

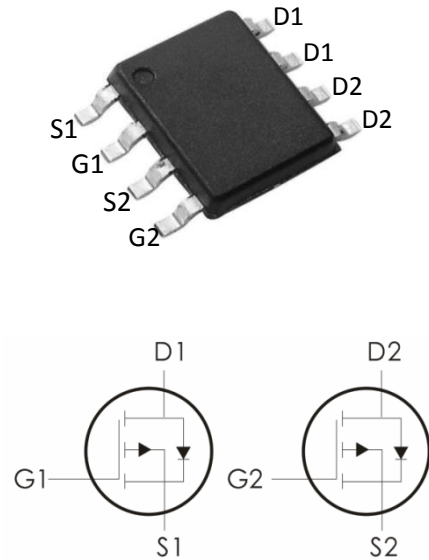
Description:

This Dual P-Channel MOSFET uses advanced trench technology and design to provide excellent $R_{DS(on)}$ with low gate charge.

It can be used in a wide variety of applications.

Features:

- 1) $V_{DS}=-60V, I_D=-5A, R_{DS(on)}<95m\Omega @V_{GS}=-10V$ (Typ: $75m\Omega$)
- 2) Low gate charge.
- 3) Green device available.
- 4) Advanced high cell density trench technology for ultra low $R_{DS(on)}$.
- 5) Excellent package for good heat dissipation.
- 6) MSL3



Package Marking and Ordering Information:

Part NO.	Marking	Package	Packing
DOF7342	F7342	SOP-8	3000 pcs/Reel

Absolute Maximum Ratings: ($T_A=25^\circ C$ unless otherwise noted)

Symbol	Parameter	Ratings	Units
V_{DS}	Drain-Source Voltage	-60	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Continuous Drain Current	-5	A
	Continuous Drain Current- $T_A=100^\circ C$	-3.5	
I_{DM}	Pulsed Drain Current ¹	-20	
P_D	Power Dissipation	3.1	W
E_{AS}	Single pulse avalanche energy ²	---	mJ
T_J, T_{STG}	Operating and Storage Junction Temperature Range	-55-+150	$^\circ C$

Thermal Characteristics:

Symbol	Parameter	Max	Units
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	30	$^\circ C/W$

Electrical Characteristics: ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Units
Off Characteristics						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =250 μ A	-60	---	---	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{GS} =0V, V _{DS} =-60V	---	---	-1	μ A
I _{GSS}	Gate-Source Leakage Current	V _{GS} =± 20V, V _{DS} =0A	---	---	± 100	nA
On Characteristics						
V _{GS(th)}	Gate-Source Threshold Voltage	V _{GS} =V _{DS} , I _D =250 μ A	-1	-1.8	-3	V
R _{DS(ON)}	Drain-Source On Resistance ³	V _{GS} =-10V, I _D =-4A	---	75	95	m Ω
		V _{GS} =-4.5V, I _D =-3A	---	95	140	m Ω
Dynamic Characteristics						
C _{iss}	Input Capacitance	V _{DS} =-30V, V _{GS} =0V, f=1MHz	---	930	---	pF
C _{oss}	Output Capacitance		---	85	--	
C _{rss}	Reverse Transfer Capacitance		---	35	---	
Switching Characteristics						
t _{d(on)}	Turn-On Delay Time	V _{DS} =-30V, I _D =-4A, R _L =3 Ω ,V _{GS} =-10V	---	8	---	ns
t _r	Rise Time		---	3.8	---	ns
t _{d(off)}	Turn-Off Delay Time		---	31.5	---	ns
t _f	Fall Time		---	7.5	---	ns
Q _g	Total Gate Charge	V _{GS} =-10V, V _{DS} =-30V, I _D =-4A	---	16	---	nC
Q _{gs}	Gate-Source Charge		---	2.5	---	nC
Q _{gd}	Gate-Drain “Miller” Charge		---	3.2	---	nC
Drain-Source Diode Characteristics						
V _{SD}	Diode Forward Voltage	V _{GS} =0V, I _{SD} =-1A	---	---	-1.0	V
I _S	Continuous Drain Curren	V _D =V _G =0V	---	---	-5	A
I _{SM}	Pulsed Drain Current		---	---	-20	A
T _{rr}	Reverse Recovery Time	I _F =-4A, T _J =25 °C	---	27	---	ns
Q _{rr}	Reverse Recovery Charge	dI/dt=100A/us	---	32	---	nC

