

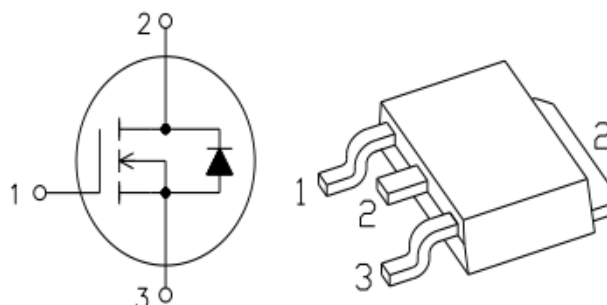
TO-252 Plastic-Encapsulate MOSFETS

FEATURE

- High Current Rating
- Lower RDS(on)
- Lower Capacitance
- Lower Total Gate Charge
- Tighter VSD Specifications
- Avalanche Energy Specified
- N-Channel Power MOSFET

MECHANICAL DATA

- Case style:TO-252 molded plastic
- Mounting position:any



1.Gate 2.Drain 3.Source

MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	1200	V
Gate-Source Voltage	V_{GS}	± 30	V
Continuous Drain Current	I_D	2.0	A
Pulsed Drain Current	I_{DM}	4.0	A
Single Pulsed Avalanche Energy (note1)	E_{AS}	465	mJ
Power Dissipation	P_D	75	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	62.5	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 ~ +150	°C
Maximum lead temperature for soldering purposes , 1/8" from case for 5 seconds	T_L	260	°C

