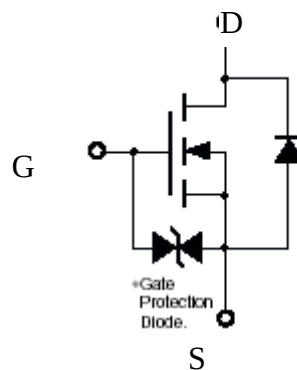
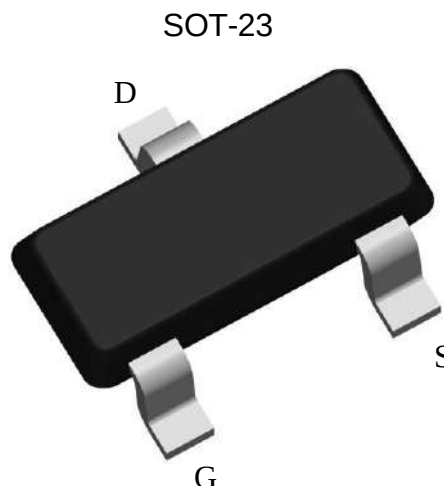


N-CHANNEL MOSFET

Features:

- Low on-resistance
- High ESD
- High speed switching
- Low-voltage drive(2V)
- Easily designed drive circuits
- Easy to use in parallel
- Pb-free package

BV _{DSS}	30V
I _D	1.4A
R _{DS(on)(max)} @V _{GS} =10V	300mΩ
R _{DS(on)(max)} @V _{GS} =4V	450mΩ



G : Gate S : Source D : Drain

Ordering Information

Device	Package	Shipping
KWN3418CN3	SOT-23 (Pb-free lead plating and halogen-free package)	3000 pcs / tape & reel

Absolute Maximum Ratings (Ta=25°C)

Parameter		Symbol	Limits	Unit
Drain-Source Voltage		V _{DSS}	30	V
Gate-Source Voltage		V _{GSS}	±20	
Drain Current	Continuous	I _D	1.4	A
	Pulsed	I _{DP}	5.6 *1	
Total Power Dissipation		P _D	900 *2	mW
ESD susceptibility			700 *3	V
Channel Temperature		T _{CH}	+150	°C
Storage Temperature		T _{stg}	-55~+150	

Note : *1. Pulse Width ≤ 300μs, Duty cycle ≤ 2%

*2. When the device is mounted on a ceramic board with area measuring 30mm × 30mm × 0.8mm

*3. Human body model, 1.5kΩ in series with 100pF

Thermal Performance

Parameter	Symbol	Limit	Unit
Thermal Resistance, Junction-to-Ambient(PCB mounted)	R _{th,ja}	139 (Note)	°C/W
Thermal Resistance, Junction-to-Case	R _{th,jc}	80	

Note : When the device is mounted on a ceramic board with area measuring 30mm × 30mm × 0.8mm.

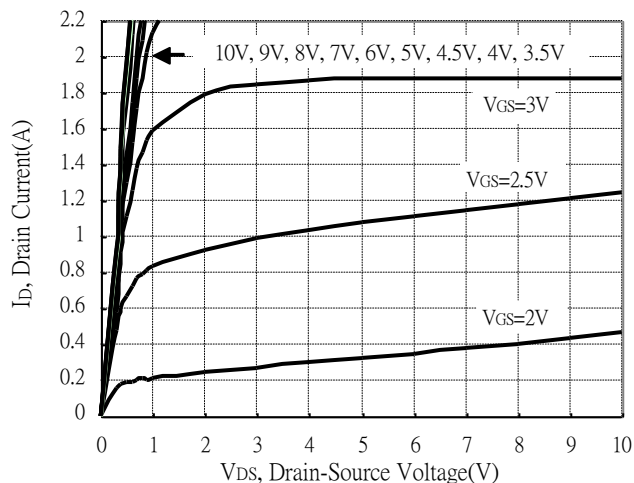
Electrical Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Static					
BV _{DSS} *	30	-	-	V	V _{GS} =0V, I _D =10μA
V _{GS(th)}	1	-	2.5		V _{DS} =V _{GS} , I _D =250μA
I _{GSS}	-	-	±10	μA	V _{GS} =±20V, V _{DS} =0V
I _{DSS}	-	-	500	nA	V _{DS} =30V, V _{GS} =0V
R _{DS(ON)} *	-	220	300	mΩ	I _D =700mA, V _{GS} =10V
	-	220	300		I _D =1.4A, V _{GS} =10V
	-	300	450		I _D =400mA, V _{GS} =4V
	-	325	450		I _D =1.4A, V _{GS} =4V
G _{FS}	400	-	-	mS	V _{DS} =10V, I _D =700mA
Dynamic					
C _{iSS}	-	60	-	pF	V _{DS} =10V, V _{GS} =0V, f=1MHz
C _{oss}	-	16	-		
C _{rSS}	-	9	-		
Source-Drain Diode					
*V _{SD}	-	-	1.2	V	V _{GS} =0V, I _{SD} =1.4A

