

**Features**

	$V_{(BR)DSS}$	$R_{DS(on)MAX}$	$I_D$
$Q_1$	20V	270mΩ@4.5V	0.8 A
		320 Ω@2.5V	
		800mΩ@1.8V	
$Q_2$	-20V	520mΩ@-4.5V	-0.8 A
		700mΩ@-2.5V	
		950mΩ(TYP)@-1.8V	

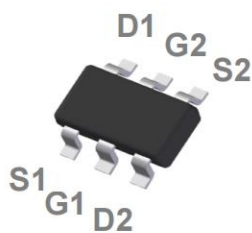
- ESD Protected

**Application**

- Notebook
- Load Switch
- Networking
- Hand-held Instruments

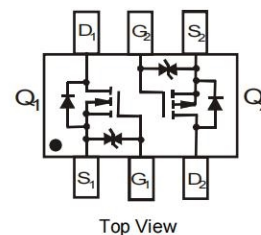
**Package and Pin Configuration**

**SOT363**



Marking: . TÇΔ  
TW=Par Number  
P =TECH PUBIC LOGOO

**Circuit diagram**



**Absolute Maximum Ratings** Tc=25°C unless otherwise noted

Parameter	Symbol	Value	Unit
<b>N-MOSFET</b>			
Drain-Source Voltage	$V_{DS}$	20	V
Typical Gate-Source Voltage	$V_{GS}$	±12	V
Continuous Drain Current (note 1)	$I_D$	0.8	A
Pulsed Drain Current (tp=10us)	$I_{DM}$	1.3	A
<b>P-MOSFET</b>			
Drain-Source Voltage	$V_{DS}$	-20	V
Typical Gate-Source Voltage	$V_{GS}$	±12	V
Continuous Drain Current (note 1)	$I_D$	-0.8	A
Pulsed Drain Current (tp=10us)	$I_{DM}$	-1.3	A
<b>Temperature and Thermal Resistance</b>			
Thermal Resistance from Junction to Ambient (note 1)	$R_{θJA}$	650	°C/W
Junction Temperature	$T_J$	150	°C
Storage Temperature	$T_{STG}$	-55~+150	°C
Lead Temperature for Soldering Purposes(1/8" from case for 10 s)	$T_L$	260	°C

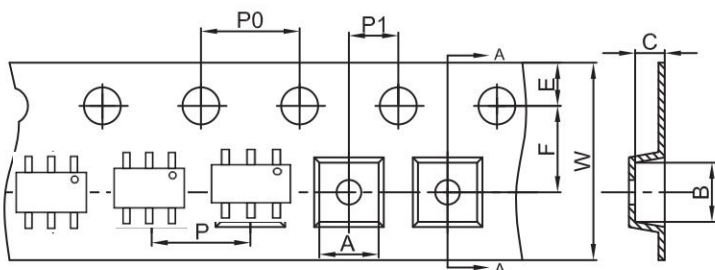
**Electrical Characteristics (T<sub>J</sub>=25 °C, unless otherwise noted)**Q<sub>1</sub>**N-ch MOSFET ELECTRICAL CHARACTERISTICS**

