

Features

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

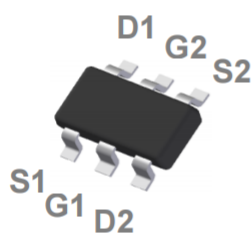
- ESD Protected

Application

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

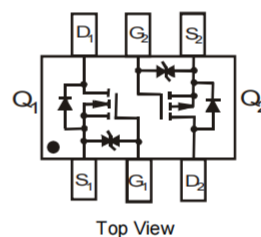
Package and Pin Configuration

SOT363



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

Circuit diagram



Absolute Maximum Ratings $T_c=25^\circ\text{C}$ unless otherwise noted

Parameter	Symbol	Value	Unit
N-MOSFET			
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 ($t_p=10\mu\text{s}$)	I_{DM}	1.3	A
P-MOSFET			
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 ($t_p=10\mu\text{s}$)	I_{DM}	-1.3	A
Temperature and Thermal Resistance			
Thermal Resistance from Junction to Ambient (note 1)	$R_{\theta JA}$	650	$^\circ\text{C/W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55~+150	$^\circ\text{C}$
Lead Temperature for Soldering Purposes(1/8" from case for 10 s)	T_L	260	$^\circ\text{C}$

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

Q₁

N-ch MOSFET ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC CHARACTERISTICS						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	20	27		V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = 20V, V_{GS} = 0V$			1	μA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 12V, V_{DS} = 0V$			± 20	μA
Gate threshold voltage (note 2)	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	0.45	0.7	1.1	V
Drain-source on-resistance(note 2)	$R_{DS(on)}$	$V_{GS} = 4.5V, I_D = 0.65A$			270	m Ω
		$V_{GS} = 2.5V, I_D = 0.55A$			320	m Ω
		$V_{GS} = 1.8V, I_D = 0.45A$			800	m Ω
Forward tranconductance(note 2)	g_{FS}	$V_{DS} = 10V, I_D = 0.8A$		1.6		S
Diode forward voltage	V_{SD}	$I_S = 0.15A, V_{GS} = 0V$			1.2	V
DYNAMIC CHARACTERISTICS (note 4)						
Input Capacitance	C_{iss}	$V_{DS} = 16V, V_{GS} = 0V, f = 1MHz$			120	pF
Output Capacitance	C_{oss}				20	pF
Reverse Transfer Capacitance	C_{rss}				15	pF
SWITCHING CHARACTERISTICS (note 3,4)						
Turn-on delay time	$t_{d(on)}$	$V_{GS} = 4.5V, V_{DS} = 10V, I_D = 500mA, R_{GEN} = 10\Omega$		6.7		ns
Turn-on rise time	t_r			4.8		ns
Turn-off delay time	$t_{d(off)}$			17.3		ns
Turn-off fall time	t_f			7.4		ns

