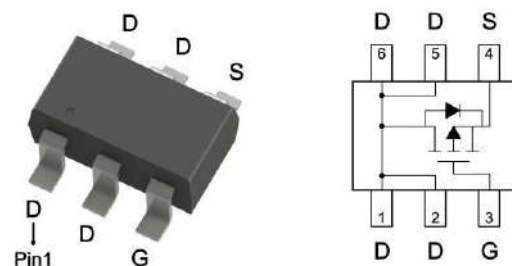


P-Channel Enhancement Mode Power MOSFET

Features :

- Low Gate Charge
- Fast Switching Characteristic
- Pb-free lead plating and halogen-free

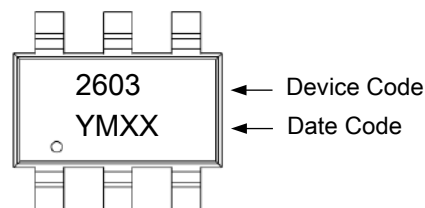
SOT-26



Ordering Information

Device	Package	Shipping
KTTP2603N	SOT-26	3000pcs / Tape & Reel

Marking



YM: Date Code Marking

Y: Year Code, the last digit of Christian year

M: Month Code

A: Jan	B: Feb	C: Mar	D: Apr	E: May	F: Jun
G: Jul	H: Aug	J: Sep	K: Oct	L: Nov	M: Dec

XX: Production Serial Number, 01~99

Product Summary

BV _{DSS}	-20	V
R _{DS(ON)} typ. @ V _{GS} =-4.5V, I _D =-4A	30	mΩ
R _{DS(ON)} typ. @ V _{GS} =-2.5V, I _D =-2A	42	
I _D @ V _{GS} =-10V, T _A =25°C	-5	A

Absolute Maximum Ratings (T_A=25°C)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V _{DS}	-20	V
Gate-Source Voltage	V _{GS}	±8	
Continuous Drain Current @ V _{GS} =-4.5V, T _A =25°C	I _D	-5	A
Continuous Drain Current @ V _{GS} =-4.5V, T _A =70°C		-4	
Pulsed Drain Current	I _{DM}	-20	
Continuous Body Diode Forward Current @ T _A =25°C	I _S	-1.2	
Pulsed Body Diode Forward Current @ T _A =25°C	I _{SM}	-4.8	
Total Power Dissipation	P _D	1.5	W
		1	
Operating Junction and Storage Temperature Range	T _J , T _{stg}	-55~+150	°C
Steady State Thermal Resistance, Junction-to-Ambient	R _{θJA}	81	°C/W