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
<b>STATIC CHARACTERISTICS</b>						
Drain-source breakdown voltage	V <sub>(BR)DSS</sub>	V <sub>GS</sub> = 0V, I <sub>D</sub> = 250μA	20	27		V
Zero gate voltage drain current	I <sub>DSS</sub>	V <sub>DS</sub> = 20V, V <sub>GS</sub> = 0V			1	μA
Gate-body leakage current	I <sub>GSS</sub>	V <sub>GS</sub> = ±12V, V <sub>DS</sub> = 0V			±20	uA
Gate threshold voltage (note 2)	V <sub>GS(th)</sub>	V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> = 250μA	0.45	0.7	1.1	V
Drain-source on-resistance(note 2)	R <sub>DSON</sub>	V <sub>GS</sub> = 4.5V, I <sub>D</sub> = 0.65A			270	mΩ
		V <sub>GS</sub> = 2.5V, I <sub>D</sub> = 0.55A			320	mΩ
		V <sub>GS</sub> = 1.8V, I <sub>D</sub> = 0.45A			800	mΩ
Forward tranconductance(note 2)	g <sub>FS</sub>	V <sub>DS</sub> = 10V, I <sub>D</sub> = 0.8A		1.6		S
Diode forward voltage	V <sub>SD</sub>	I <sub>S</sub> = 0.15A, V <sub>GS</sub> = 0V			1.2	V
<b>DYNAMIC CHARACTERISTICS (note 4)</b>						
Input Capacitance	C <sub>ISS</sub>	V <sub>DS</sub> = 16V, V <sub>GS</sub> = 0V, f = 1MHz			120	pF
Output Capacitance	C <sub>OSS</sub>				20	pF
Reverse Transfer Capacitance	C <sub>RSS</sub>				15	pF
<b>SWITCHING CHARACTERISTICS (note 3,4)</b>						
Turn-on delay time	t <sub>d(on)</sub>	V <sub>GS</sub> = 4.5V, V <sub>DS</sub> = 10V, I <sub>D</sub> = 500mA, R <sub>GEN</sub> = 10Ω		6.7		ns
Turn-on rise time	t <sub>r</sub>			4.8		ns
Turn-off delay time	t <sub>d(off)</sub>			17.3		ns
Turn-off fall time	t <sub>f</sub>			7.4		ns

Q<sub>2</sub>**P-ch MOSFET ELECTRICAL CHARACTERISTICS**

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
<b>STATIC CHARACTERISTICS</b>						
Drain-source breakdown voltage	V <sub>(BR)DSS</sub>	V <sub>GS</sub> = 0V, I <sub>D</sub> = -250μA	-20	-27		V
Zero gate voltage drain current	I <sub>DSS</sub>	V <sub>DS</sub> = -20V, V <sub>GS</sub> = 0V			-1	μA
Gate-body leakage current	I <sub>GSS</sub>	V <sub>GS</sub> = ±12V, V <sub>DS</sub> = 0V			±20	uA
Gate threshold voltage (note 2)	V <sub>GS(th)</sub>	V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> = -250μA	-0.45	-0.7	-1.3	V
Drain-source on-resistance(note 2)	R <sub>DSON</sub>	V <sub>GS</sub> = -4.5V, I <sub>D</sub> = -1A		270	520	mΩ
		V <sub>GS</sub> = -2.5V, I <sub>D</sub> = -0.8A		330	700	mΩ
		V <sub>GS</sub> = -1.8V, I <sub>D</sub> = -0.5A		950		mΩ
Forward tranconductance(note 2)	g <sub>FS</sub>	V <sub>DS</sub> = -10V, I <sub>D</sub> = -0.54A		1.2		S
Diode forward voltage	V <sub>SD</sub>	I <sub>S</sub> = -0.5A, V <sub>GS</sub> = 0V			-1.2	V
<b>DYNAMIC CHARACTERISTICS (note 4)</b>						
Input Capacitance	C <sub>ISS</sub>	V <sub>DS</sub> = -16V, V <sub>GS</sub> = 0V, f = 1MHz			170	pF
Output Capacitance	C <sub>OSS</sub>				25	pF
Reverse Transfer Capacitance	C <sub>RSS</sub>				15	pF
<b>SWITCHING CHARACTERISTICS (note 3,4)</b>						
Turn-on delay time	t <sub>d(on)</sub>	V <sub>GS</sub> = -4.5V, V <sub>DS</sub> = -10V, I <sub>D</sub> = -200mA, R <sub>GEN</sub> = 10Ω		9		ns
Turn-on rise time	t <sub>r</sub>			5.8		ns
Turn-off delay time	t <sub>d(off)</sub>			32.7		ns
Turn-off fall time	t <sub>f</sub>			20.3		ns