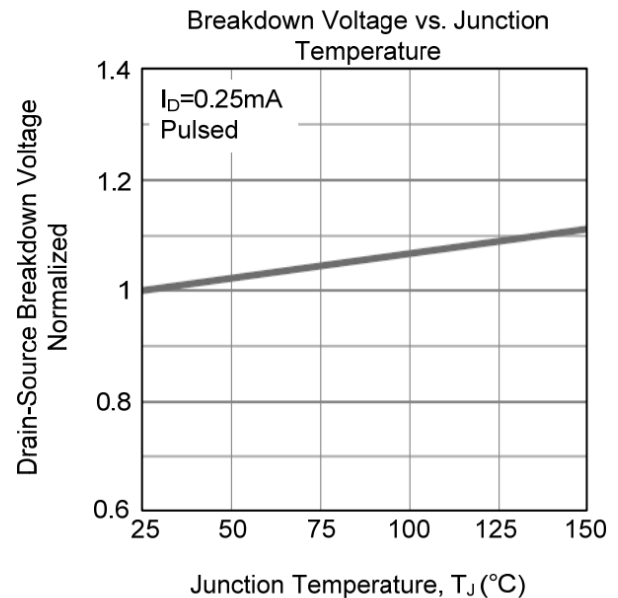
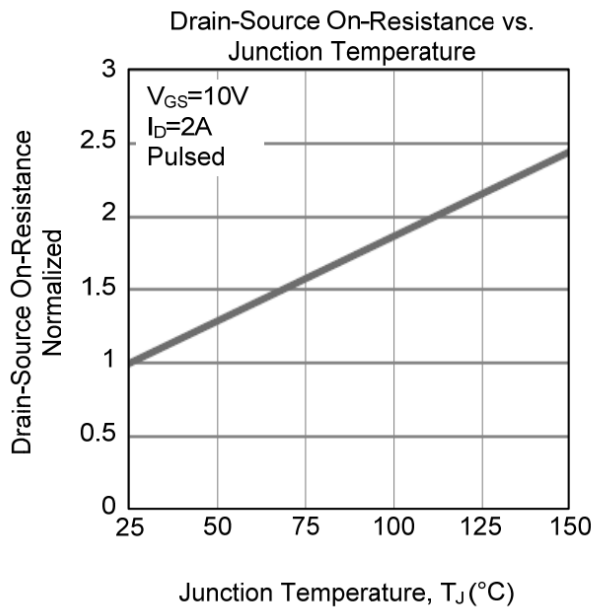
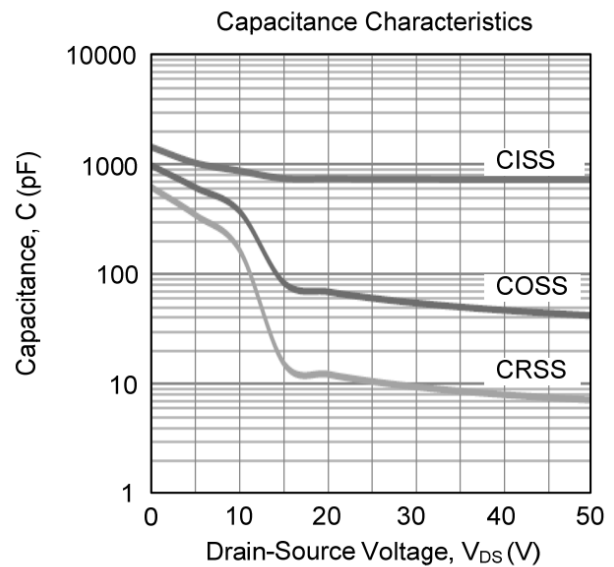
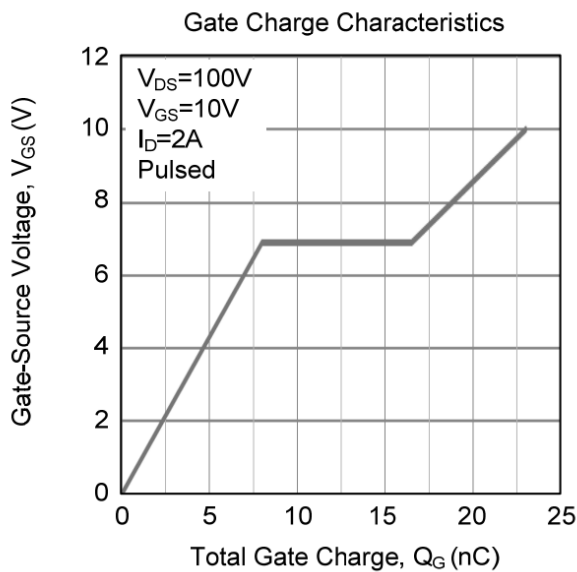
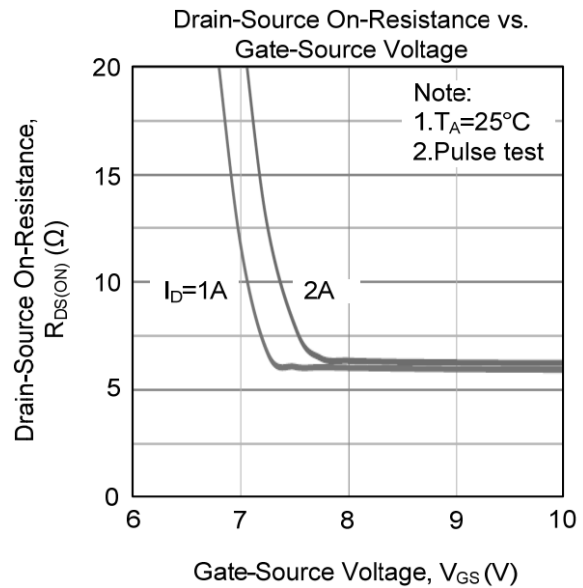
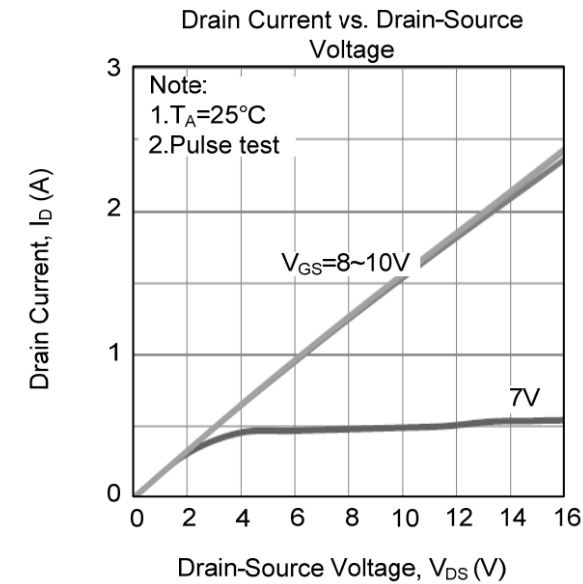
MOSFET ELECTRICAL CHARACTERISTICS $T_A=25^\circ\text{C}$ unless otherwise specified

