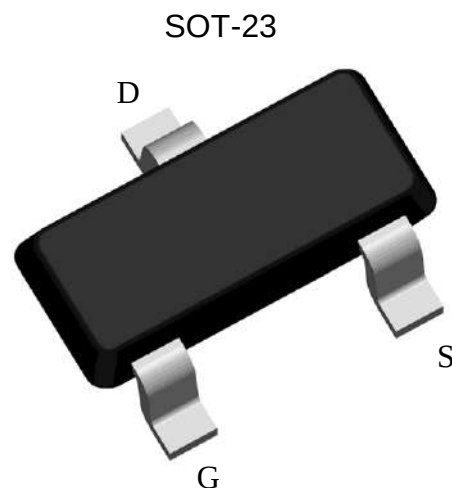


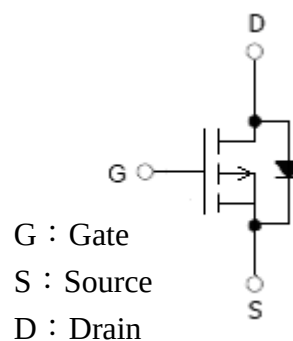
P-Channel Enhancement Mode MOSFET

Features:

- Advanced trench process technology
- High density cell design for ultra low on resistance
- Pb-free lead plating and halogen-free package



BV _{DSS}		-60V
I _D @V _{GS} =-10V, T _A =25°C		-2.5A
R _{DS(on)} (TYP)	V _{GS} =-10V, I _D =-2A	80mΩ
	V _{GS} =-4.5V, I _D =-1.7A	109mΩ



Ordering Information

Device	Package	Shipping
KWB080P06	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 _{DS}	-60	V
Gate-Source Voltage	V _{GS}	±20	
Continuous Drain Current @ V _{GS} =-10V	I _D	-2.5 (Note 3)	A
		-2 (Note 3)	
Pulsed Drain Current (Note 1&2)	I _{DM}	-10	
Maximum Power Dissipation	P _D	1.25	W
		0.8	
Operating Junction and Storage Temperature	T _j , T _{stg}	-55~+150	°C

Thermal Performance

Parameter	Symbol	Limit	Unit
Thermal Resistance, Junction-to-Ambient , max (Note 3)	R _{θJA}	100	°C/W
Thermal Resistance, Junction-to-Case , max	R _{θJC}	50	

Note : 1. Pulse width limited by maximum junction temperature.

2. Pulse width ≤ 300μs, duty cycle ≤ 2%

3. Surface mounted on 1 in² copper pad of FR-4 board, t ≤ 5s; 120°C/W at steady state; 417°C/W when mounted on minimum copper pad.

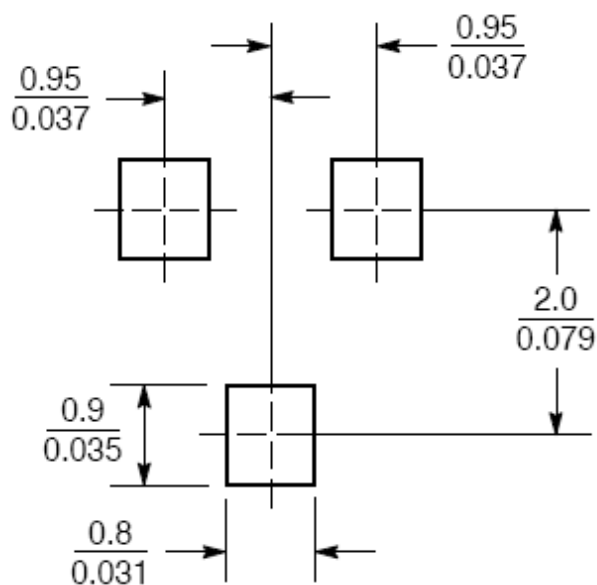
Electrical Characteristics (T_j=25°C, unless otherwise specified)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Static					
BV _{DSS}	-60	-	-	V	V _{GS} =0V, I _D =-250μA
V _{GS(th)}	-1.0	-	-2.5		V _{DS} =V _{GS} , I _D =-250μA
I _{GSS}	-	-	±100	nA	V _{GS} =±20V, V _{DS} =0V
I _{DSS}	-	-	-1	μA	V _{DS} =-48V, V _{GS} =0V
	-	-	-10		V _{DS} =-48V, V _{GS} =0V, T _j =55°C
*R _{DS(ON)}	-	80	104	mΩ	V _{GS} =-10V, I _D =-2A
	-	109	150		V _{GS} =-4.5V, I _D =-1.7A
*G _{FS}	-	5	-	S	V _{DS} =-10V, I _D =-2A
Dynamic					
C _{iss}	-	511	-	pF	V _{DS} =-25V, V _{GS} =0V, f=1MHz
C _{oss}	-	57	-		
C _{rss}	-	40	-		
*t _{d(ON)}	-	6.8	-	ns	V _{DS} =-30V, I _D =-2A, V _{GS} =-10V, R _G =3Ω
*t _r	-	18.2	-		
*t _{d(OFF)}	-	26.4	-		
*t _f	-	7.6	-		
*Q _g	-	12	-	nC	V _{DS} =-48V, I _D =-2A, V _{GS} =-10V
*Q _{gs}	-	1.7	-		
*Q _{gd}	-	3	-		

