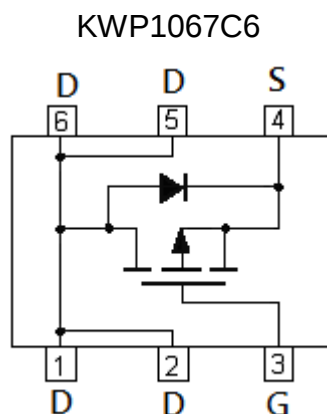


P-Channel Enhancement Mode MOSFET

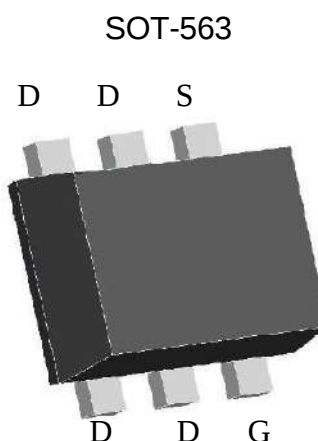
Features:

- High speed switching
- Low-voltage drive(-1.8V)
- Easily designed drive circuits
- Easy to use in parallel
- Pb-free lead plating and halogen-free package

Equivalent Circuit



Outline



Ordering Information

Device	Package	Shipping
KWP1067C6	SOT-563 (Pb-free lead plating and halogen-free package)	3000 pcs / tape & reel

Absolute Maximum Ratings (Ta=25°C, unless otherwise specified)

Parameter	Symbol	Limits	Unit
Drain-Source Voltage	V _{DSS}	-20	V
Gate-Source Voltage	V _{GSS}	±12	
Continuous Drain Current @ V _{GS} =-4.5V, T _A =25°C	I _D	-1.06	A
Continuous Drain Current @ V _{GS} =-4.5V, T _A =70°C		-0.85	
Pulsed Drain Current	I _{DM}	-8 (Note 1)	
Power Dissipation	P _D	236 (Note 2)	mW
		151 (Note 2)	
Operating Junction and Storage Temperature Range	T _j ; T _{stg}	-55~+150	°C

Thermal Data

Parameter	Symbol	Typical	Maximum	Unit
Thermal Resistance, Junction-to-ambient (Note 2)	R _{θJA}	440	530	°C/W
Thermal Resistance, Junction-to-ambient, steady state (Note 2)		540	650	

Note : 1. Pulse test, pulse width ≤ 300μs, duty ≤ 2%

2. When device is mounted on a 1"×1" FR-4 board, t ≤ 5s.

Electrical Characteristics (Ta=25°C, unless otherwise specified)

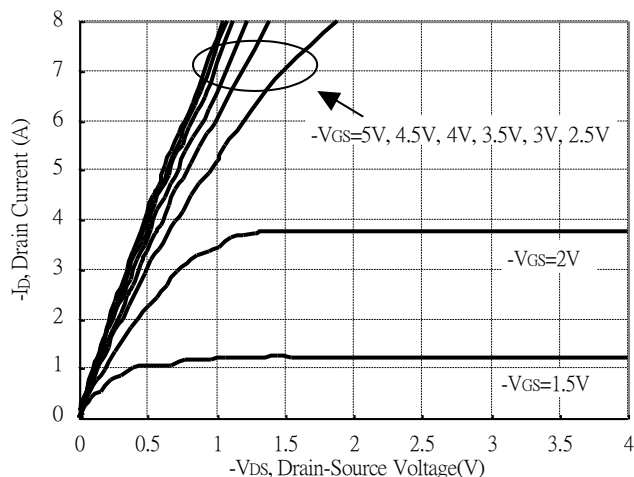
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Static					
BV _{DSS} *	-20	-	-	V	V _{GS} =0V, I _D =-250μA
V _{GS(th)}	-0.45	-	-0.95		V _{DS} =V _{GS} , I _D =-250μA
I _{GSS}	-	-	±100	nA	V _{GS} =±12V, V _{DS} =0V
I _{DSS}	-	-	-1	μA	V _{DS} =-20V, V _{GS} =0V
	-	-	-10		V _{DS} =-20V, V _{GS} =0V, T _j =85°C
R _{DS(ON)} *	-	0.112	0.150	Ω	V _{GS} =-4.5V, I _D =-1.06A
	-	0.149	0.200		V _{GS} =-2.5V, I _D =-1.0A
	-	0.206	0.250		V _{GS} =-1.8V, I _D =-0.49A
G _{FS}	-	2.7	-	S	V _{DS} =-10V, I _D =-1.06A
Dynamic					
C _{iss}	-	386	-	pF	V _{DS} =-10V, V _{GS} =0, f=1MHz
C _{oss}	-	37	-		
C _{rss}	-	32	-		
Q _g	-	4.3	-	nC	V _{DS} =-10V, I _D =-1.06A, V _{GS} =-4.5V
Q _{gs}	-	0.69	-		
Q _{gd}	-	1.01	-		
t _{d(on)}	-	7	10.5	ns	V _{DD} =-10V, I _D =-0.76A, V _{GS} =-4.5V, R _G =1Ω
t _r	-	17.4	26		
t _{d(off)}	-	26.4	40		
t _f	-	6.4	9.6		
R _g	-	10.5	15	Ω	f=1MHz