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

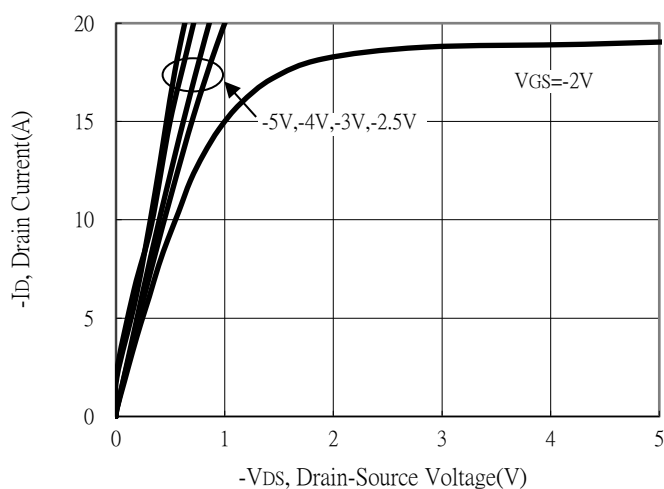
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Static					
BV _{DSS}	-20	-	-	V	V _{GS} =0V, I _D =-250μA
V _{GS(th)}	-0.4	-	-1.2		V _{DS} =V _{GS} , I _D =-250μA
G _{FS}	-	9	-	S	V _{DS} =-10V, I _D =-4A
I _{GSS}	-	-	±100	nA	V _{GS} =±8V, V _{DS} =0V
I _{DSS}	-	-	-1	μA	V _{DS} =-16V, V _{GS} =0V
R _{DS(ON)}	-	30	40	mΩ	V _{GS} =-4.5V, I _D =-4A
	-	42	58		V _{GS} =-2.5V, I _D =-2A
Dynamic					
C _{iss}	-	1150	-	pF	V _{DS} =-10V, V _{GS} =0V, f=1MHz
C _{oss}	-	120	-		
C _{rss}	-	105	-		
R _g	-	40	-	Ω	f=1MHz
Q _g *c,d	-	14	-	nC	V _{DS} =-10V, I _D =-4A, V _{GS} =-4.5V
Q _{gs} *c,d	-	1.7	-		
Q _{gd} *c,d	-	3.5	-		
t _{d(ON)} *c,d	-	5	-	ns	V _{DS} =-10V, I _D =-4A, V _{GS} =-4.5V, R _{GS} =1Ω
t _r *c,d	-	17	-		
t _{d(OFF)} *c,d	-	112	-		
t _f *c,d	-	145	-		
Source-Drain Diode					
V _{SD} *c	-	-0.85	-1.2	V	I _S =-4A, V _{GS} =0V
t _{rr}	-	68	-	ns	I _F =-2A, di/dt=100A/μs
Q _{rr}	-	62	-	nC	

Note:

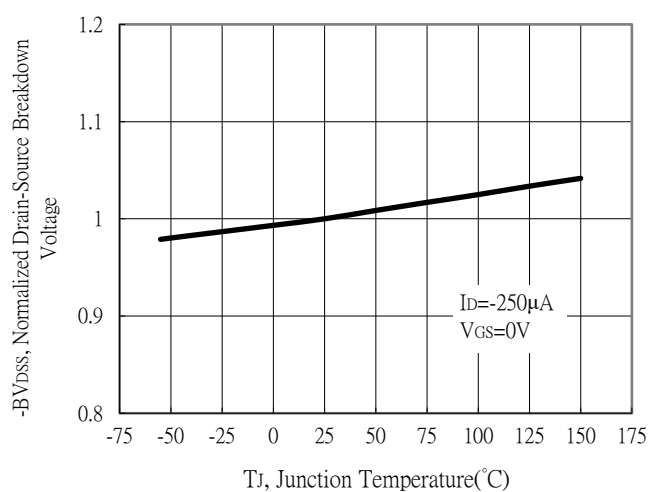
- *a. The value of $R_{\theta JA}$ is measured with the device mounted on 1in² FR-4 board with 2oz copper, in a still air environment with $T_A=25^\circ\text{C}$. The power dissipation P_D is based on $R_{\theta JA}$ and the maximum allowed junction temperature of 150°C . The value in any given application depends on the user's specific board design.
- *b. Repetitive rating, pulse width limited by junction temperature $T_{J(MAX)}=150^\circ\text{C}$. Ratings are based on low frequency and low duty cycles to keep initial $T_J=25^\circ\text{C}$.
- *c. Pulse Test : Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.
- *d. Independent of operating temperature.