Source-Drain Diode					
I_S	-	-	-2.5	A	
I_{SM}	-	-	-10		
$*V_{SD}$	-	-0.82	-1.2	V	$V_{GS}=0V, I_S=-2A$
$*t_{rr}$	-	10.7	-	ns	$I_F=-2A, V_{GS}=0V, dI_F/dt=100A/\mu s$
$*Q_{rr}$	-	6.4	-	nC	

*Pulse Test : Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$

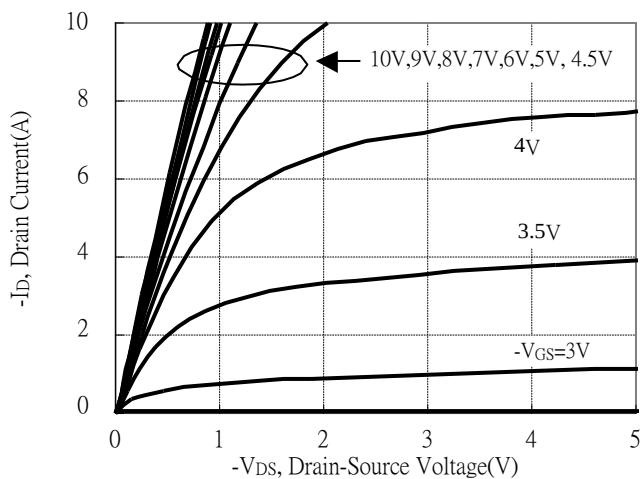
Recommended Soldering Footprint



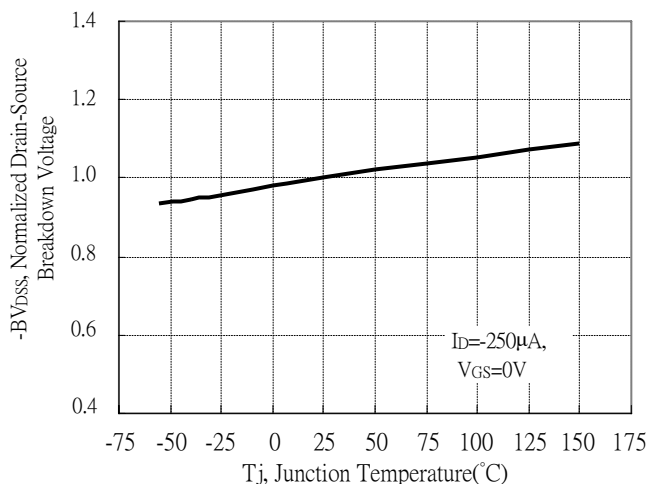
Unit : $\frac{mm}{inches}$