Source-Drain Diode					
I _S	-	-	-1.06	A	
I _{SM}	-	-	-8		
V _{SD}	-	-0.8	-1.2	V	I _S =-0.63A, V _{GS} =0V
trr*	-	5.3	-	ns	I _F =-1A, dI _F /dt=100A/μs
Q _{rr} *	-	2.1	-	nC	
t _a	-	4.8	-	ns	
t _b	-	0.5	-	ns	

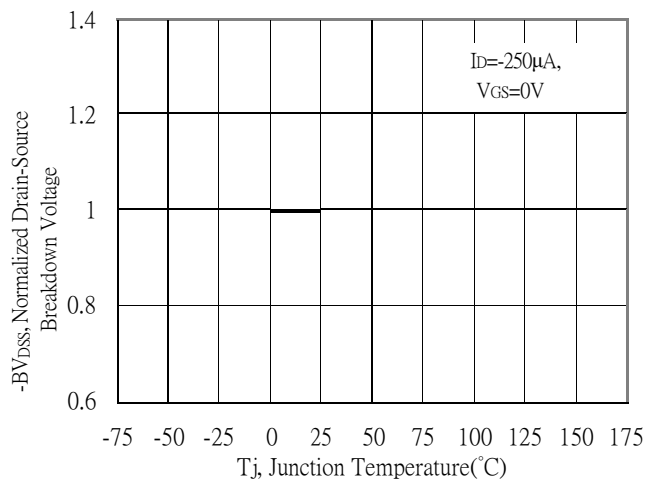
*Pulse Test : Pulse Width ≤300μs, Duty Cycle≤2%

Typical Characteristics

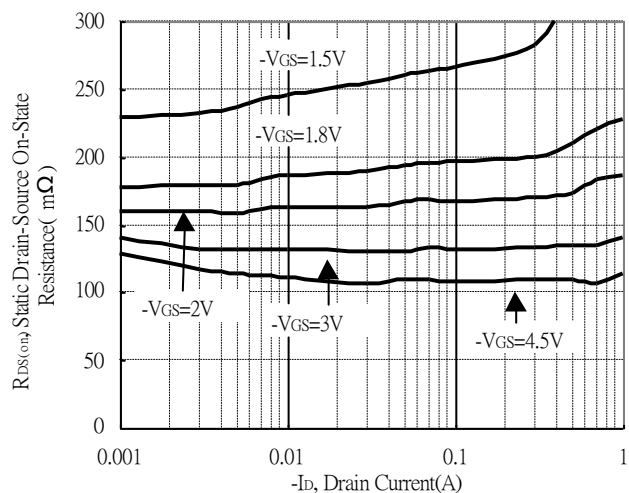
Typical Output Characteristics



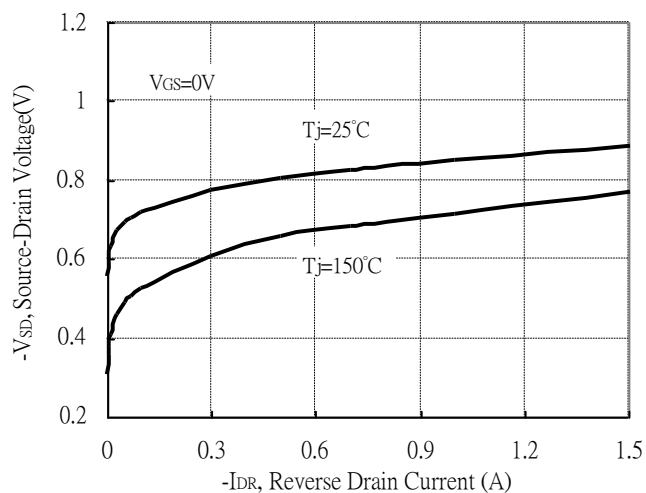
Breakdown Voltage vs Ambient Temperature