Typical Characteristics

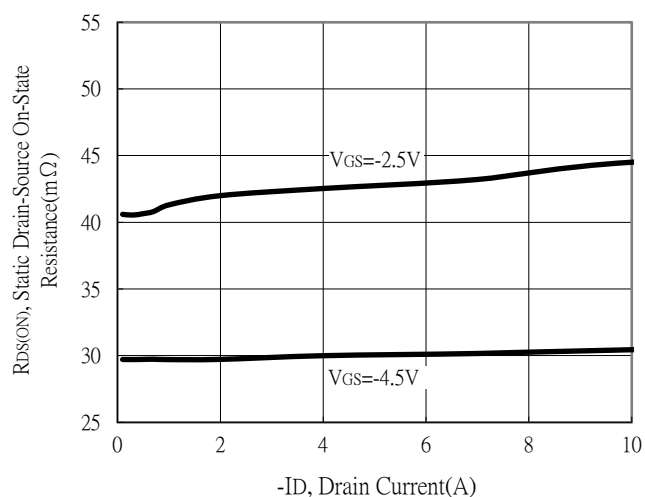
Typical Output Characteristics



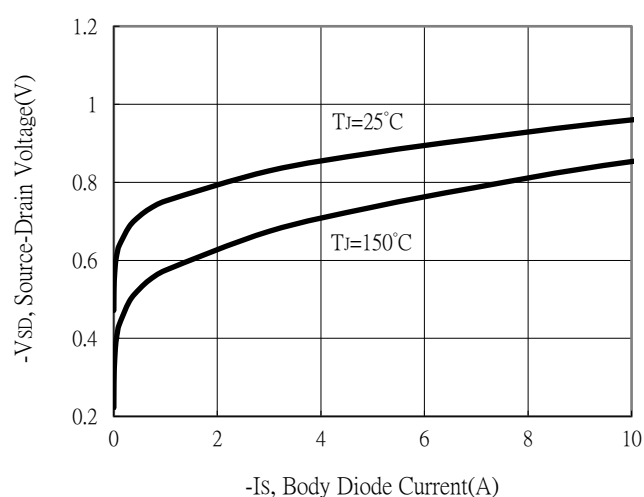
Breakdown Voltage vs Ambient Temperature



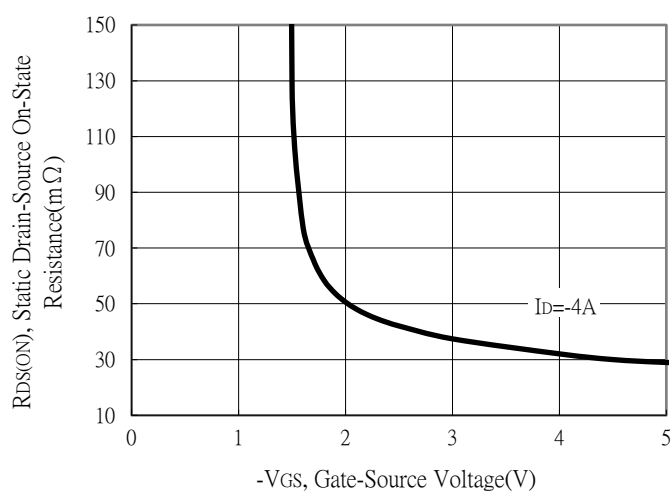
Static Drain-Source On-State resistance vs Drain Current



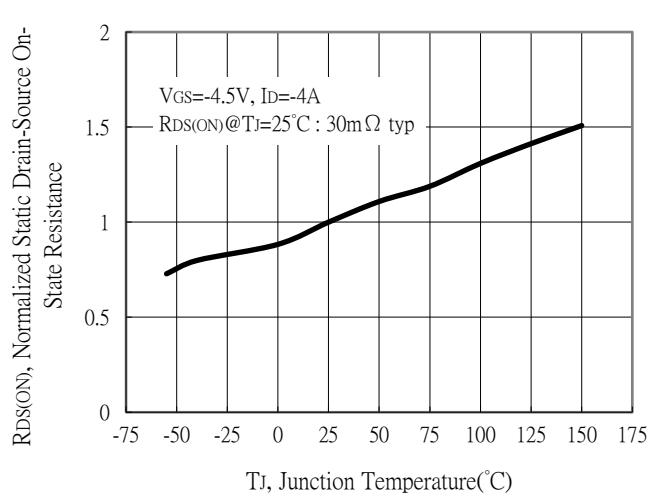
Body Diode Current vs Source-Drain Voltage