Typical Characteristics

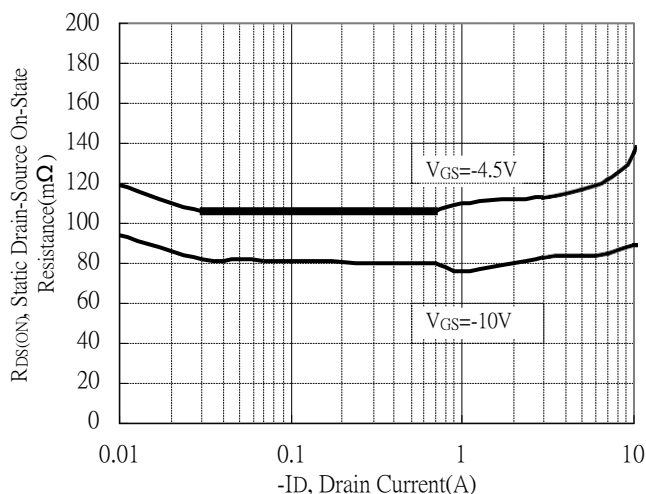
Typical Output Characteristics



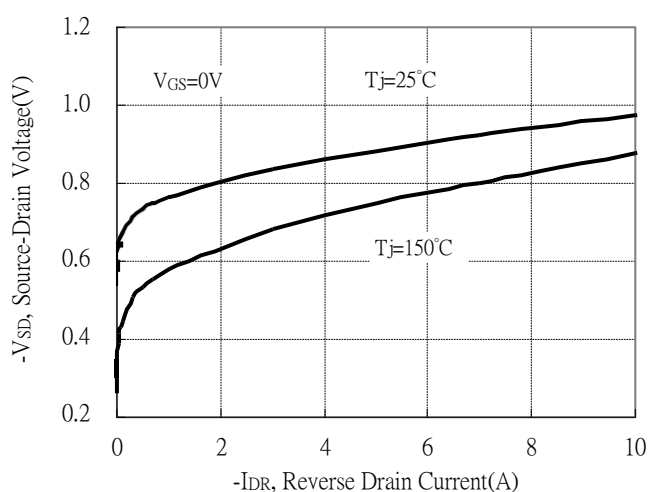
Breakdown Voltage vs Ambient Temperature



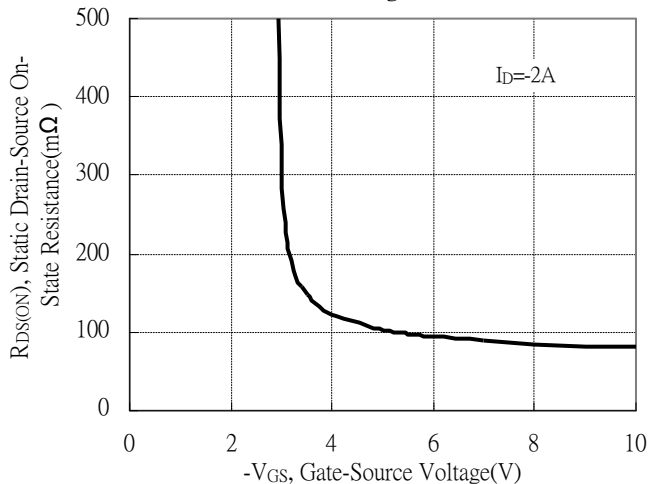
Static Drain-Source On-State resistance vs Drain Current



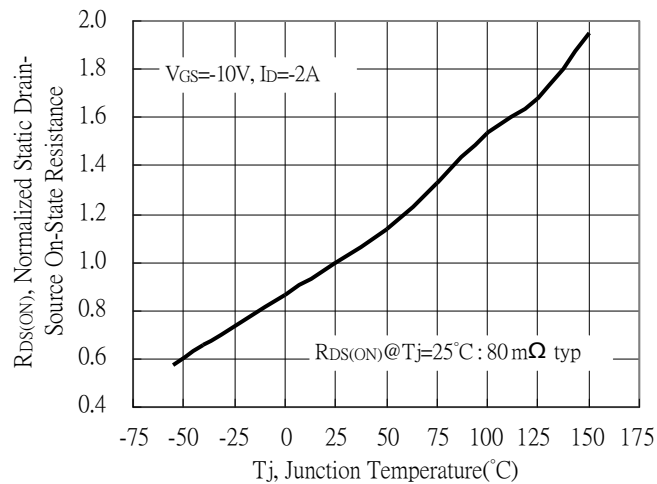
Reverse Drain Current vs Source-Drain Voltage