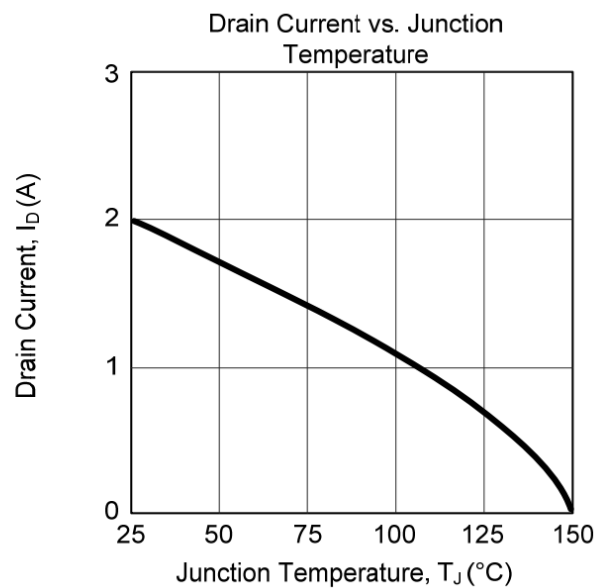
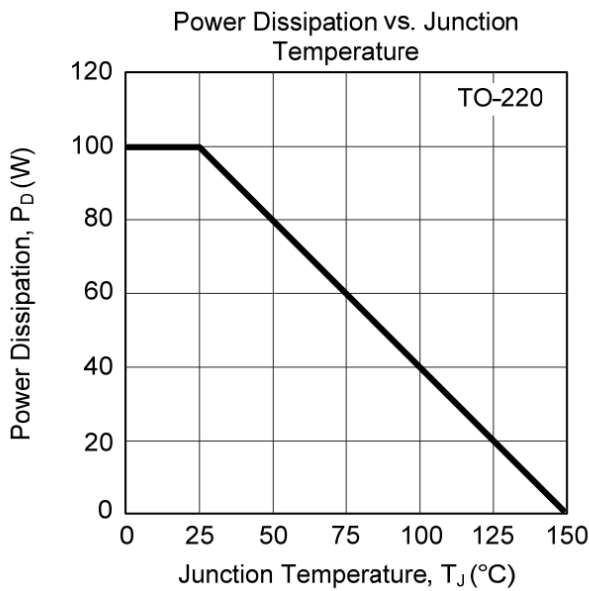
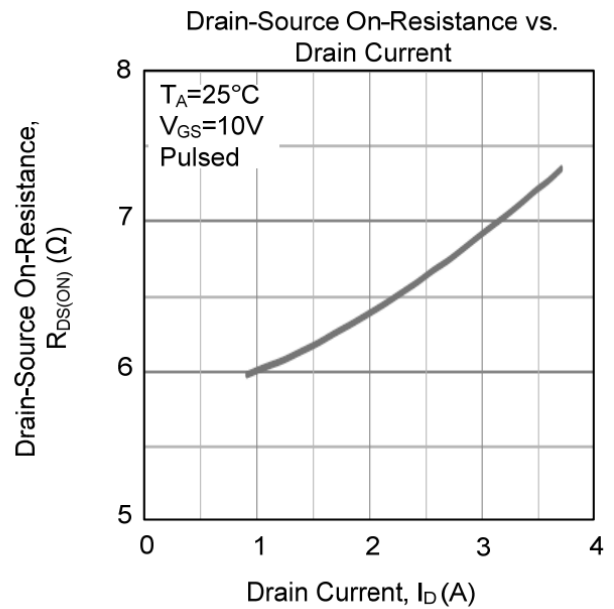
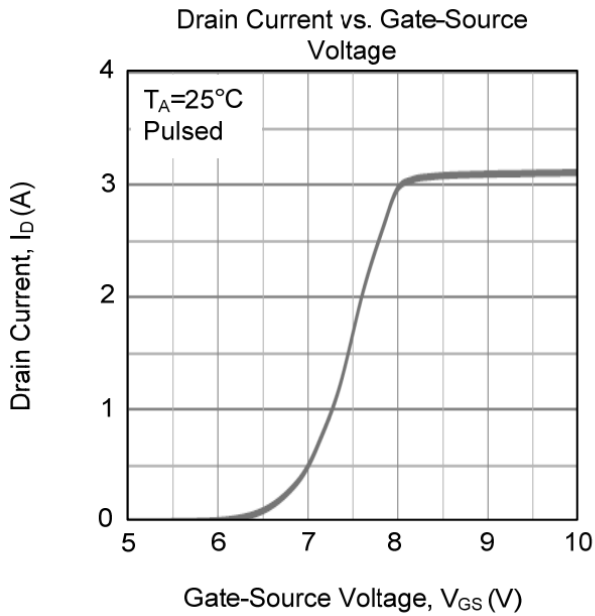
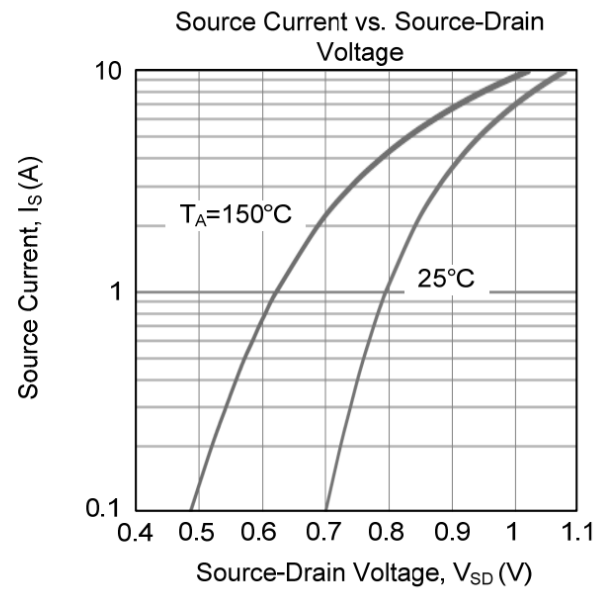
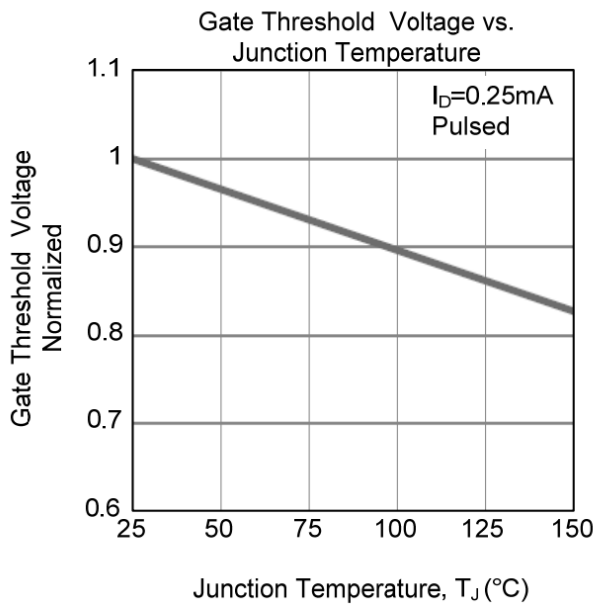
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Off characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =250μA	1200			V
Drain-source diode forward voltage(note2)	V _{SD}	V _{GS} = 0V, I _S =2.0A			1.4	
Zero gate voltage drain current	I _{DSS}	V _{DS} =1200V, V _{GS} =0V			1	μA
Gate-body leakage current (note2)	I _{GSS}	V _{DS} =0V, V _{GS} = ± 30V			± 100	nA
On characteristics (note2)						
Gate-threshold voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	3.0	4.0	5.0	V
Static drain-source on-resistance	R _{DS(on)}	V _{GS} =10V, I _D =1.0A		6.75	7.5	Ω
Forward Transconductance	g _{fs}	V _{DS} =10V, I _D =1.0A,dI _b =100mA		10		S
Dynamic characteristics (note 3)						
Input capacitance	C _{iss}	V _{DS} =25V,V _{GS} =0V,f =1MHz		7 0 0		pF
Output capacitance	C _{oss}			6 5		
Reverse transfer capacitance	C _{rss}			12		
Switching characteristics (note 3)						
Total gate charge	Q _g	V _{DS} =100V,V _{GS} =10V,I _D =2.0A		31		nC
Gate-source charge	Q _{gs}			9.5		
Gate-drain charge	Q _{gd}			10.1		
Turn-on delay time (note3)	t _{d(on)}	V _{DD} =100V, V _{GS} =10V, R _G =25Ω, I _D =2.0A		13		ns
Turn-on rise time (note3)	t _r			20		
Turn-off delay time (note3)	t _{d(off)}			75		
Turn-off fall time (note3)	t _f			50		