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

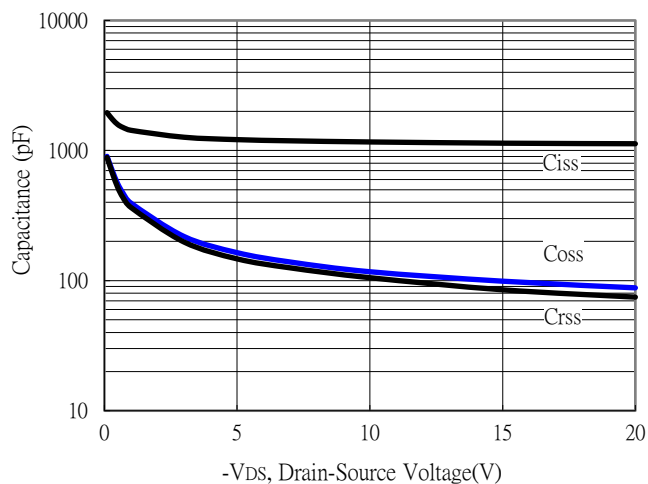


Drain-Source On-State Resistance vs Junction Temperature

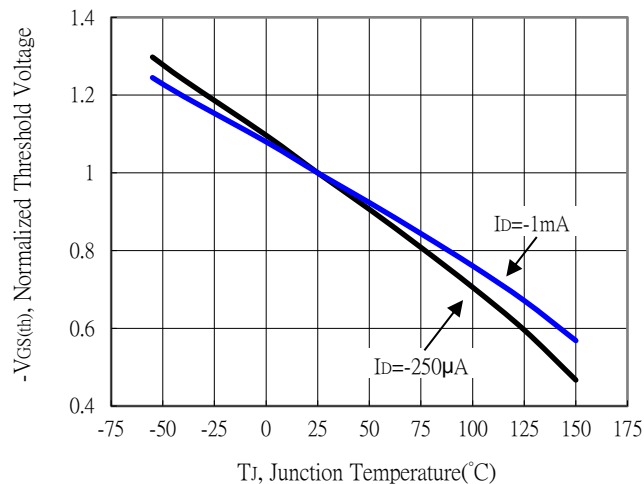


Typical Characteristics

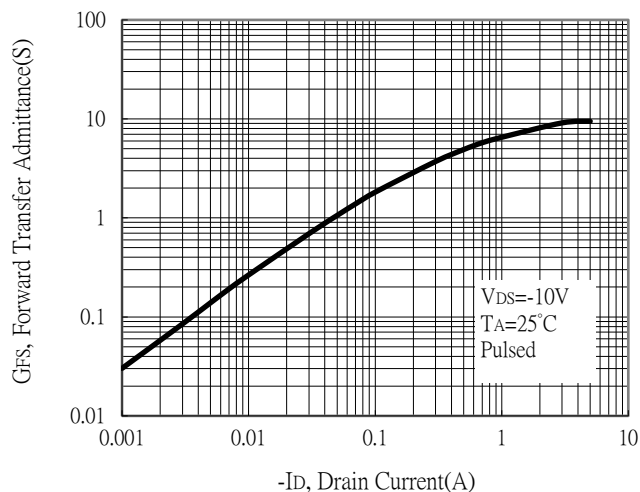
Capacitance vs Drain-to-Source Voltage



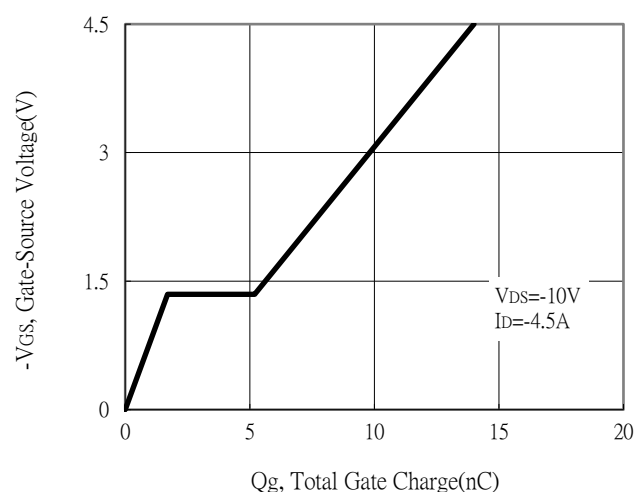
Threshold Voltage vs Junction Temperature