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

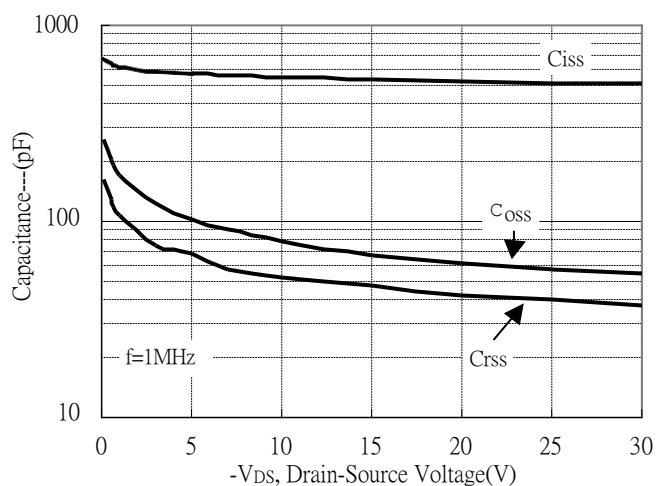


Drain-Source On-State Resistance vs Junction Temperature

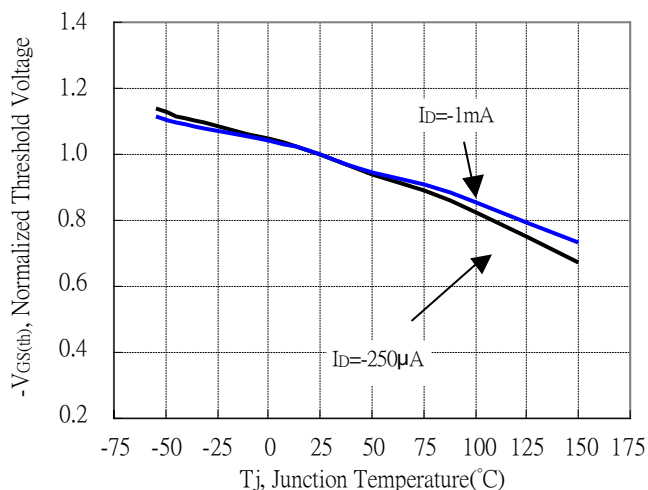


Typical Characteristics(Cont.)

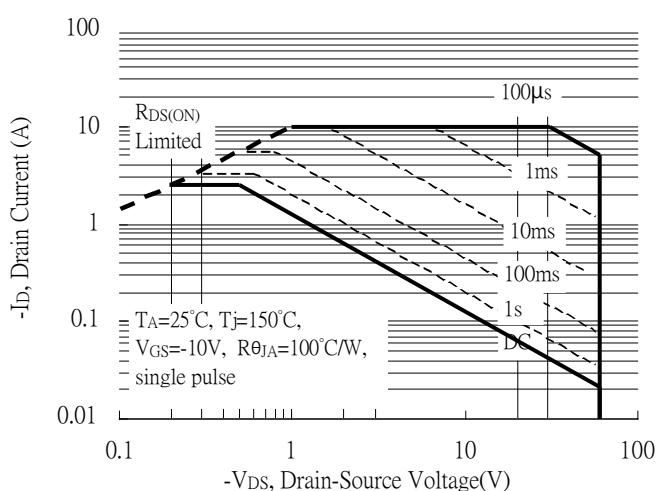
Capacitance vs Drain-to-Source Voltage



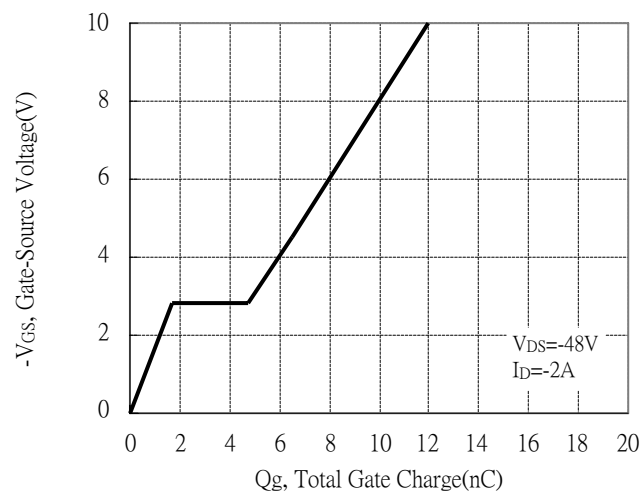
Threshold Voltage vs Junction Temperature