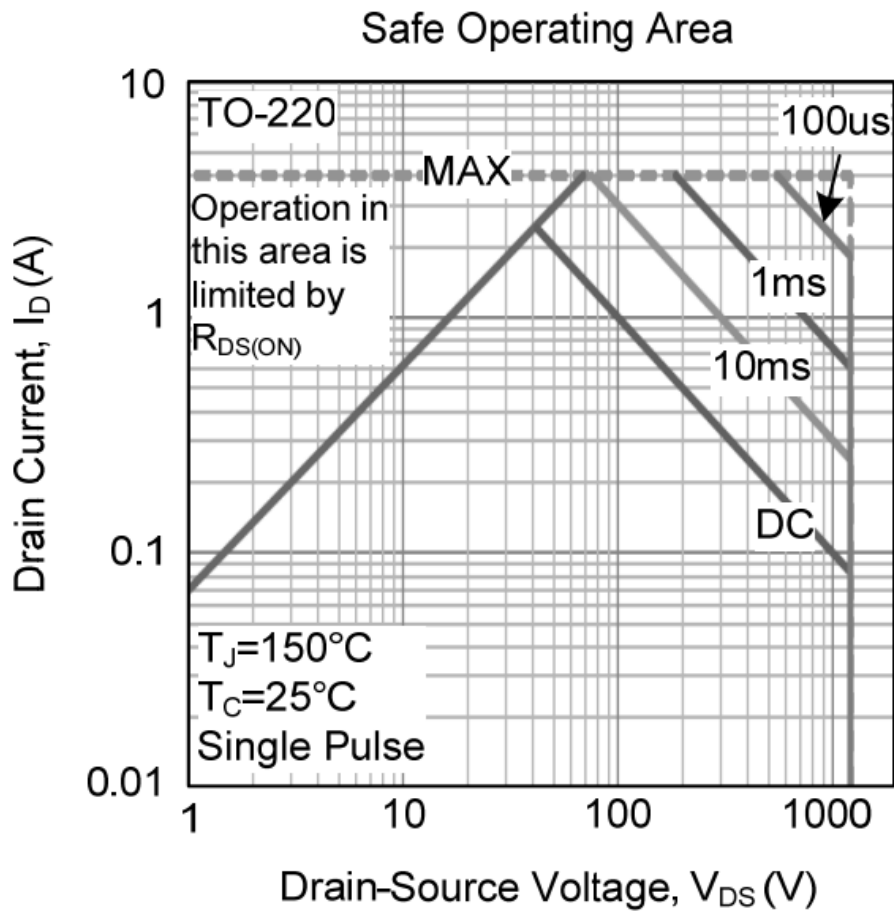
Notes :