Notes:

1. Repetitive Rating: Pulse Width Limited by Maximum Junction Temperature
2. EAS condition : $T_J=25^{\circ}\text{C}$, $V_{DD}=-30\text{V}$, $V_G=-10\text{V}$, $L=0.5\text{mH}$
3. Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 0.5\%$

Typical Characteristics: ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

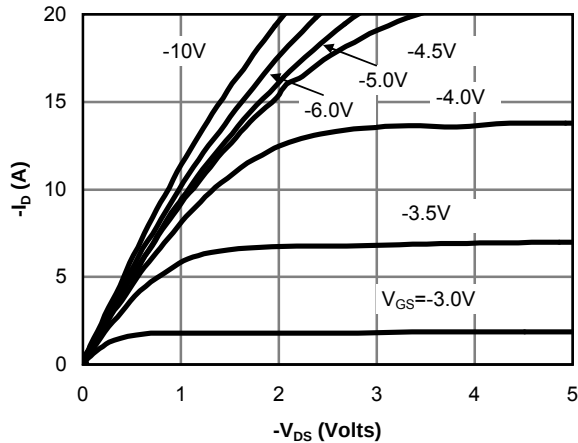


Fig 1: On-Region Characteristics

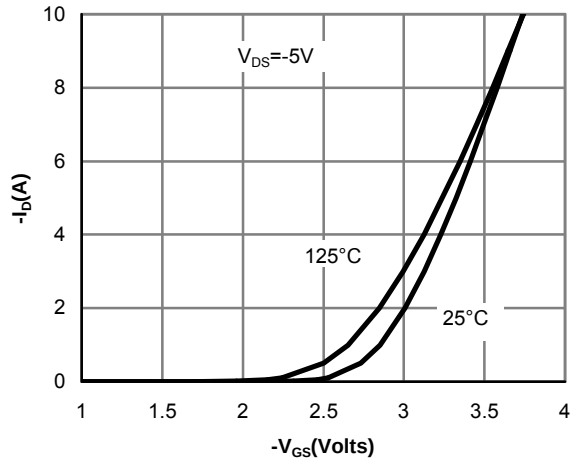


Figure 2: Transfer Characteristics

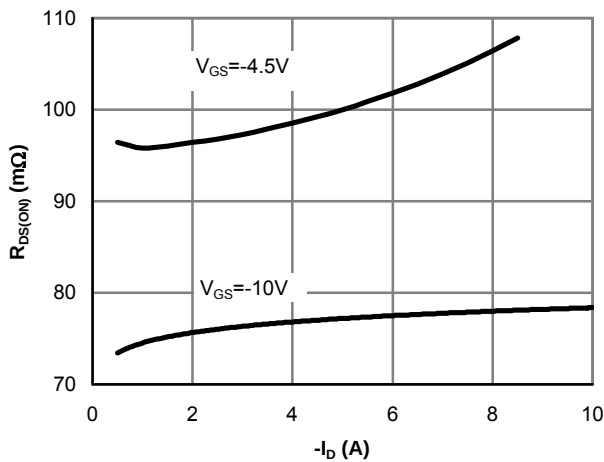


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

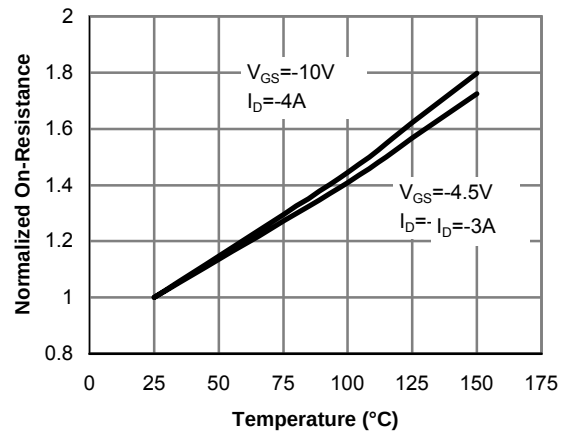


Figure 4: On-Resistance vs. Junction Temperature

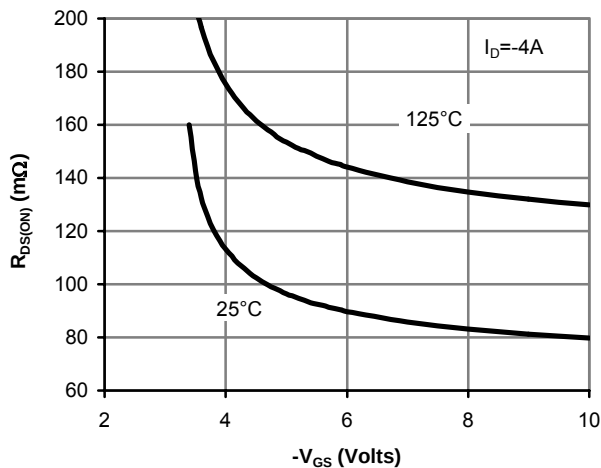


Figure 5: On-Resistance vs. Gate-Source Voltage

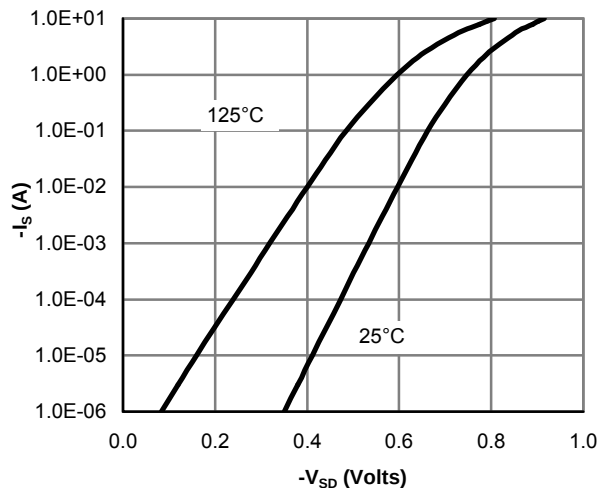


