

POWER MOSFET

Feature

- 30V P-Channel MOSFET High Dense Design.
- Ultra low On-Resistance.
- $R_{DS(ON)} < 60m\Omega$ @ $V_{GS} = -10V$
- $R_{DS(ON)} < 95m\Omega$ @ $V_{GS} = -4.5V$
- Reliable and Rugged

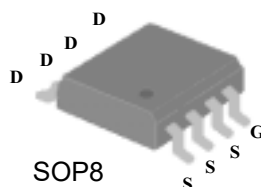
Applications

- Power Management in Notebook Computer, Portable Equipment and Battery Powered Systems.

▼ Simple Drive Requirement

▼ Low On-resistance

▼ Fast Switching

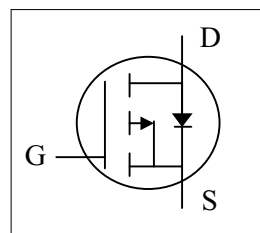


BV_{DSS}	-30V
$R_{DS(ON)}$	55m Ω
I_D	$\pm 5.3A$

Description

The MOSFETs from TITAN MICRO provide the designer with the best combination of fast switching, ruggedized device design, low on-resistance and cost-effectiveness.

The SOP8 package is universally preferred for all commercial-industrial surface mount applications and suited for low voltage applications such as DC/DC converters.



Ordering Information

Device	Package	Units per Reel
JY9435MX	SOP8	2500

Electrical Characteristics

1. Absolute Maximum Ratings (T_A=25°C Unless Otherwise Noted)

Symbol	Parameter	Rating	Unit
V _{DSS}	Drain-Source Voltage	-30	V
V _{GSS}	Gate-Source Voltage	±20	
I _D	Continue Drain Current	-5.3	A
I _{DM}	Pulsed Drain Current	-30 ^(note1)	
I _S ^a	Diode Continuous Forward Current	-2	A
T _J	Maximum Junction Temperature	150	°C
T _{STG}	Storage Temperature Range	-55 to 150	
R _{θJA} ^b	Thermal Resistance-Junction to Ambient	62.5 ^c	°C/W

Note1: Test pulse width 8.3ms.

Electrical Characteristics (Cont.)

2. Static Electrical Characteristics (T_A=25°C Unless Otherwise Noted)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _{DS} =250μA	-30			V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =-24V, V _{GS} =0V T _A =85°C		-30	-1 30	μA
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _{DS} =250μA	-1.	-1.5	-3.0	V
I _{GSS}	Gate Leakage Current	V _{GS} =±20V, V _{DS} =0V			±100	nA
R _{DS(ON)} ^d	Drain-Source On-state Resistance	V _{GS} =-10V, I _{DS} =-5.3A		55	60	mΩ
		V _{GS} =-4.5V, I _{DS} =-4.2A		80	95	
V _{SD} ^d	Diode Forward Voltage	I _{SD} =-1.7A, V _{GS} =0V		-0.7	-1.3	V

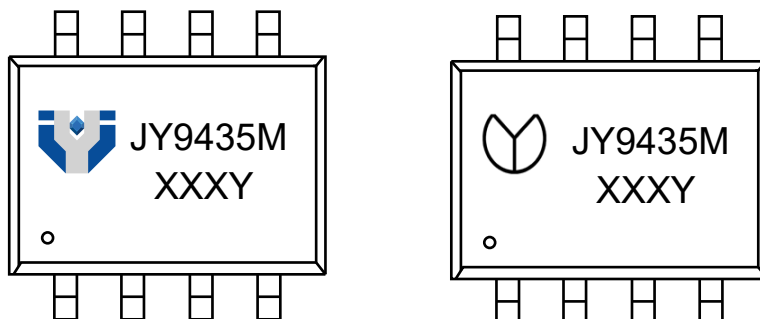
Note:

a : Current maybe limit by bonding wire.

b : The R_{θJA} is the sum of the thermal impedance from junction to ambient and depend on package type.

c : SOP-8 package and surface mounted on 1 in² pad area, t ≤ 10 sec.