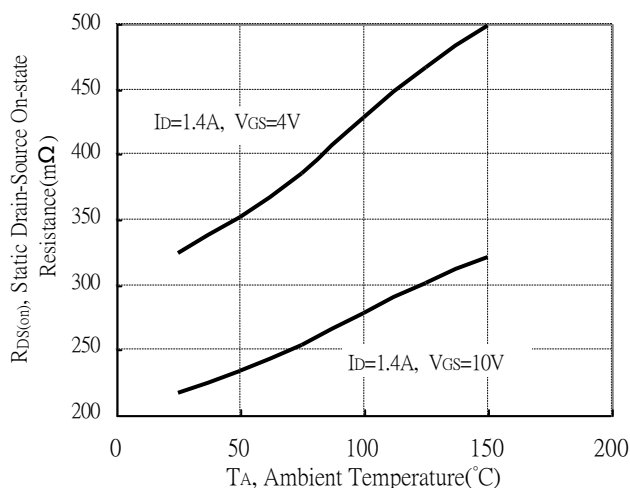
*Pulse Test : Pulse Width ≤ 380μs, Duty Cycle ≤ 2%

Typical Characteristics

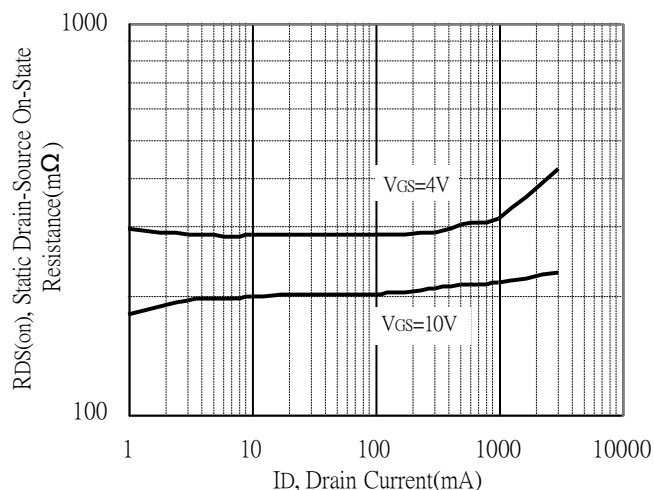
Typical Output Characteristics



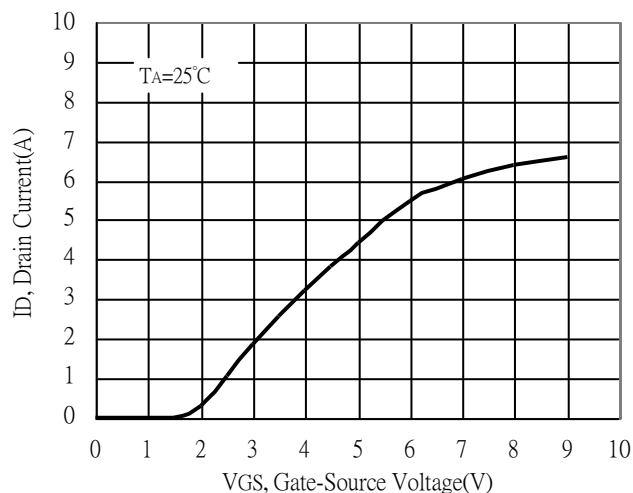
Static Drain-Source On-resistance vs Ambient Temperature