Figure 6: Body-Diode Characteristics

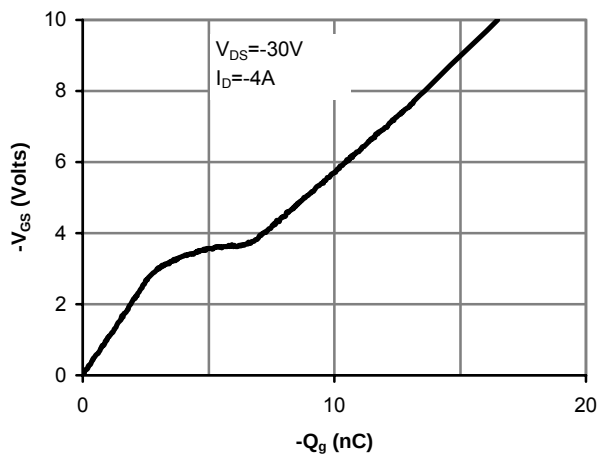


Figure 7: Gate-Charge Characteristics

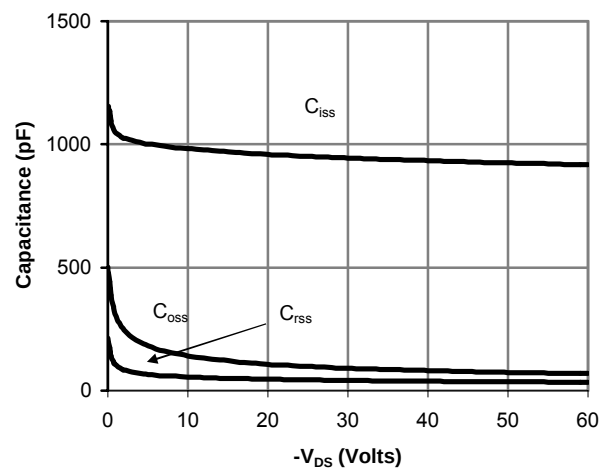


Figure 8: Capacitance Characteristics

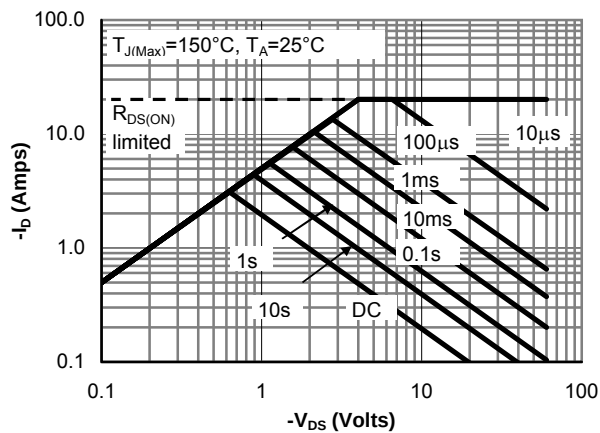


Figure 9: Maximum Forward Biased Safe Operating Area (Note E)

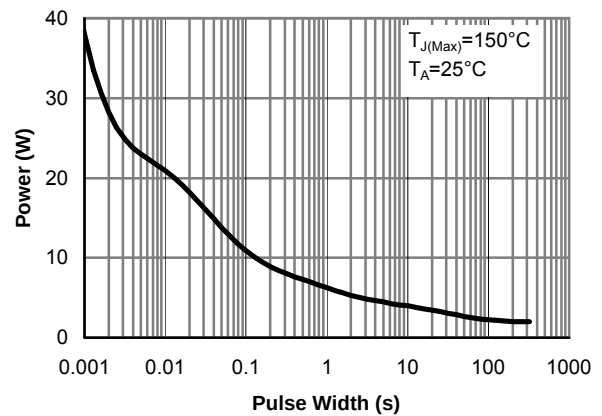


Figure 10: Single Pulse Power Rating Junction-to-Ambient (Note E)