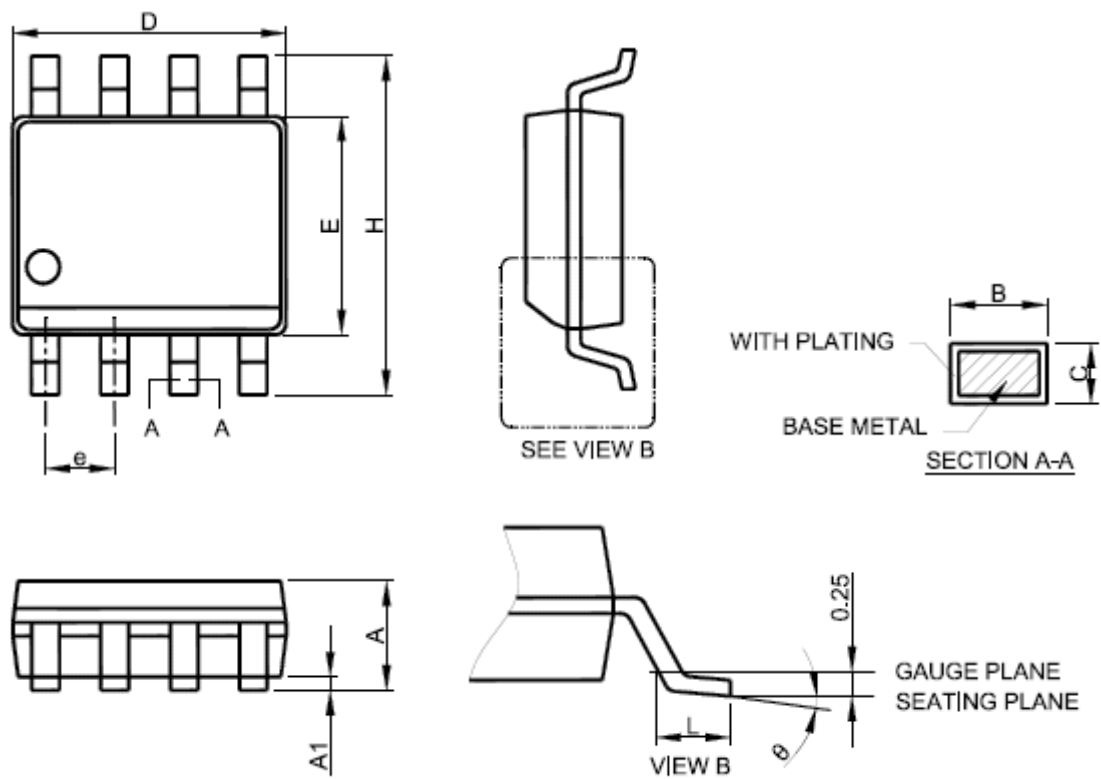
d : Pulse test ; pulse width ≤ 300μs, duty cycle ≤ 2% (T_A=25°C Unless Otherwise Noted)

Marking Information

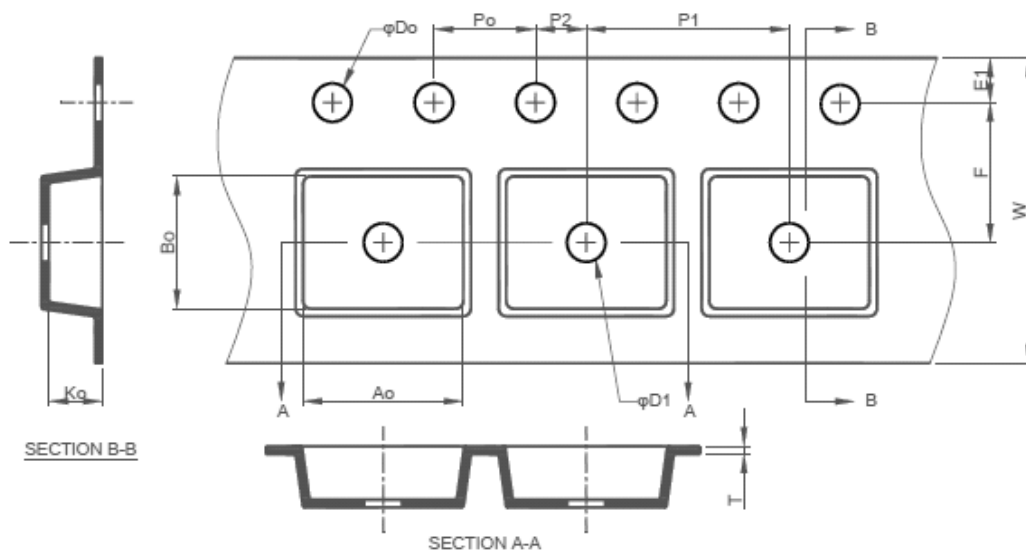
- (1) JY9435MX: Part number, fixed
- (2) XXX: Wafer's Lot No Y: Internal code

