Features

- -20V, -2.3A, $R_{DS(ON)}$ =100mΩ (typ) @V_{GS} =4.5V.
- $R_{DS(ON)}$ = 125mΩ (typ) @V_{GS} = 2.5V.
- SOT-323 package.

Applications

- Battery protection
- Load switch
- Power management

Ordering Information

Part Number	Qty per Reel	Reel Size
TPM2601C3	3000	7"

SOT-323
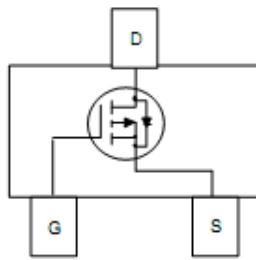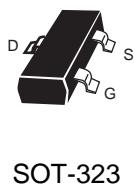
Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	- 20	V
Gate-Source Voltage	V_{GS}	±10	
Continuous Drain Current	I_D	-2.3	A
Pulsed Drain Current (t_p=10µs)	I_{DM}	-5.0	
Power Dissipation	P_D	0.29	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	431	°C/W
Junction Temperature	T_J	125	°C
Storage Temperature	T_{stg}	-50 ~+150	

Electrical Characteristics $(T_A=25°C$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
OFF CHARACTERISSTICS						
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}	$V_{DS} =-20V$, $V_{GS} =0V$			-1.0	μA
OFF CHARACTERISSTICS						
Gate-Source Threshold Voltage	$V_{GS(th)}$	$V_{DS} =V_{GS}$, $I_D =-250μA$	-0.45	-0.7	-1.0	V
Drain-Source On-State Resistance	$R_{DS(on)}$	$V_{GS} =-4.5V$, $I_D =-2.3A$			100	mΩ
		$V_{GS} =-2.5V$, $I_D =-1A$			125	
CHARGES AND CAPACITANCES						
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 CHARACTERISSTICS						
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		

PACKAGE DIMENSIONS

SC−70 (SOT−323)
CASE 419−04
ISSUE N

NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
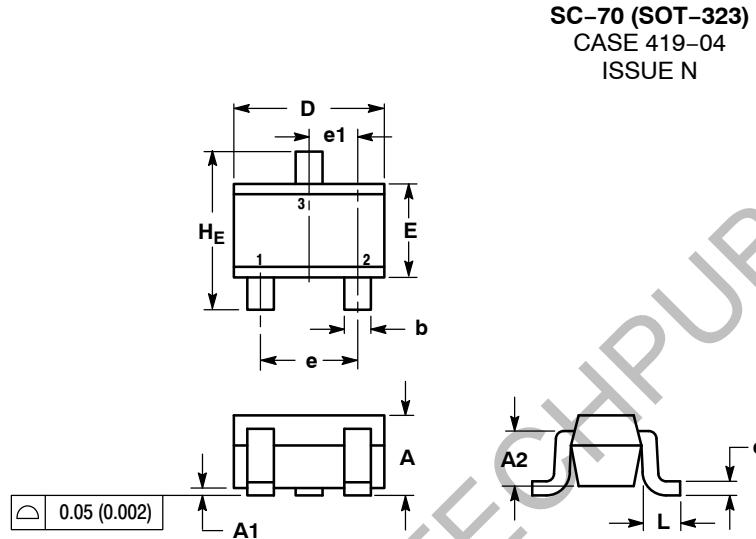
DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.035	0.040
A1	0.00	0.05	0.10	0.000	0.002	0.004
A2	0.70 REF			0.028 REF		
b	0.30	0.35	0.40	0.012	0.014	0.016
c	0.10	0.18	0.25	0.004	0.007	0.010
D	1.80	2.10	2.20	0.071	0.083	0.087
E	1.15	1.24	1.35	0.045	0.049	0.053
e	1.20	1.30	1.40	0.047	0.051	0.055
e1	0.65 BSC			0.026 BSC		
L	0.20	0.38	0.56	0.008	0.015	0.022
H$_E$	2.00	2.10	2.40	0.079	0.083	0.095

STYLE 8:
PIN 1. GATE
2. SOURCE
3. DRAIN

⌴ 0.05 (0.002)

SOLDERING FOOTPRINT*

$\frac{0.65}{0.025}$ $\frac{0.65}{0.025}$

$\frac{0.9}{0.035}$ $\frac{1.9}{0.075}$

$\frac{0.7}{0.028}$

SCALE 10:1 $\left(\frac{mm}{inches}\right)$