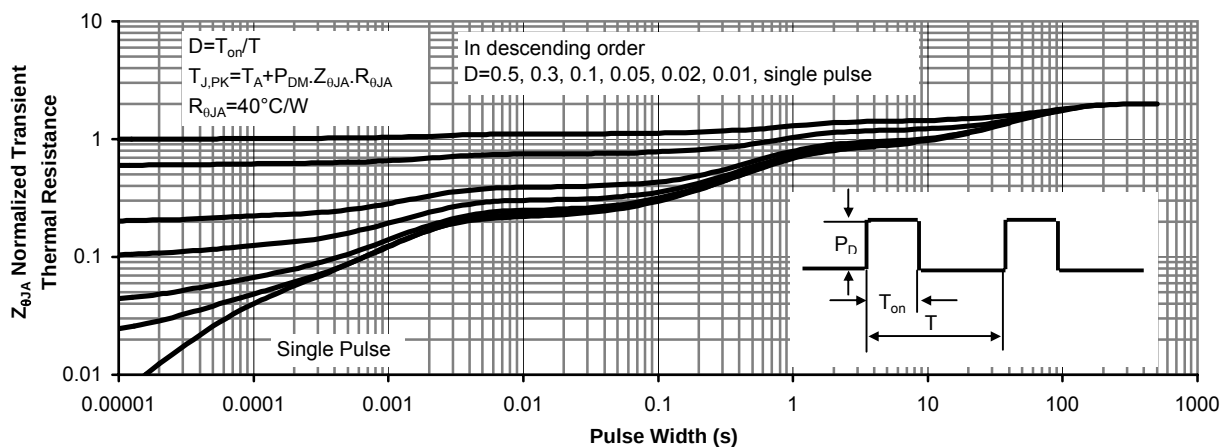
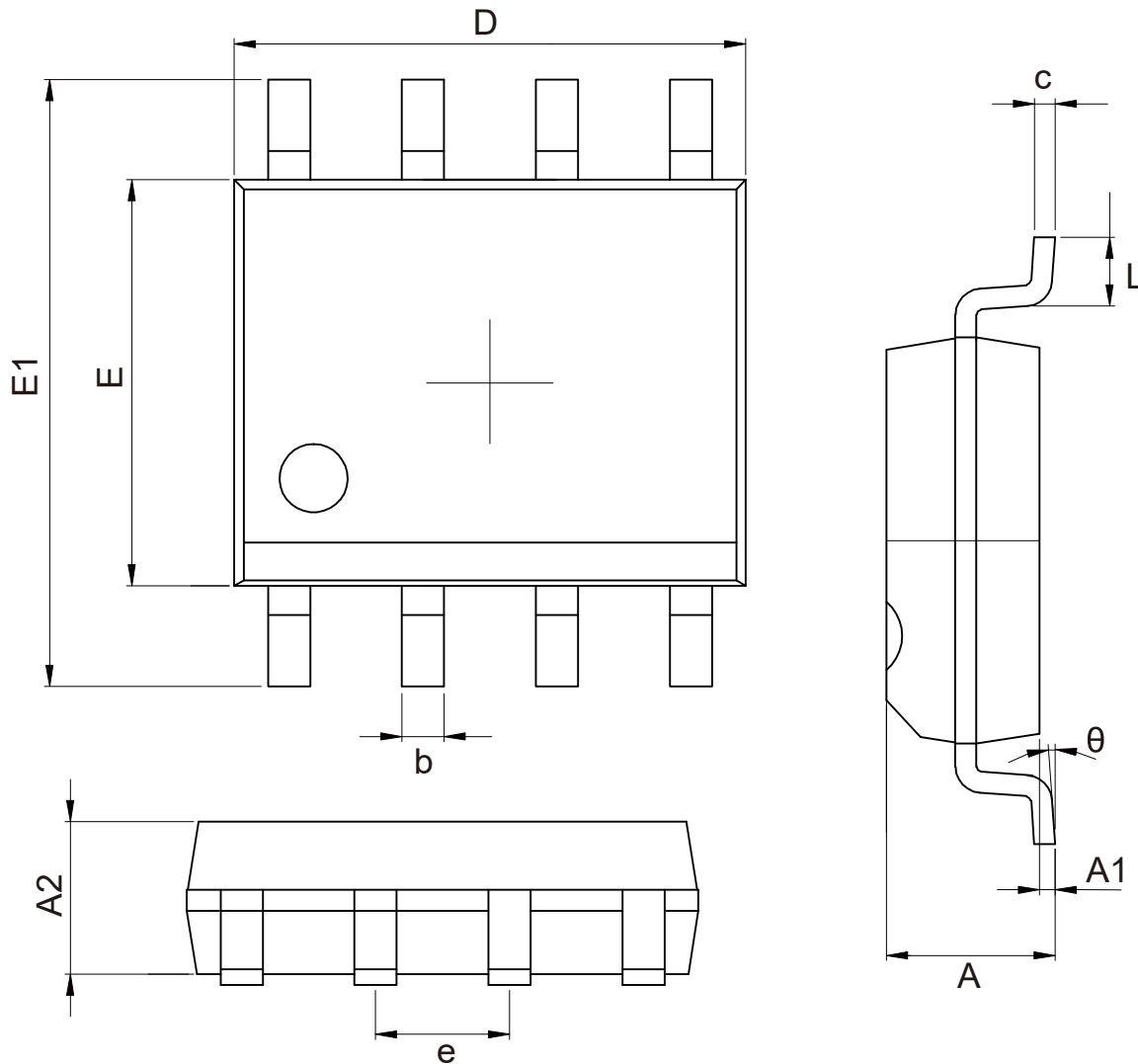