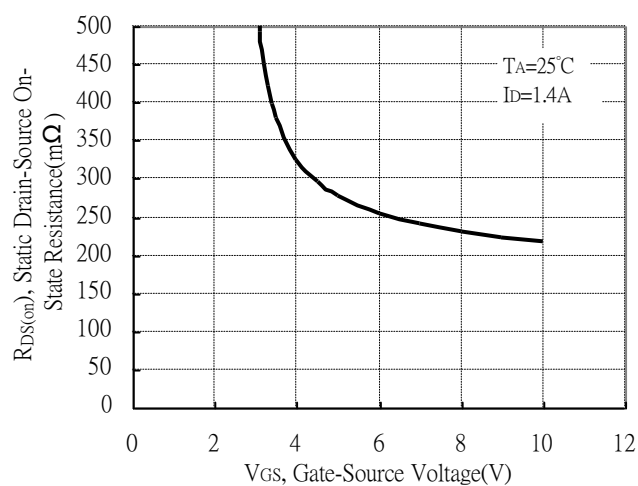
Static Drain-Source On-State resistance vs Drain Current



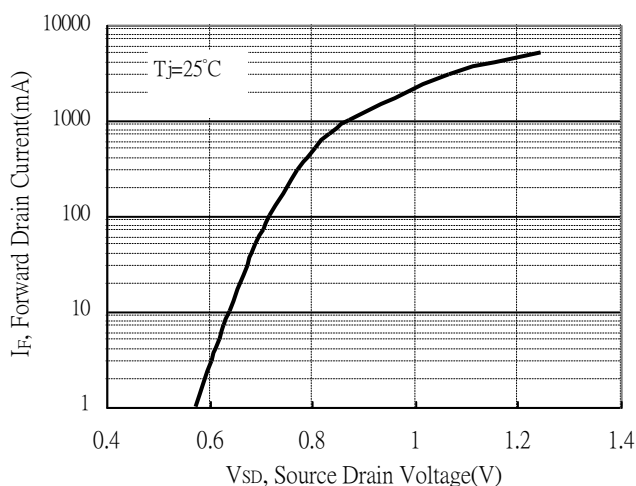
Drain Current vs Gate-Source Voltage



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

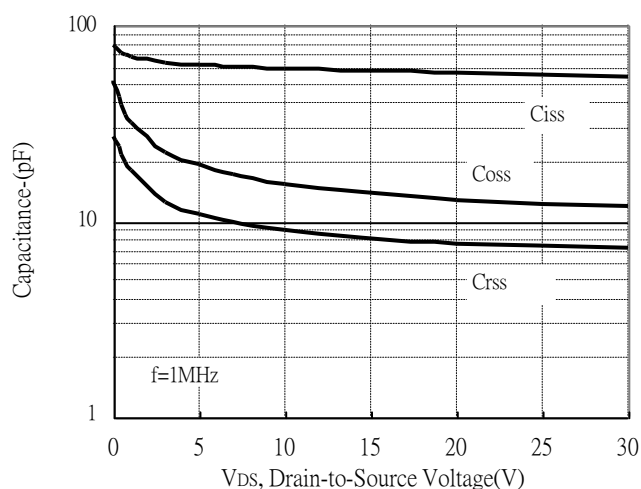


Forward Drain Current vs Source-Drain Voltage

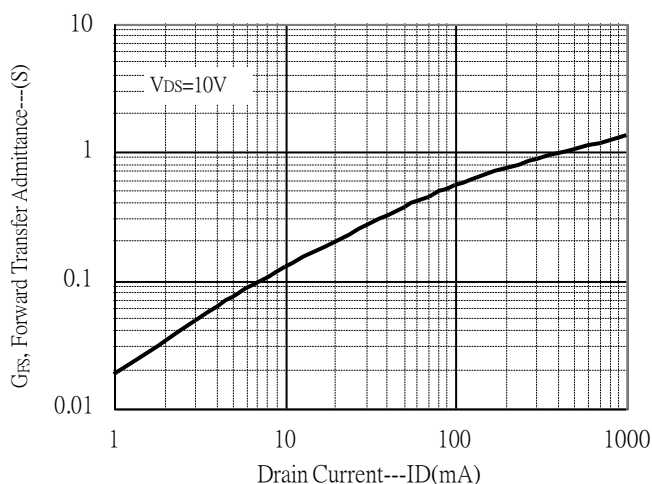


Typical Characteristics(Cont.)