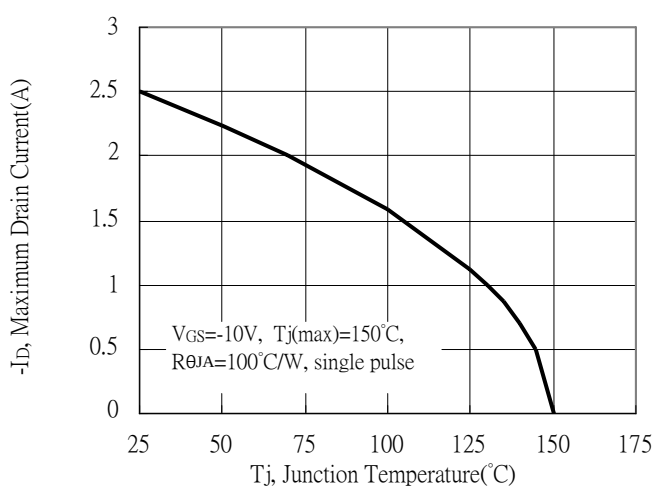
Maximum Safe Operating Area



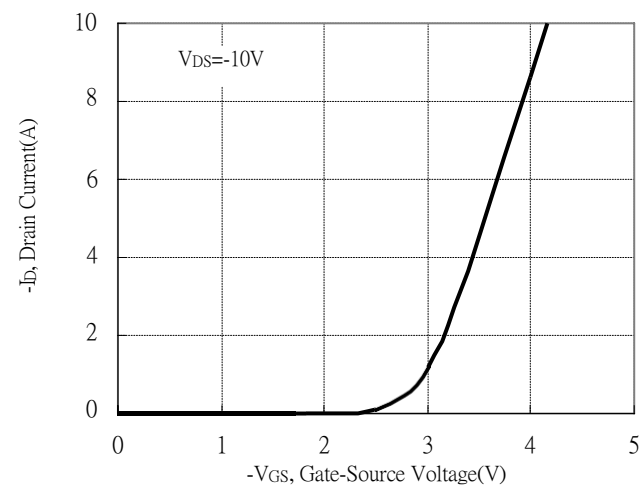
Gate Charge Characteristics