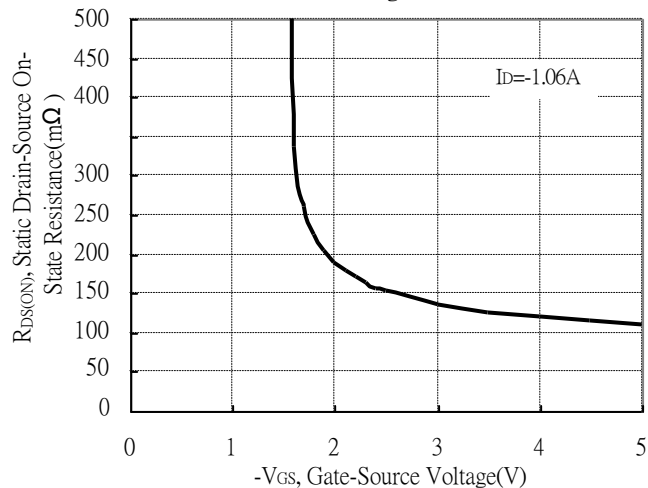
Static Drain-Source On-State resistance vs Drain Current



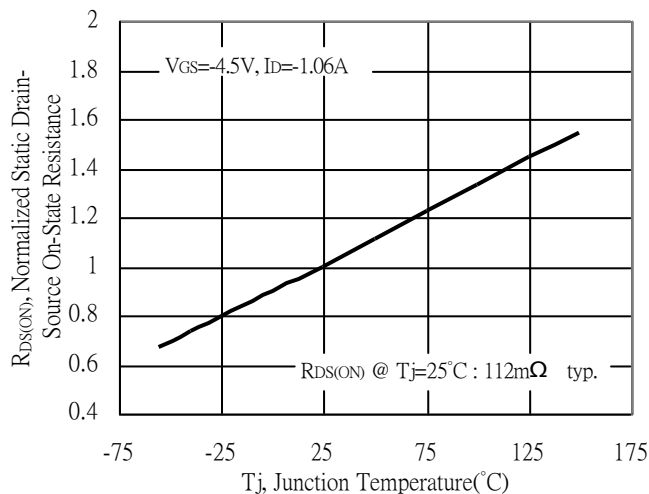
Reverse Drain Current vs Source-Drain Voltage



Static Drain-Source On-State Resistance vs Gate-Source Voltage

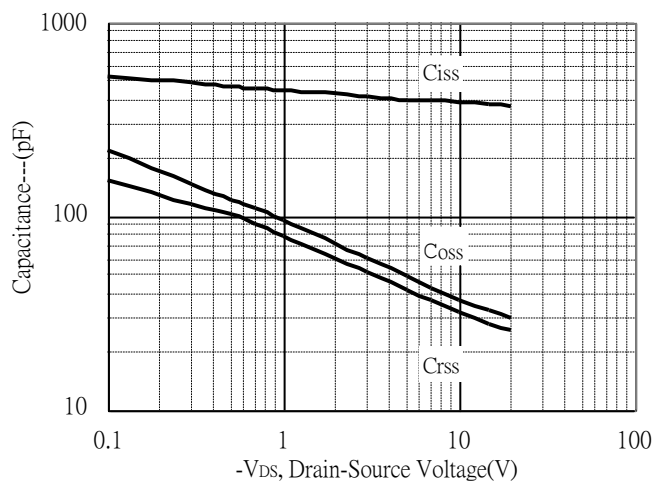


Drain-Source On-State Resistance vs Junction Temperature

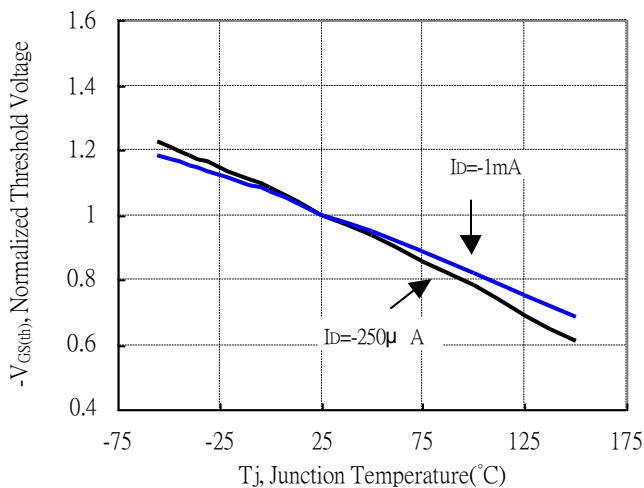


Typical Characteristics(Cont.)