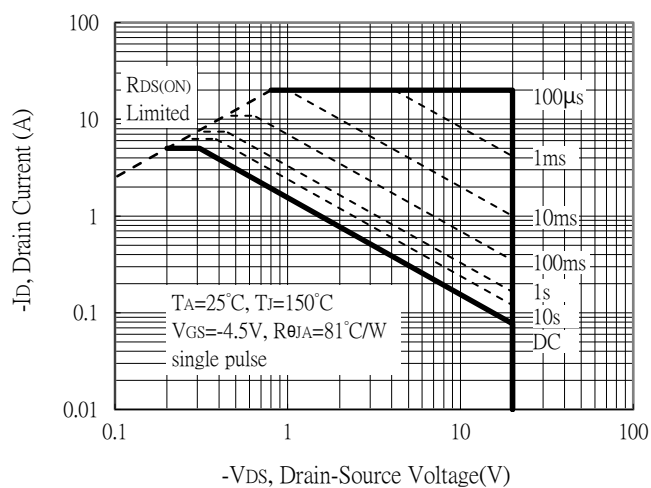
Forward Transfer Admittance vs Drain Current



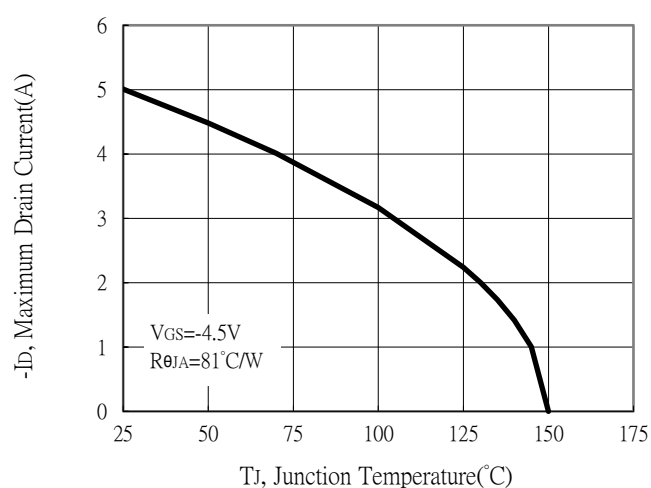
Gate Charge Characteristics



Maximum Safe Operating Area

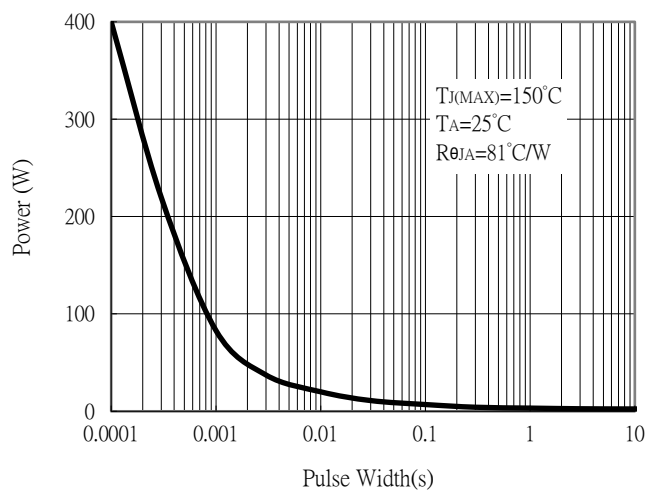


