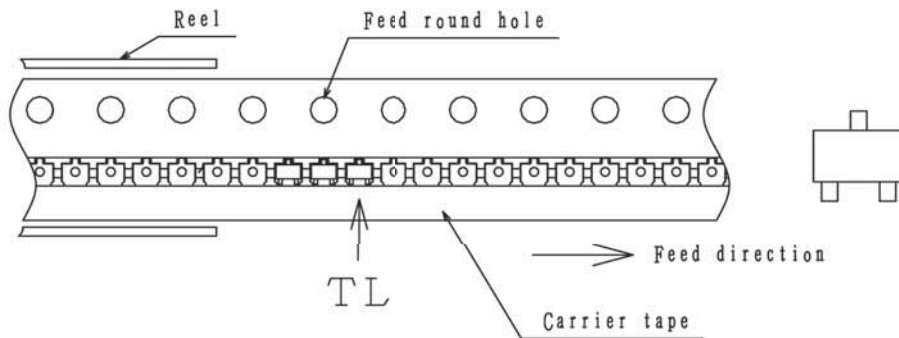
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

2-1. Carrier tape size (unit:mm)



2-2. Device placement direction

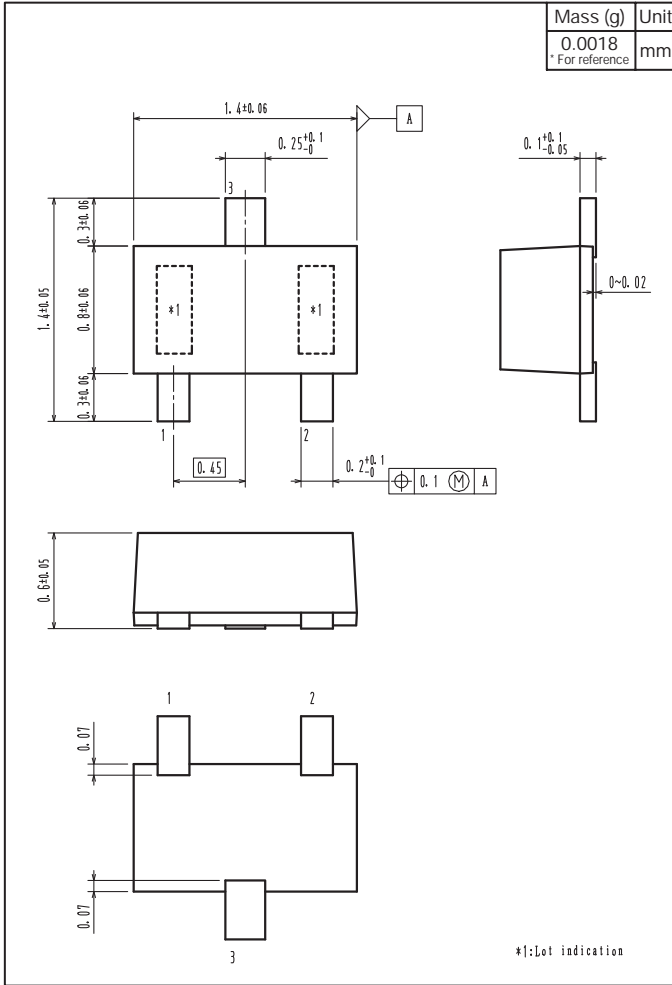


Those with pin 1 index on the feed hole side.....TL

5LP01SS

Outline Drawing

5LP01SS-TL-E, 5LP01SS-TL-H



Land Pattern Example



Note on usage : Since the 5LP01SS is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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