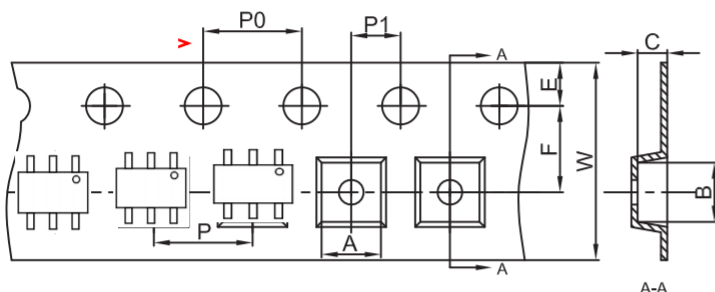
Q₂

P-ch MOSFET ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC CHARACTERISTICS						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	-20	-27		V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = -20V, V_{GS} = 0V$			-1	μA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 12V, V_{DS} = 0V$			± 20	μA
Gate threshold voltage (note 2)	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-0.45	-0.7	-1.3	V
Drain-source on-resistance(note 2)	$R_{DS(on)}$	$V_{GS} = -4.5V, I_D = -1A$		270	520	m Ω
		$V_{GS} = -2.5V, I_D = -0.8A$		330	700	m Ω
		$V_{GS} = -1.8V, I_D = -0.5A$		950		m Ω
Forward tranconductance(note 2)	g_{FS}	$V_{DS} = -10V, I_D = -0.54A$		1.2		S
Diode forward voltage	V_{SD}	$I_S = -0.5A, V_{GS} = 0V$			-1.2	V
DYNAMIC CHARACTERISTICS (note 4)						
Input Capacitance	C_{iss}	$V_{DS} = -16V, V_{GS} = 0V, f = 1MHz$			170	pF
Output Capacitance	C_{oss}				25	pF
Reverse Transfer Capacitance	C_{rss}				15	pF
SWITCHING CHARACTERISTICS (note 3,4)						
Turn-on delay time	$t_{d(on)}$	$V_{GS} = -4.5V, V_{DS} = -10V, I_D = -200mA, R_{GEN} = 10\Omega$		9		ns
Turn-on rise time	t_r			5.8		ns
Turn-off delay time	$t_{d(off)}$			32.7		ns
Turn-off fall time	t_f			20.3		ns

DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	(.073)	(1.85)
G	.039	1.00
P	.026	0.65
X	.016	0.40
Y	.033	0.85
Z	.106	2.70

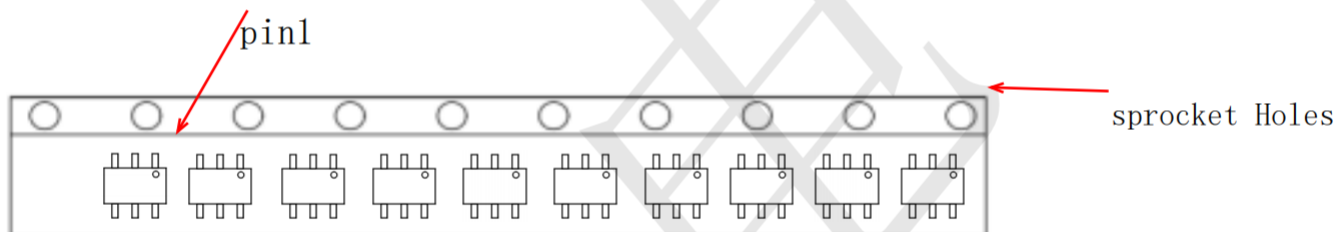
SOT-363 Embossed Carrier Tape



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

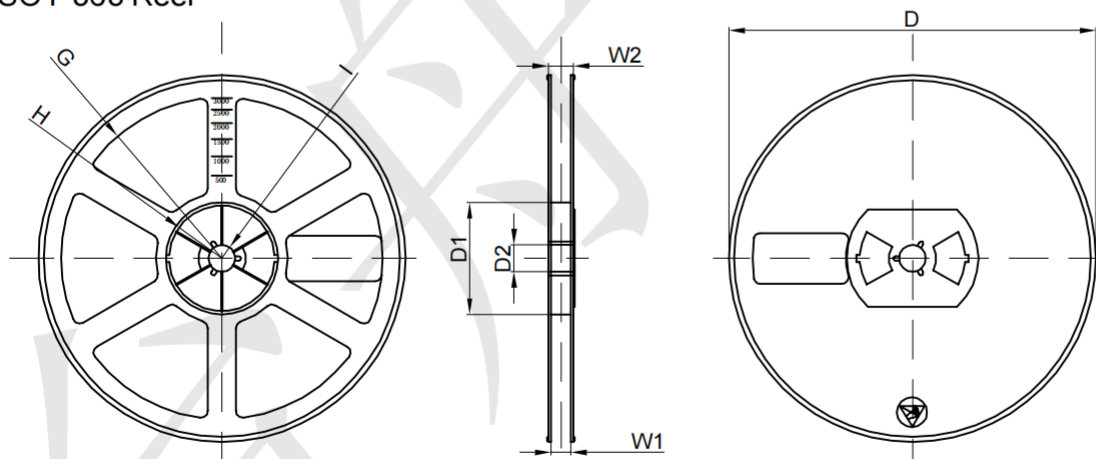
SOT-363 Tape Leader and Trailer

Package orientation in reel



Shipping: 3000 pcs / 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	