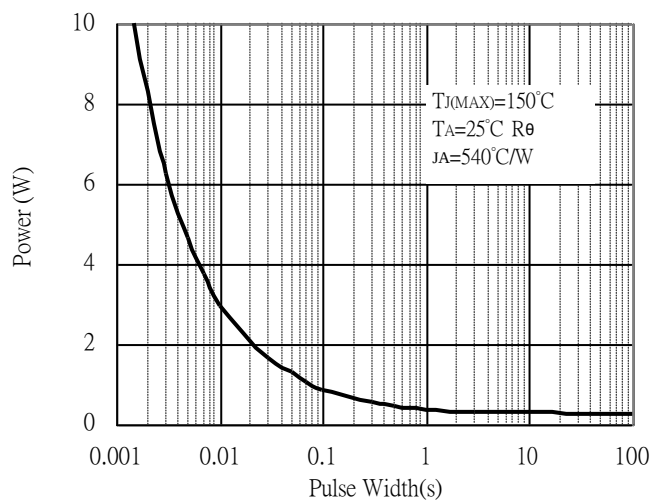
Capacitance vs Drain-to-Source Voltage



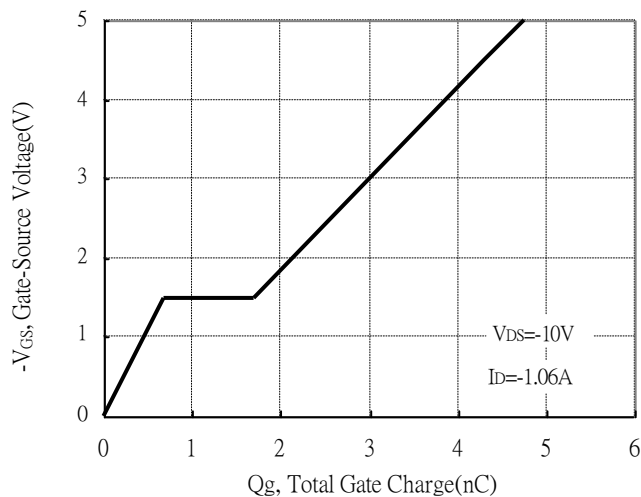
Threshold Voltage vs Junction Temperature



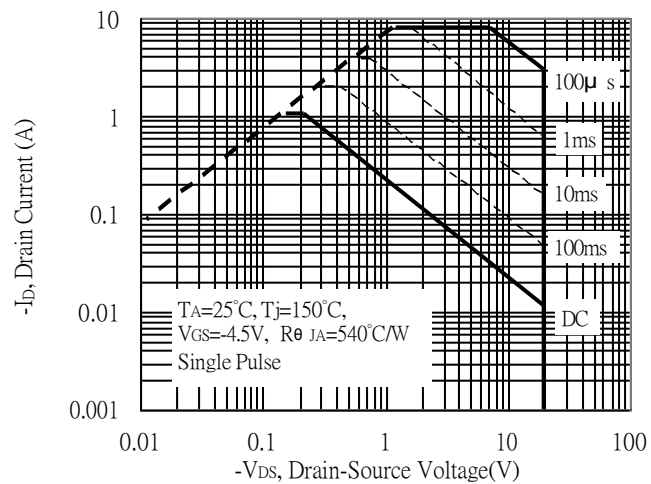
Single Pulse Power Rating, Junction to Ambient