1. $L=30mH, I_L=4A, V_{DD}=100V, R_G=25\Omega$, Starting $T_J=25^\circ\text{C}$.
2. Pulse Test : Pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.
3. These parameters have no way to verify.

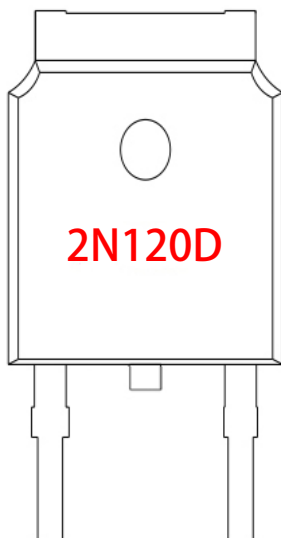
Rating and Characteristic Curves



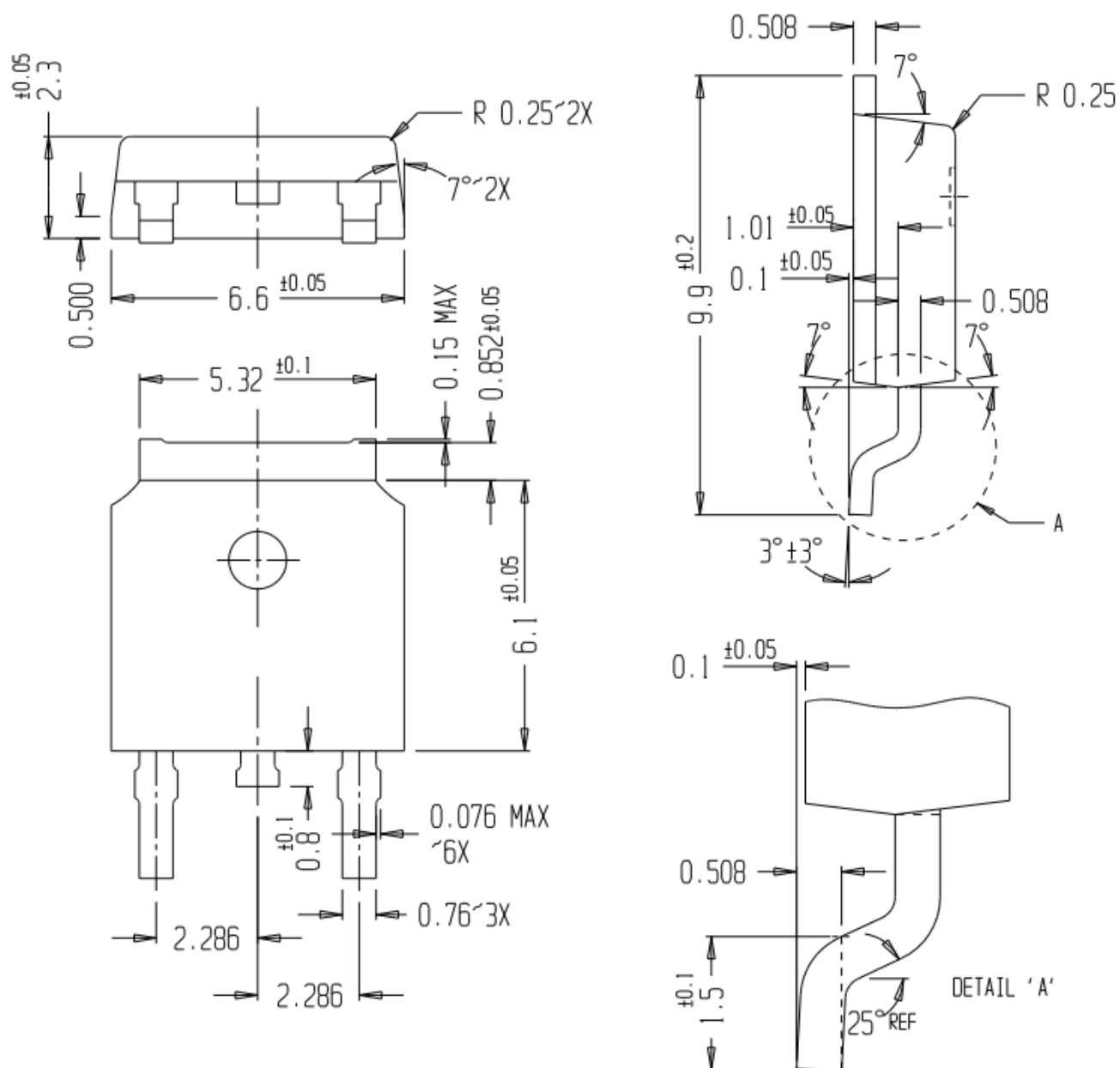




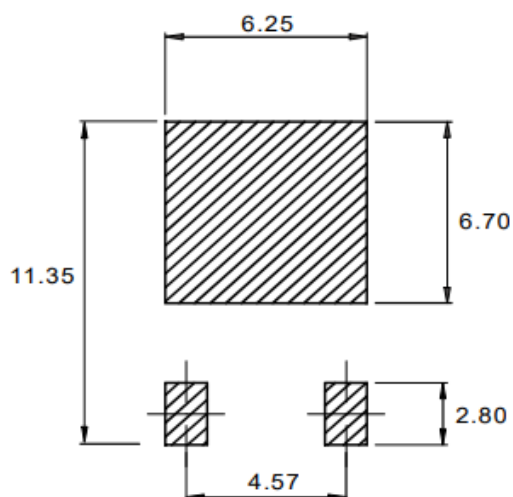
Marking



Dimensions(Unit:mm)



