

Features

- V_{DS} -20V
- I_D -1.4A
- $R_{DS(ON)}$ (at $V_{GS}=2.5V$) <140m Ω
- $R_{DS(ON)}$ (at $V_{GS}=4.5V$) <100m Ω

Applications

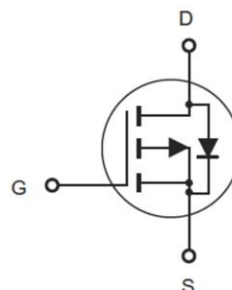
- Battery protection
- Load switch
- Power management

Ordering Information

Part Number	Qty per Reel	Reel Size
TPCJ2101	3000	7"



SOT323



Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Drain-source voltage	V_{DS}	-20	V
Gate-source voltage	V_{GS}	± 8	V
Continuous drain current	I_D	-1.4	A
Pulsed drain current ($t_p=10\mu\text{s}$)	I_{DM}	-3.0	
Power dissipation	P_D	0.29	W
Thermal resistance from junction to ambient	$R_{\theta JA}$	431	$^\circ\text{C/W}$
Junction temperature range	T_J	150	$^\circ\text{C}$
Storage temperature range	T_{STG}	-50 ~ +150	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
OFF CHARACTERISTICS						
Drain-source breakdown voltage	V_{DSS}	$V_{GS} = 0V, I_D = -250\mu A$	-20			V
Gate-source leakage	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 8V$			± 100	nA
Zero gate voltage drain current	I_{DSS}	$V_{DS} = -20V, V_{GS} = 0V$			-1	μA
OFF CHARACTERISTICS (note 1)						
Gate-source threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-0.45	-0.7		V
Drain-source on-state resistance	$R_{DS(on)}$	$V_{GS} = -4.5V, I_D = -1.0A$			100	m Ω
		$V_{GS} = -2.5V, I_D = -0.5A$			140	
		$V_{GS} = -1.8V, I_D = -0.3A$			210	
CHARGE AND CAPACITANCES (note 3)						
Input capacitance	C_{iss}	$V_{DS} = -8.0V, V_{GS} = 0V,$ $f = 1MHz$		640		pF
Output capacitance	C_{oss}			120		
Reverse transfer capacitance	C_{rss}			82		
SWITCHING CHARACTERISTICS (note 2,3)						
Turn-on delay time	$t_{d(on)}$	$V_{GS} = -4.5V, V_{DD} = -4.0V$ $I_D = -1.0A, R_g = 6.2\Omega$		6.2		nS
Rise time	t_r			15		
Turn-off delay time	$t_{d(off)}$			26		
Fall time	t_f			18		
DRAIN-SOURCE BODY DIODE CHARACTERISTICS						
Forward Diode Voltage	V_{SD}	$V_{GS} = 0V, I_S = -0.3A$		-0.62	-1.2	V

Outline Drawing - SOT323