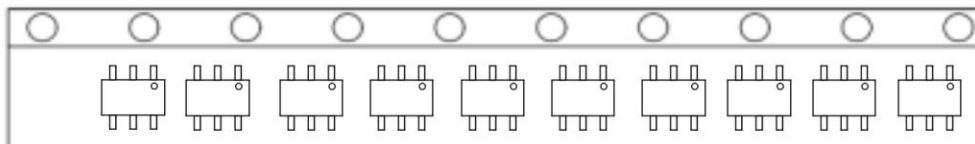
**SOT-363 Embossed Carrier Tape**



Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-363	2.25	2.55	1.20	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

**SOT-363 Tape Leader and Trailer**

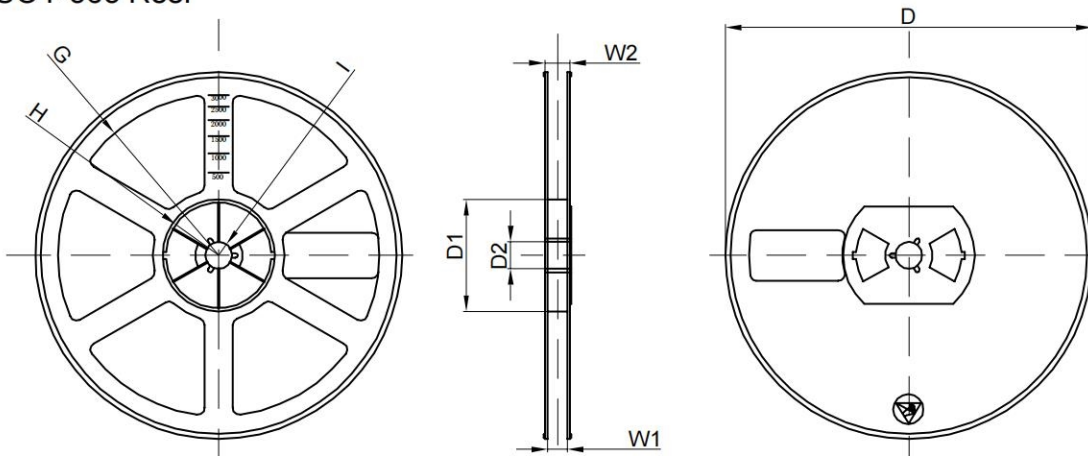
Package orientation in reel  
pin1



sprocket Holes

Shipping:3000pcs / Tape & Reel

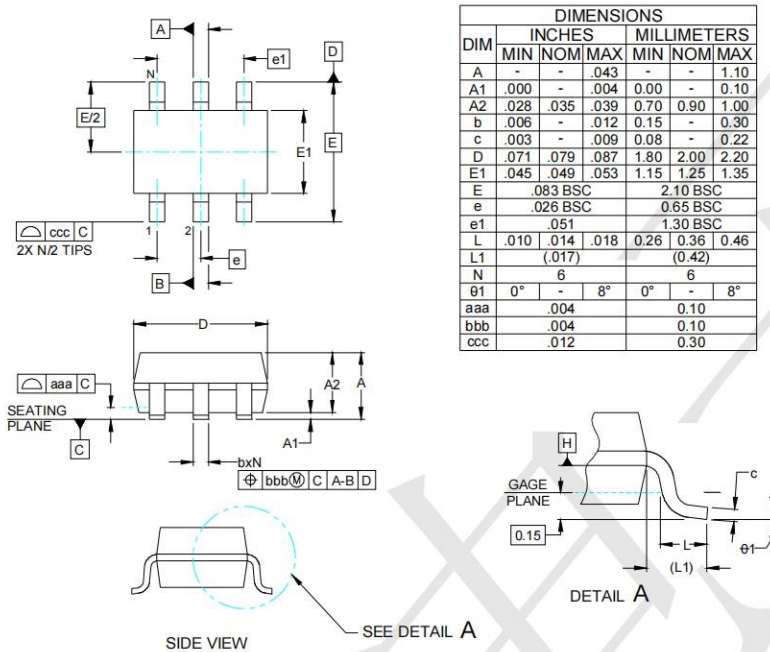
**SOT-363 Reel**



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 Inch	45,000 pcs	203×203×195	180,000 pcs	438×438×220	

**Outline Drawing - SOT-363(2.0X2.1)**



**Land Pattern - SOT-363**