Maximum Drain Current vs Junction Temperature

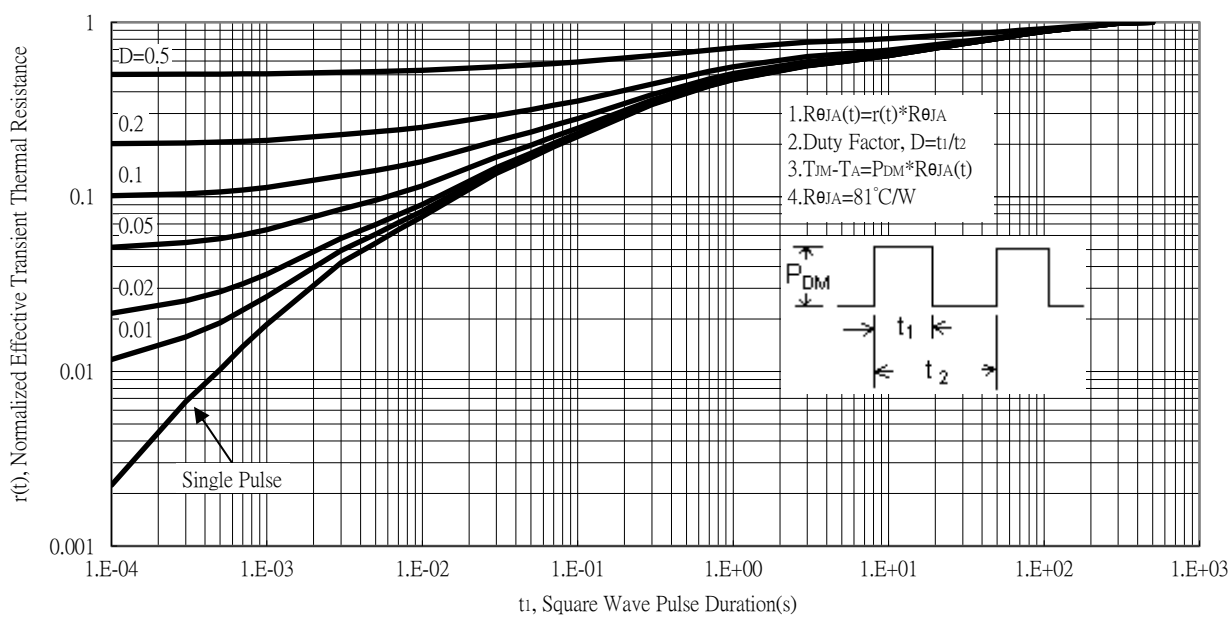


Typical Characteristics

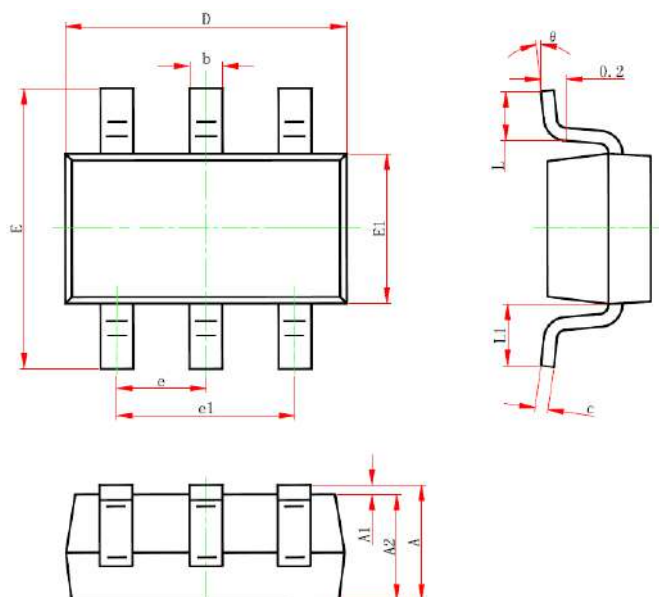
Single Pulse Power Rating, Junction to Ambient



