

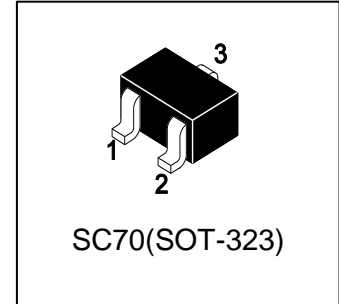
LP1480WT1G

S-LP1480WT1G

-20V P-Channel Power Mosfet

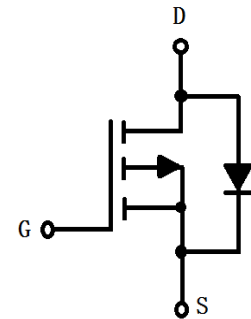
1. FEATURES

- $V_{(BR)DSS} = -20V$
 $R_{DS(ON)} \leq 210m\Omega @ V_{GS} = -4.5V, I_D = -1.0A$
 $R_{DS(ON)} \leq 310m\Omega @ V_{GS} = -2.5V, I_D = -0.5A$
- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.



2. APPLICATIONS

- Power Management in Note book
- Portable Equipment
- Battery Powered System
- Load Switch
- DSC



3. DEVICE MARKING AND RESISTOR VALUES

Device	Marking	Shipping
LP1480WT1G	W14	3000/Tape&Reel
S-LP1480WT1G	W14	3000/Tape&Reel

4. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Drain-Source voltage	V _{DS}	-20	V _{dc}
Gate-Source Voltage	V _{GS}	±8	V _{dc}
Continuous Drain Current	Steady-State @t ≤ 5s	-1.4	A
		-1.5	
Pulse Drain Current @T _p =10μs	IDM	-3.0	

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Power Dissipation FR-4 Board (Note 1) @ TA = 25°C @ TA = 70°C	PD	0.29	W
		0.19	
Thermal Resistance, Junction-to-Ambient(Note 1)	RθJA	430	°C/W
Junction to Lead	RθJL	100	°C/W
Junction and Storage temperature	T _J , T _{stg}	-55~+150	°C

1. FR-4 @ Minimum Pad.

6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

OFF CHARACTERISTICS

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Voltage (ID = -250μA, VGS = 0V)	V(BR)DSS	-20	-	-	V
Zero Gate Voltage Drain Current (VDS = -16V, VGS = 0V)	IDSS	-	-	-1	μA
Gate-body Leakage Current (VDS = 0V, VGS = ±8V)	IGSS	-	-	±100	nA

ON CHARACTERISTICS

Gate Threshold Voltage (VDS = VGS, ID = -250μA)	VGS(th)	-0.4	-0.6	-1.0	V
Static Drain-Source On resistance (VGS = -4.5V, ID = -1.0A) (VGS = -2.5V, ID = -0.5A) (VGS = -1.8V, ID = -0.3A)	RDS(ON)	-	110 150 190	210 310 370	mΩ

Dynamic

Transconductance (VDS = -10V, ID = -1A)	gFS	4	6	-	S
Input Capacitance	(VDS = -10V, VGS = 0V, f=1MHz)	Ciss	-	480	pF
Output Capacitance		Coss	-	58	
Reverse Transfer Capacitance		Crss	-	51	
Gate Resistance (VDS = 0V, VGS = 0V, f=1MHz)	Rg	-	12	-	Ω

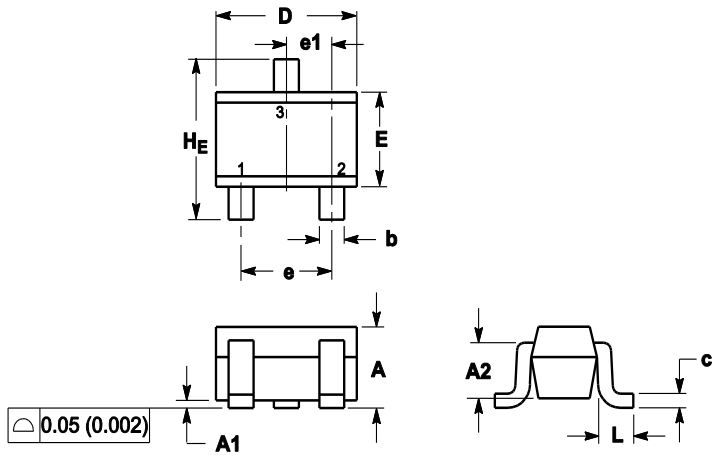
Switching

Total Gate Charge	(VGS = -4.5V, ID = -1.2A, VDS = -10V)	Qg	-	6.5	-	nC
Gate Source Charge		Qgs	-	0.3	-	
Gate Drain Charge		Qgd	-	0.7	-	
Turn-On Delay Time	(VGS = -4.5V, VDS = -10V, ID = -1.2A, RGEN = 6Ω)	tD(on)	-	8	-	ns
Turn-On Rise Time		tr	-	6	-	
Turn-Off Delay Time		tD(off)	-	42	-	
Turn-Off Fall Time		tf	-	7	-	

Source Drain Diode

Diode Forward Voltage (IS = -1A, VGS = 0V)	VSD	-	-0.79	-1.5	V
Maximum Body-diode Continuous Current	Is	-	-	-1	A
Body-diode Reverse Recovery Time (Is = -1.0A, di/dt=100A/μs)	trr	-	30	-	ns
Body-diode Reverse Recovery Charge (Is = -1.0A, di/dt=100A/μs)	Qrr	-	12	-	nC

7. OUTLINE AND DIMENSIONS



Notes:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.035	0.039
A1	0.00	0.05	0.10	0.000	0.002	0.004
A2	0.70REF			0.028REF		
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	0.65REF			0.026REF		
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

8. SOLDERING FOOTPRINT