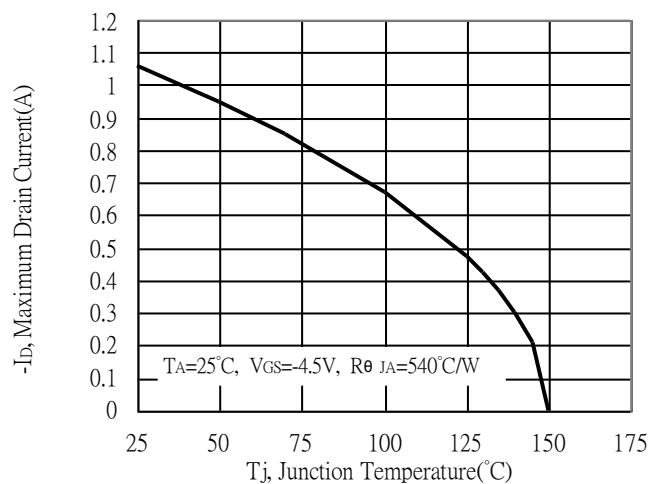
Gate Charge Characteristics



Maximum Safe Operating Area

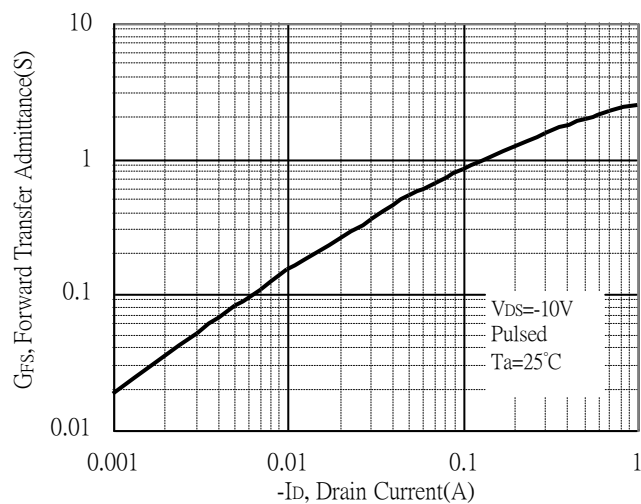


Maximum Drain Current vs Junction Temperature

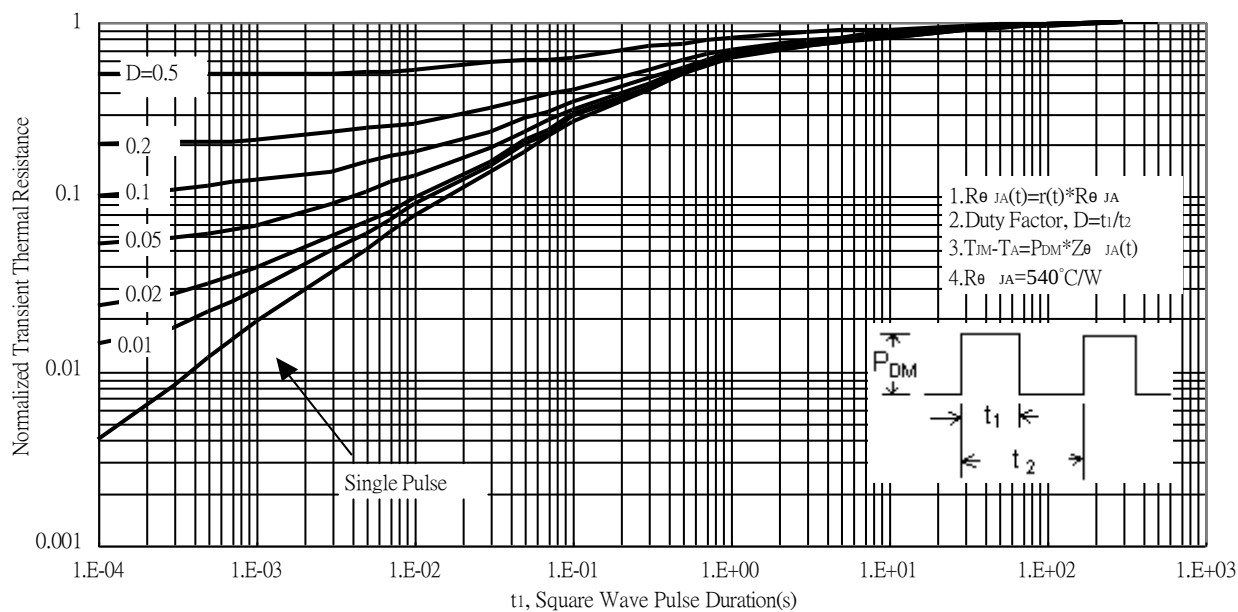


Typical Characteristics(Cont.)