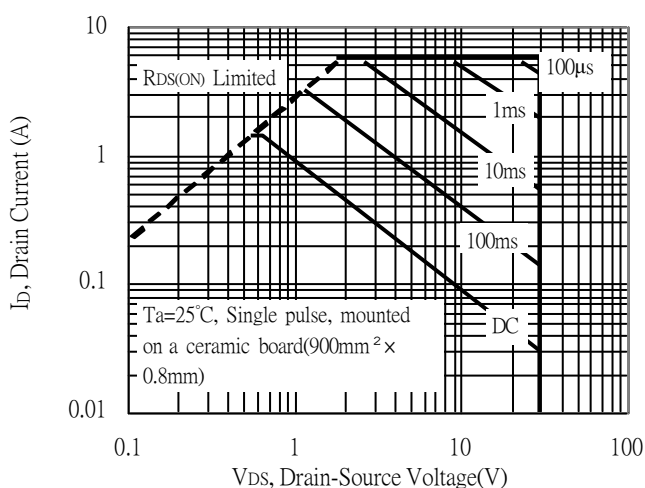
Capacitance vs Reverse Voltage



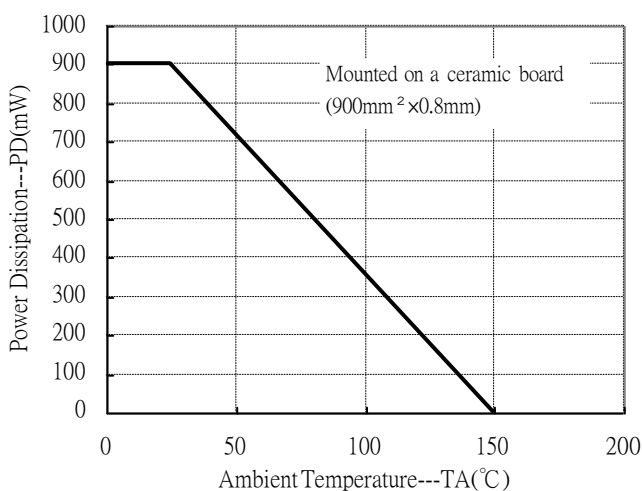
Forward Transfer Admittance vs Drain Current