Package Information (All Dimensions in mm)

SOP8

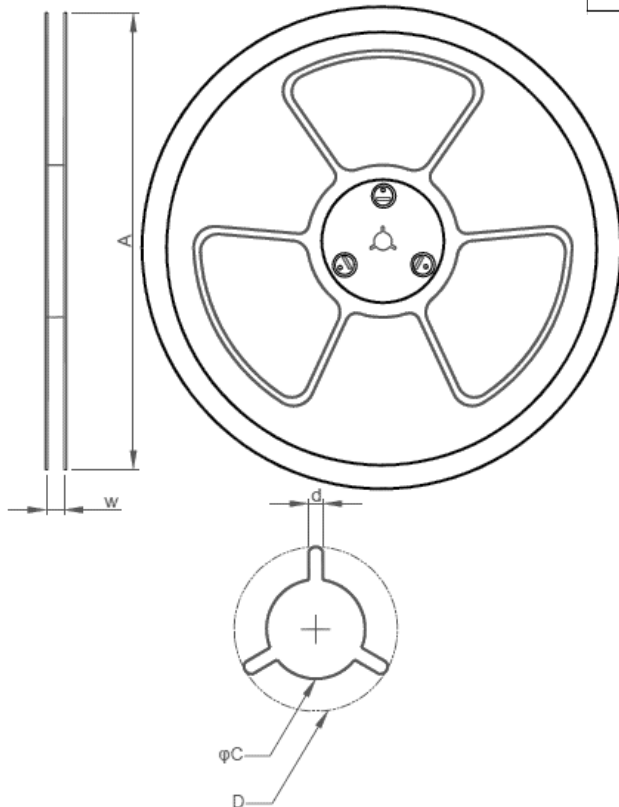


Symbol	Dimensions In Millimeters	
	Min	Max
A	1.35	1.75
A1	0.10	0.25
B	0.33	0.51
C	0.19	0.25
D	4.70	5.10
E	3.70	4.10
E	1.27BSC	
H	5.80	6.20
L	0.40	1.27
θ	0	8°

Tape/Reel


- Note: 1. Refer to EIA-481-B
 2. 10 sprocket hole pitch cumulative tolerance ± 0.2
 3. Material: conductive polystyrene
 4. A0 and B0 measured on a plane 0.3mm above the bottom of the pocket
 5. K0 measured from a plane on the inside bottom of the pocket to the top surface of the carrier

SYMBOL	A0	B0	K0	T	D0	D1
SPEC	6.400 ± 0.100	5.350 ± 0.100	2.000 ± 0.100	0.250 ± 0.020	1.550 ± 0.050	1.550 ± 0.100
SYMBOL	P0	P1	P2	E1	F	W
SPEC	4.000 ± 0.100	8.000 ± 0.100	2.000 ± 0.050	1.750 ± 0.100	5.500 ± 0.050	12.000 ± 0.30



Package Type	A	W	C	d	D
TO-252-3L	330 ± 2	$16.4 \begin{smallmatrix} +2.0 \\ -0.0 \end{smallmatrix}$	$13.0 \begin{smallmatrix} +0.5 \\ -0.2 \end{smallmatrix}$	1.5 MIN.	20.2 MIN.
SOP-8 SOT-223	330 ± 2	$12.4 \begin{smallmatrix} +2.0 \\ -0.0 \end{smallmatrix}$	$13.0 \begin{smallmatrix} +0.5 \\ -0.2 \end{smallmatrix}$	1.5 MIN.	20.2 MIN.
SOT-89-3L	178 ± 2	$12.4 \begin{smallmatrix} +2.0 \\ -0.0 \end{smallmatrix}$	$13.0 \begin{smallmatrix} +0.5 \\ -0.2 \end{smallmatrix}$	1.5 MIN.	20.2 MIN.

Note: Refer to EIA-481-B