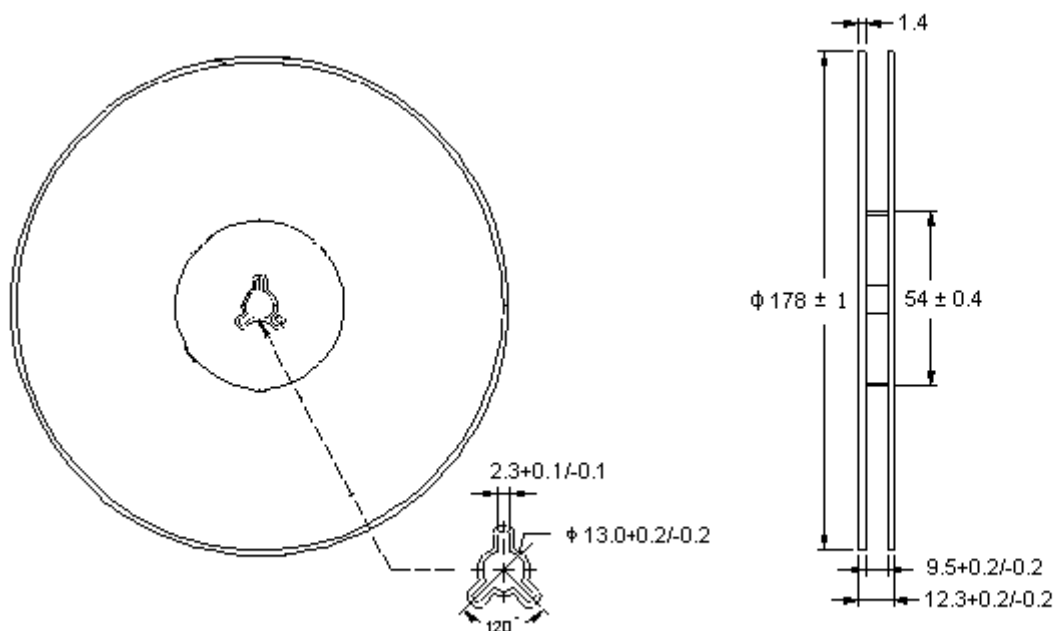
Forward Transfer Admittance vs Drain Current