Figure 11: Normalized Maximum Transient Thermal Impedance

SOP-8 Package Information:

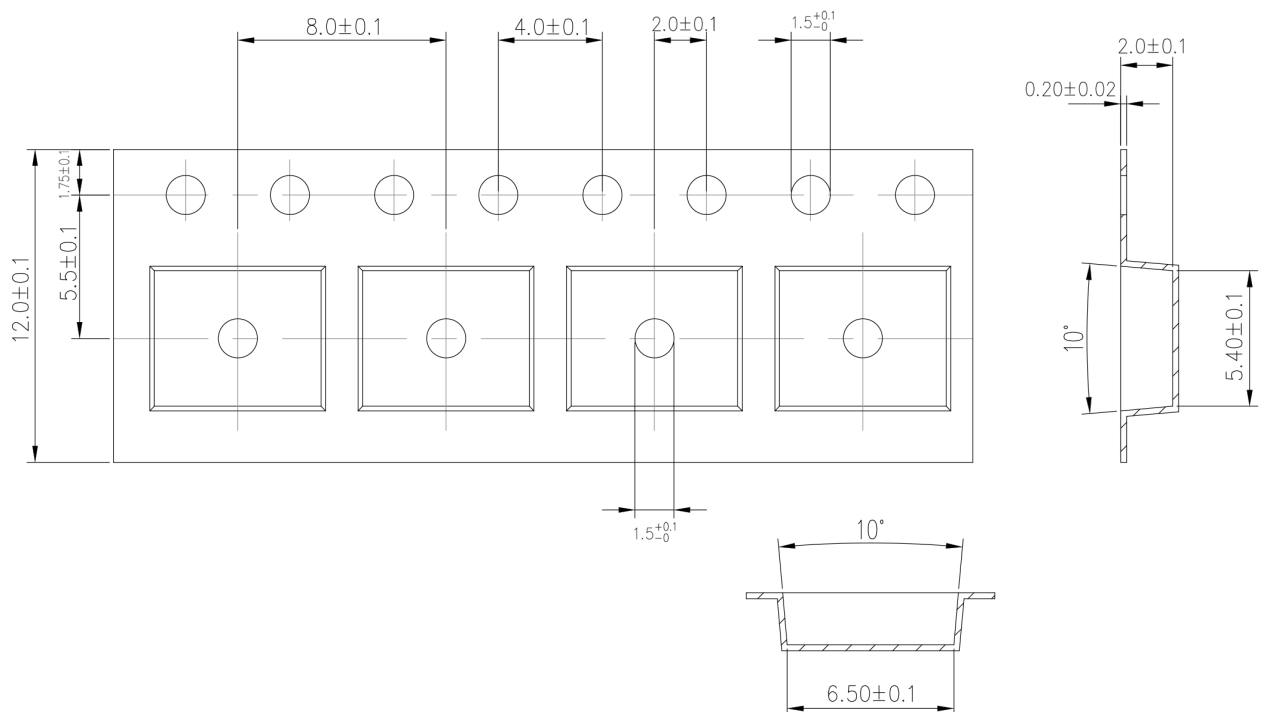
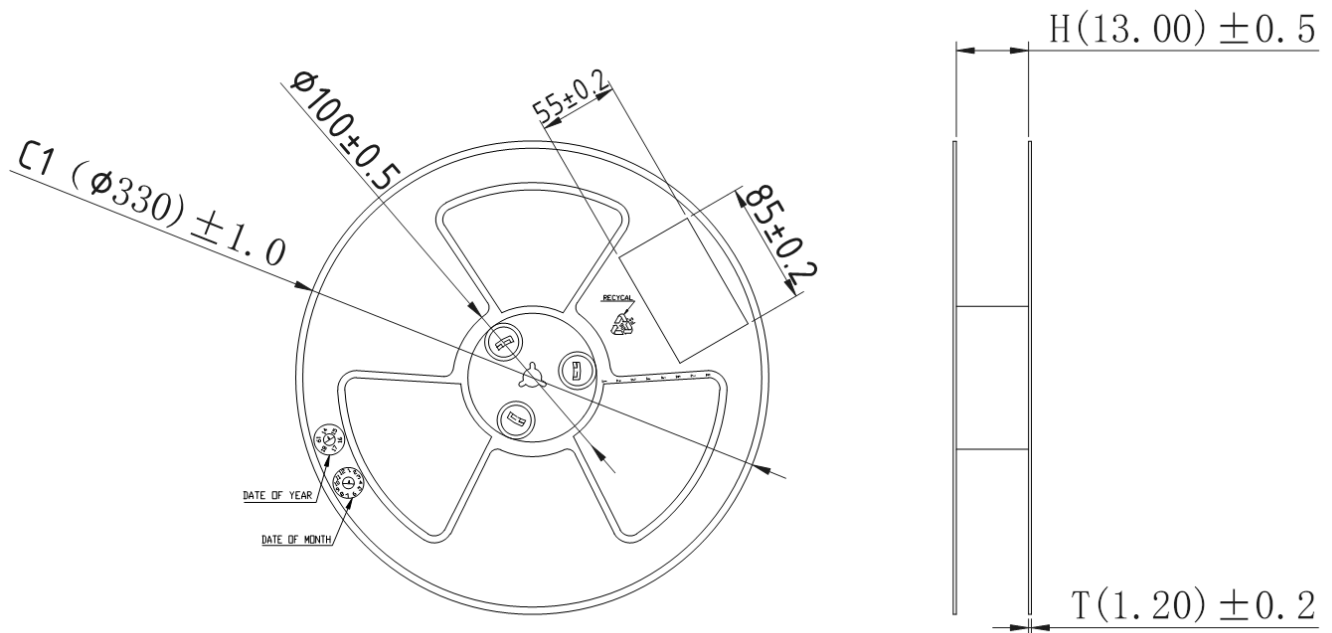