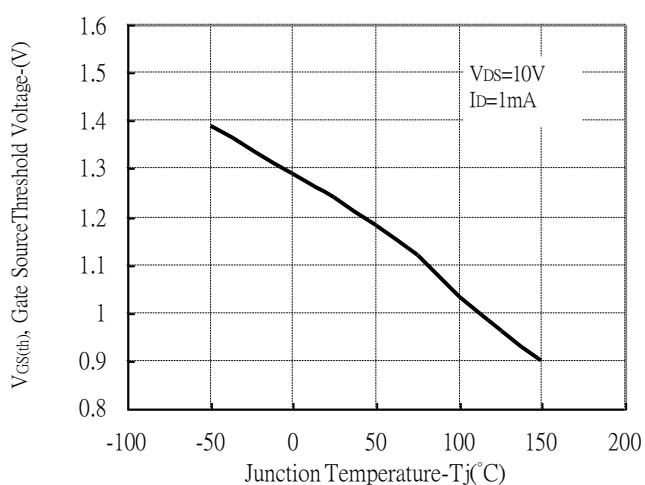
Maximum Safe Operating Area



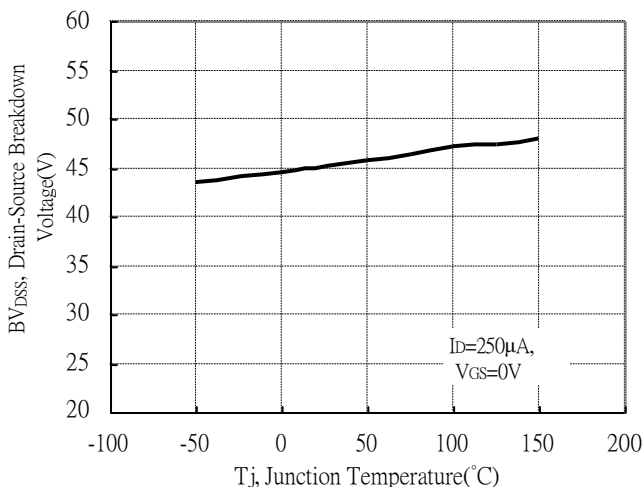
Power Derating Curve



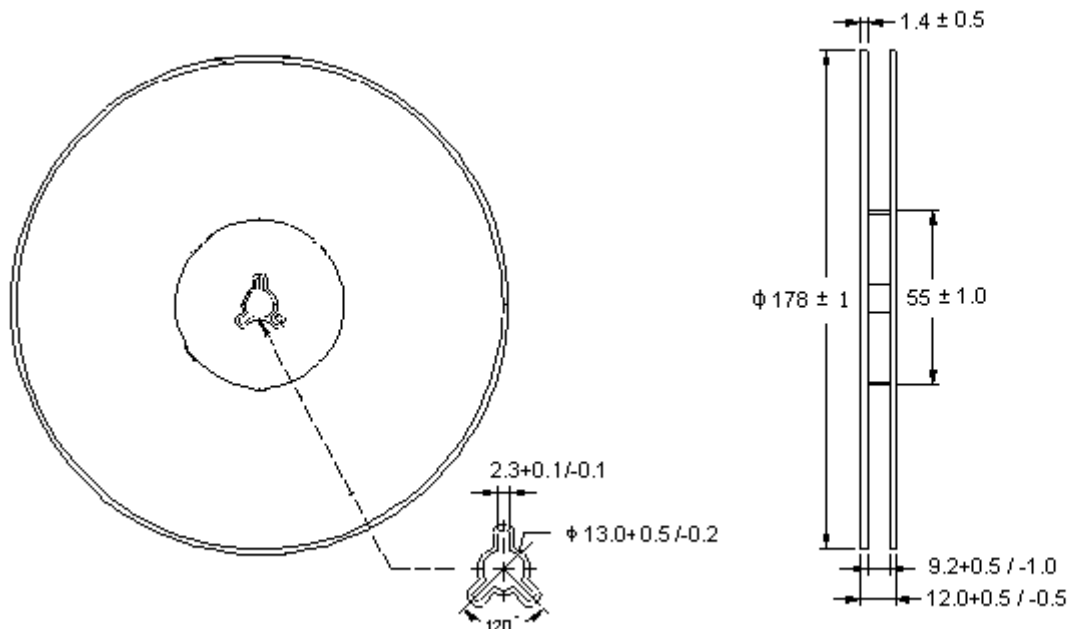
Gate Threshold Voltage vs Ambient Temperature