Transient Thermal Response Curves

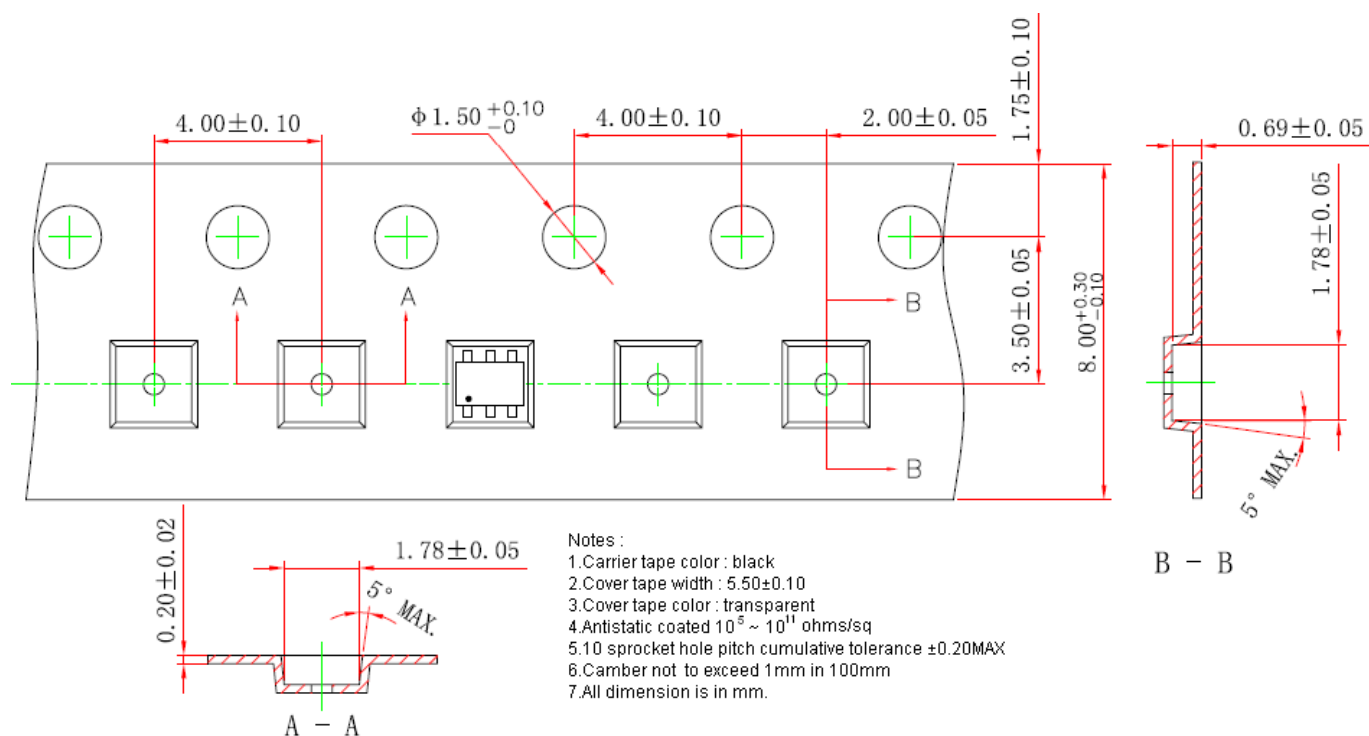


Reel Dimension

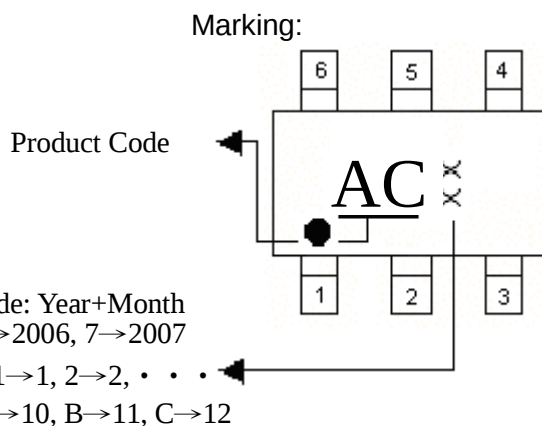
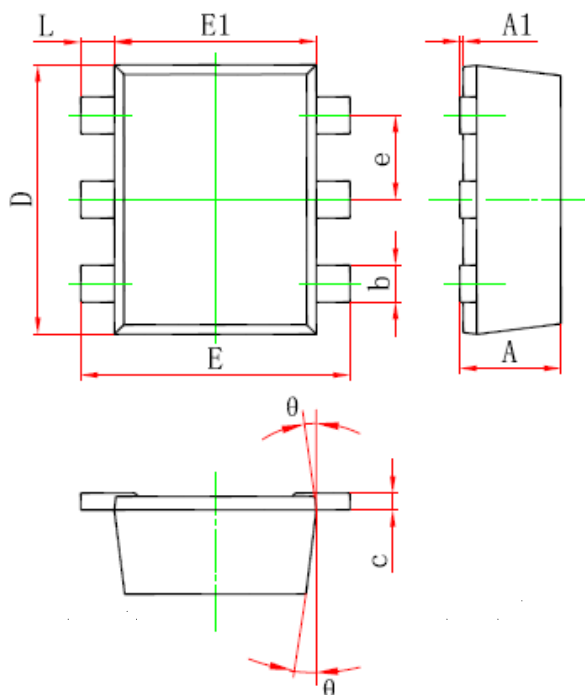


Unit: millimeter

Carrier Tape Dimension



SOT-563 Dimension



Style:
 Pin 1. Drain (D)
 Pin 2. Drain (D)
 Pin 3. Gate (G)
 Pin 4. Source (S)
 Pin 5. Drain (D)
 Pin 6. Drain (D)

6-Lead SOT-563 Plastic
 Surface Mounted Package
 Package Code: C6

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.021	0.024	0.525	0.600	b	0.007	0.011	0.170	0.270
A1	0.000	0.002	0.000	0.050	E1	0.043	0.051	0.100	1.300
e	0.018	0.022	0.450	0.550	E	0.059	0.067	1.500	1.700
c	0.004	0.006	0.090	0.160	L	0.004	0.012	0.100	0.300
D	0.059	0.067	1.500	1.700	θ	7° REF		7° REF	