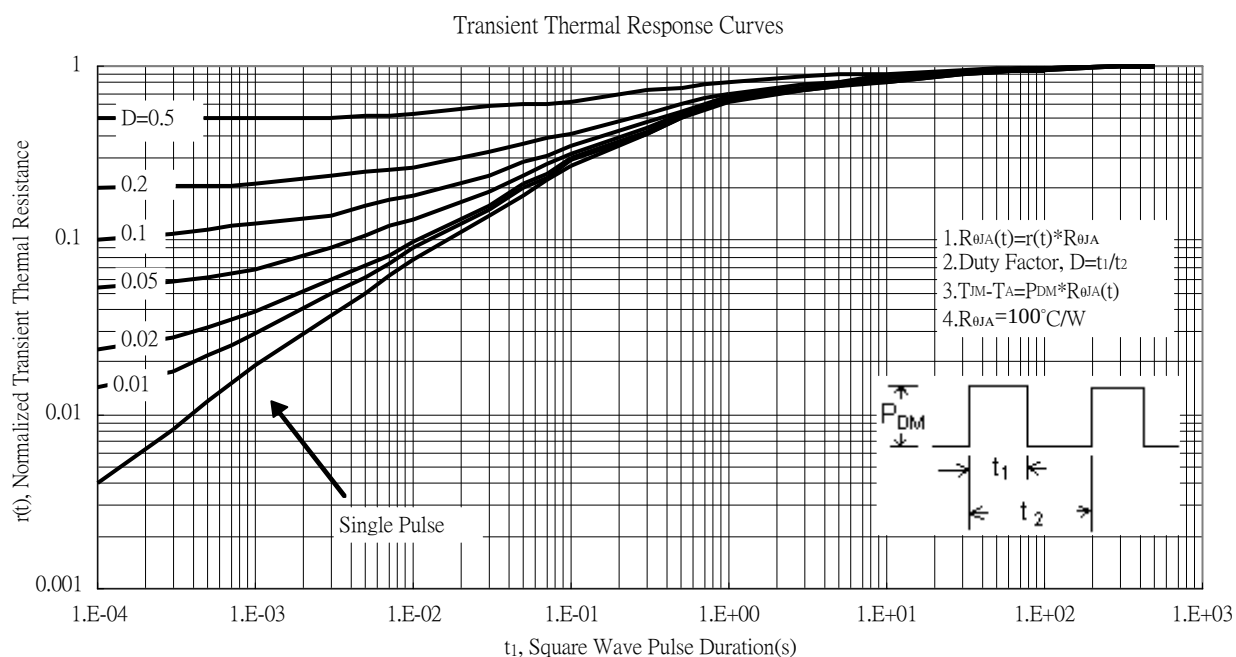
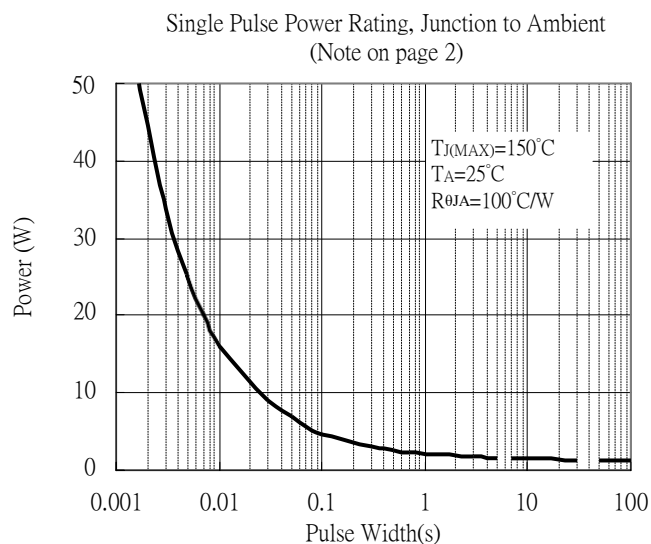
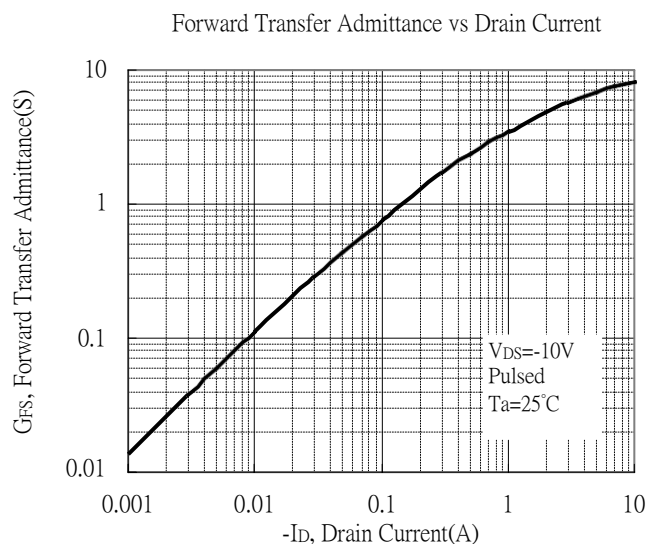
Maximum Drain Current vs Junction Temperature