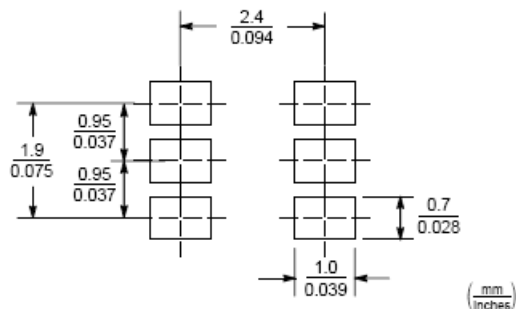
Transient Thermal Response Curves



SOT-26 Dimension



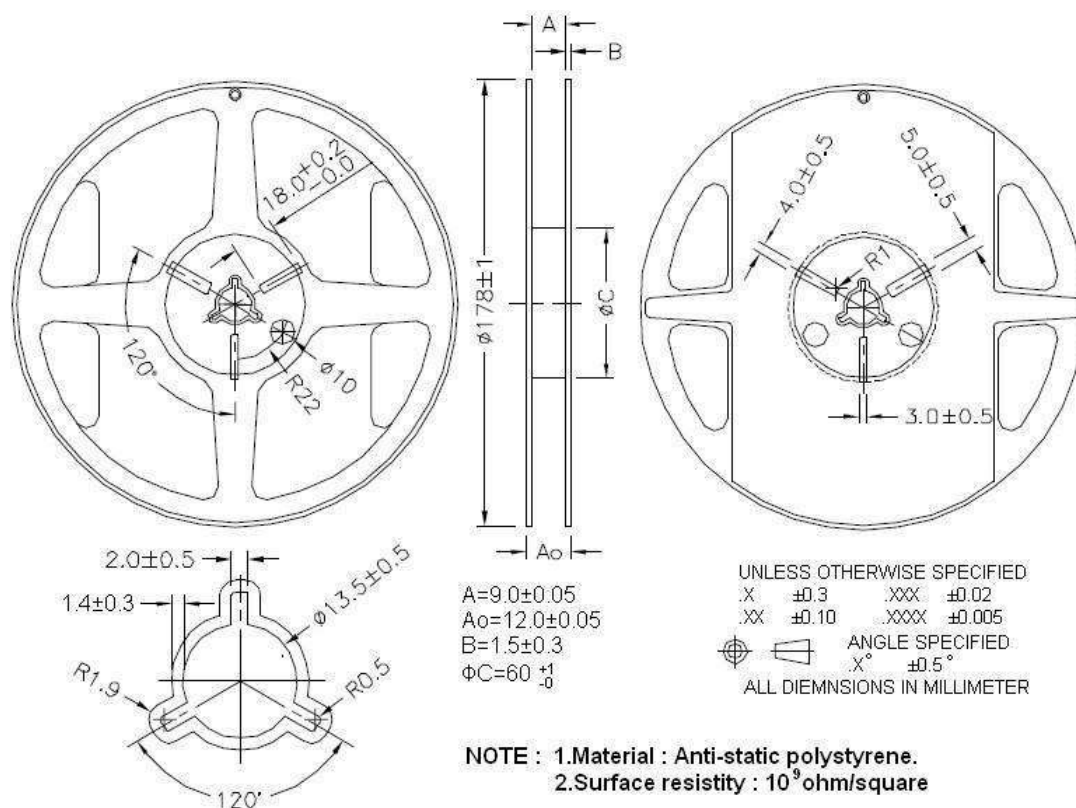
6-Lead SOT-26 Plastic Surface Mount Package



Recommended Soldering Footprint

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.041	0.049	1.050	1.250	E1	0.104	0.116	2.650	2.950
A1	0.000	0.004	0.000	0.100	e	0.037	(BSC)	0.950	(BSC)
A2	0.041	0.045	1.050	1.150	e1	0.071	0.079	1.800	2.000
b	0.012	0.020	0.300	0.500	L	0.012	0.024	0.300	0.600
c	0.004	0.008	0.100	0.200	L1	0.024	REF.	0.600	REF.
D	0.111	0.119	2.820	3.020	θ	0°	8°	0°	8°
E	0.059	0.067	1.500	1.700					

Reel Dimension



Carrier Tape Dimension