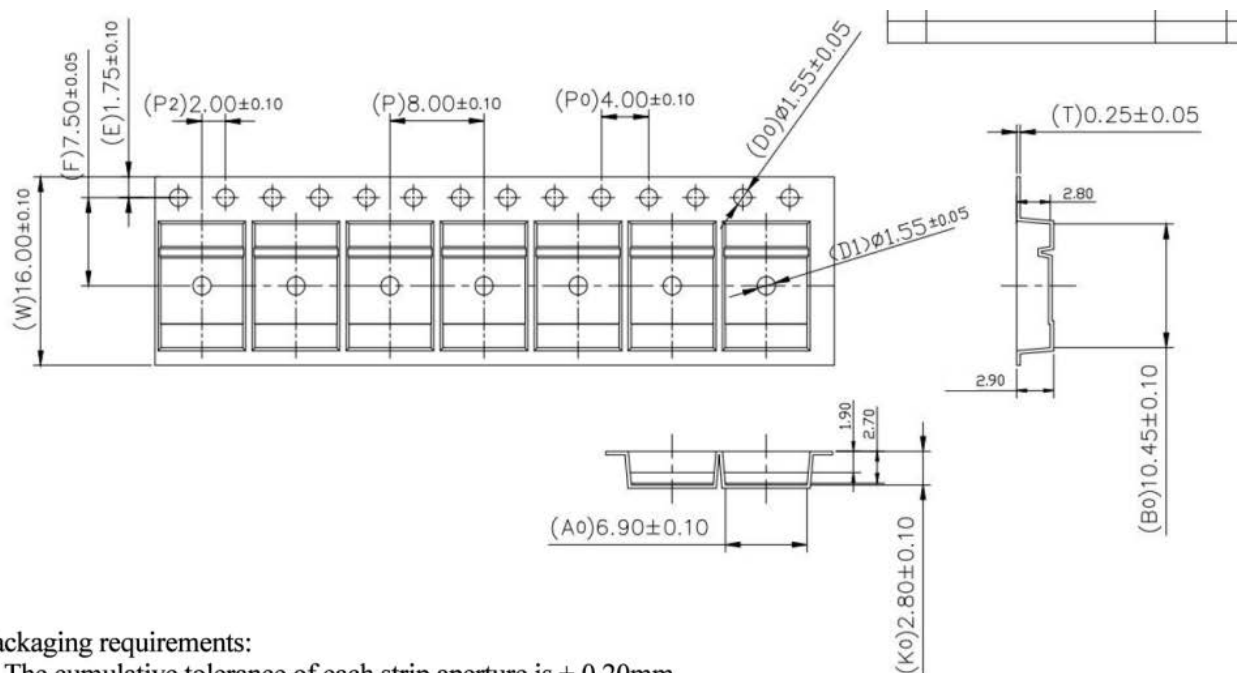
Suggested solder pad layout



Note:

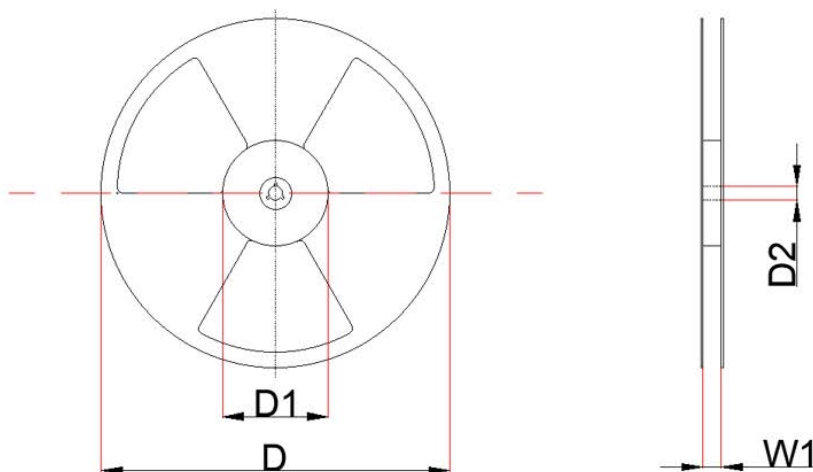
1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.1 mm.
3. The pad layout is for reference purposes only.

Packing Information



Packaging requirements:

1. The cumulative tolerance of each strip aperture is $\pm 0.20\text{mm}$.
2. The bending of the material strip should not exceed 1mm per 100mm.



Symbol [↗]	Value (mm) [↗]
D [↗]	330 [↗]
D1 [↗]	100 [↗]
D2 [↗]	13 [↗]
W1 [↗]	17 [↗]

Package	Reel Size	Reel DIA. (mm)	QTY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	QTY/Carton (Kpcs)
TO-252	13'	330	2.5	340	5.0	360*360*360	40