COMMON DIMENSIONS			
CUNITS MEASURE=MILLIMETER			
SYMBOL	MIN	NOM	MAX
A	1.350	—	1.750
A1	0.100	—	0.250
A2	1.350	—	1.550
b	0.330	—	0.510
c	0.170	—	0.250
D	4.700	—	5.100
E	3.800	3.900	4.000
E1	5.800	—	6.200
e	1.270BSC		
L	0.400	—	1.270
θ	0°	—	8°

Unit:mm

Tape & Reel Information

Dimensions in mm



Pulling direction 

Marking Information:

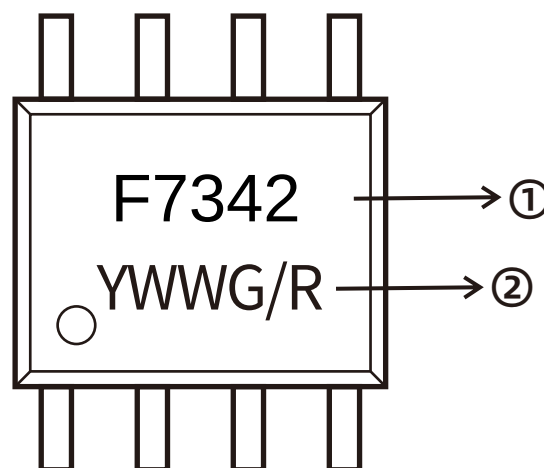
①. Part NO.

②. Date Code(YWWG / R)

Y : Year Code , last digit of the year

WW : Week Code(01-53)

G/R : G(Green) /R(Lead Free)



Previous Version

Version	Date	Subjects (major changes since last revision)
1.0	2024-05-21	Release of final version

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