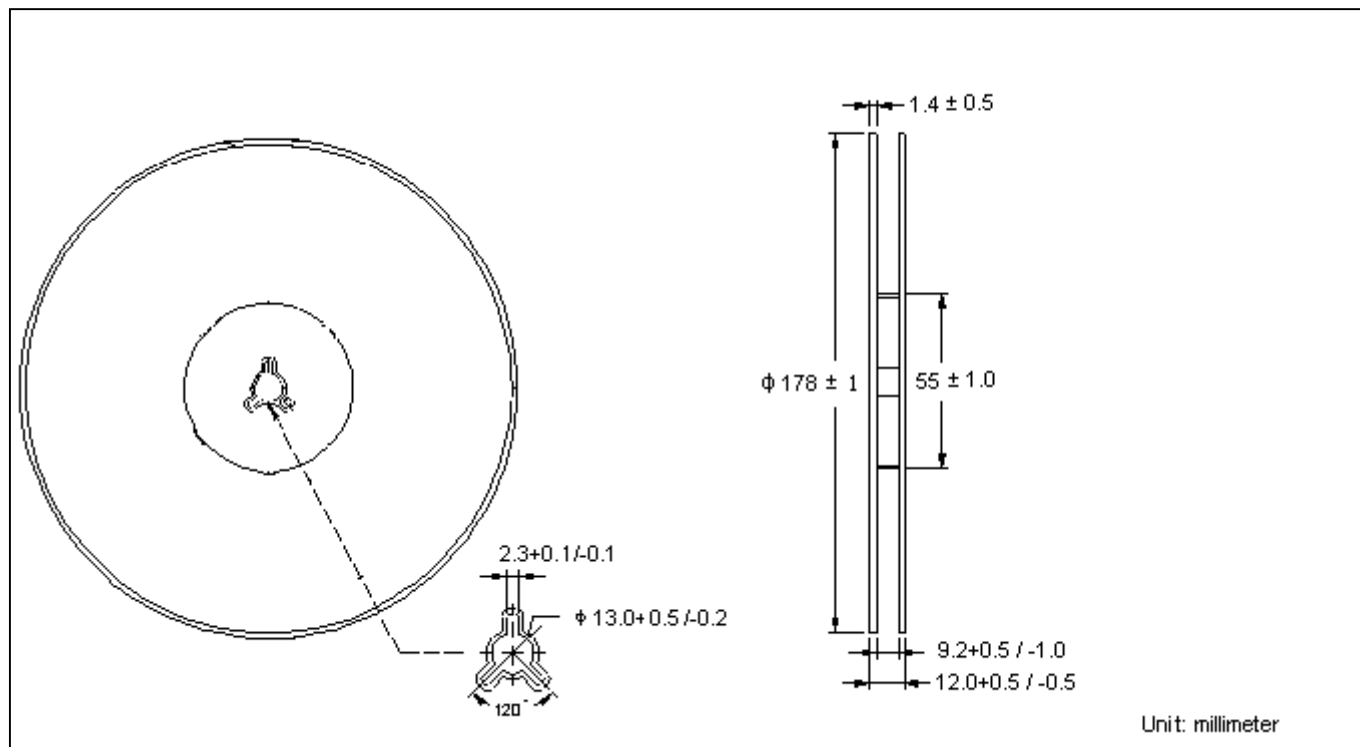
Typical Transfer Characteristics



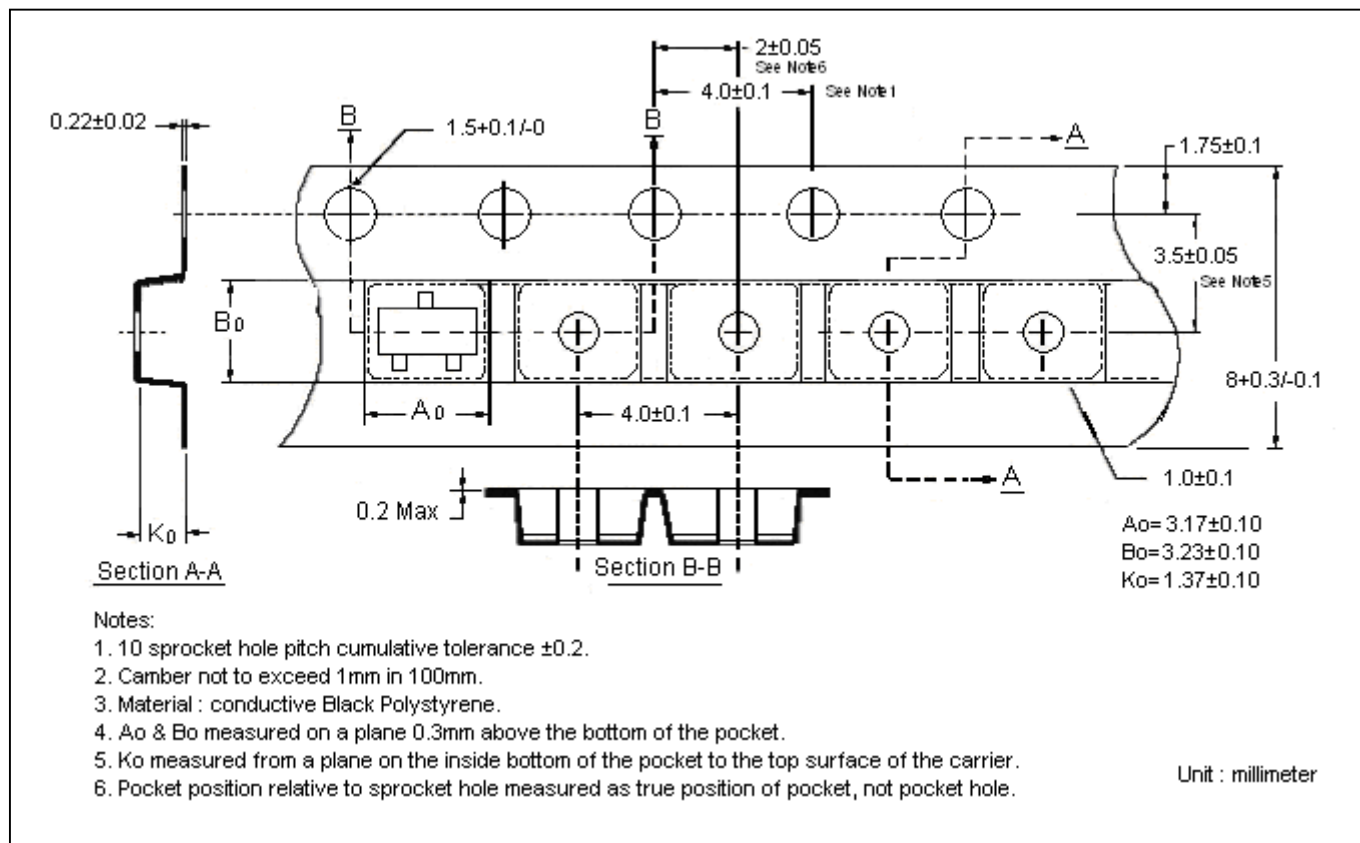
Typical Characteristics(Cont.)



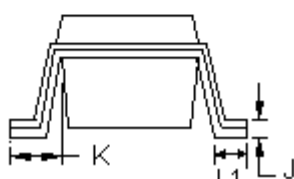
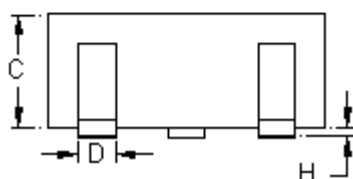
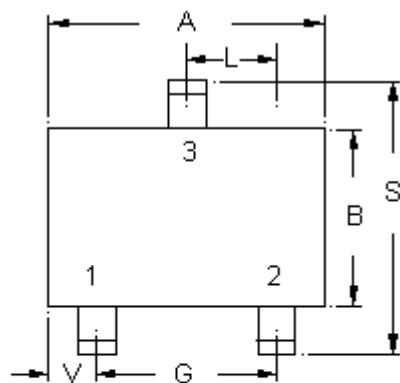
Reel Dimension



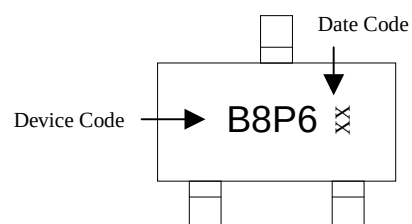
Carrier Tape Dimension



SOT-23 Dimension



Marking:



3-Lead SOT-23 Plastic
 Surface Mounted Package

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

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	0.0669	1.20	1.70	K	0.0197	0.0283	0.50	0.72
C	0.0335	0.0453	0.89	1.15	L	0.0335	0.0453	0.85	1.15
D	0.0118	0.0197	0.30	0.50	S	0.0830	0.1161	2.10	2.95
G	0.0669	0.0787	1.70	2.00	V	0.0098	0.0256	0.25	0.65
H	0.0000	0.0040	0.00	0.10	L1	0.0118	0.0236	0.30	0.60