

Features

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

Applications

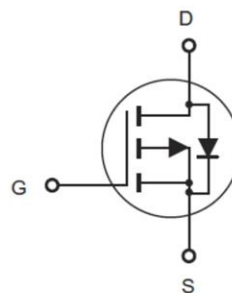
- Battery protection
- Load switch
- Power management

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 = -250μA	-20			V
Gate-source leakage	I _{GSS}	V _{DS} = 0V , V _{GS} = ±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 = -250μA	-0.45	-0.7		V
Drain-source on-state resistance	R _{DS(on)}	V _{GS} = -4.5V , I _D = -1.0A			100	mΩ
		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 = 6.2Ω		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