Brekdown Voltage vs Ambient Temperature

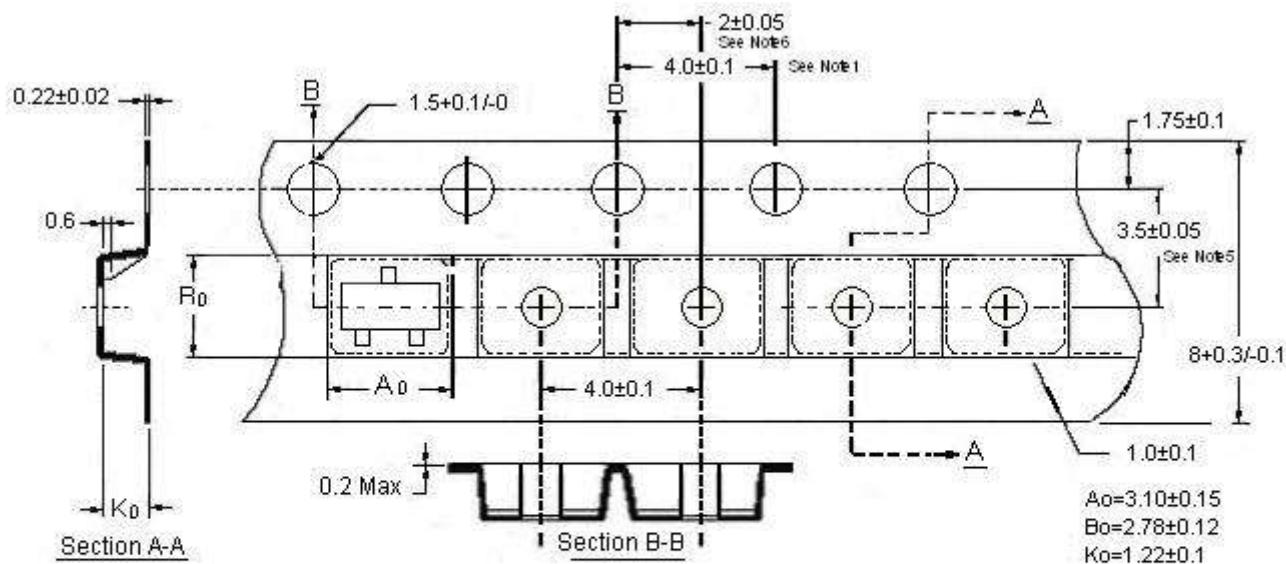


Reel Dimension



Unit: millimeter

Carrier Tape Dimension

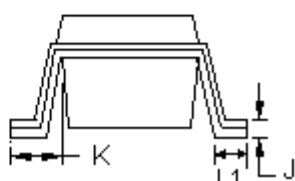
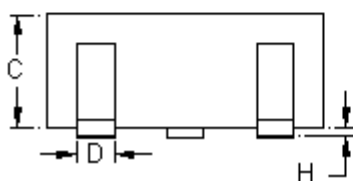
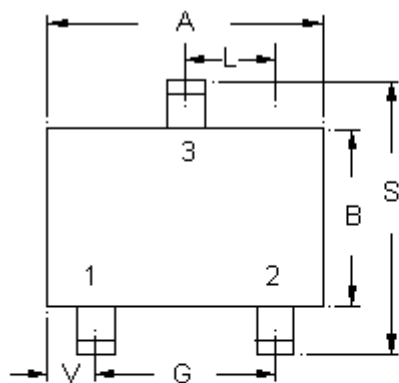


Notes:

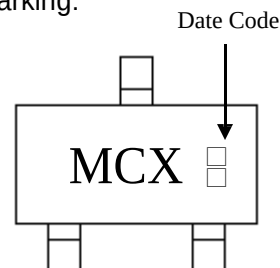
1. 10 sprocket hole pitch cumulative tolerance ± 0.2 .
2. Camber not to exceed 1mm in 100mm.
3. Material : conductive Black Polystyrene.
4. A_0 & B_0 measured on a plane 0.3mm above the bottom of the pocket.
5. K_0 measured from a plane on the inside bottom of the pocket to the top surface of the carrier.
6. Pocket position relative to sprocket hole measured as true position of pocket, not pocket hole.

Unit : millimeter

SOT-23 Dimension



Marking:



3-Lead SOT-23 Plastic
 Surface Mounted Package
 Package Code: N3

Style : Pin 1.Gate 2.Source 3.Drain

*:Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1102	0.1204	2.80	3.04	J	0.0032	0.0079	0.08	0.20
B	0.0472	0.0551	1.20	1.40	K	0.0118	0.0266	0.30	0.67
C	0.0335	0.0512	0.89	1.30	L	0.0335	0.0453	0.85	1.15
D	0.0118	0.0197	0.30	0.50	S	0.0830	0.1004	2.10	2.55
G	0.0669	0.0910	1.70	2.30	V	0.0098	0.0256	0.25	0.65
A	0.1102	0.1204	2.80	3.04	L1	0.0032	0.0079	0.08	0.20

Notes : 1.Controlling dimension : millimeters.