LP1480WT1G
S-LP1480WT1G
-20V P-Channel Power Mosfet

1. FEATURES

- V(BR)DSS=-20V

  RDS(ON) ≤210mΩ @VGS =-4.5V,ID=-1.0A

  RDS(ON) ≤310mΩ @VGS =-2.5V,ID=-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

SC70(SOT-323)

3. DEVICE MARKING AND RESISTOR VALUES

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

4. MAXIMUM RATINGS(Ta = 25ºC)

Parameter		Symbol	Limits	Unit
Drain-Source voltage		VDS	-20	Vdc
Gate-Source Voltage		VGS	±8	Vdc
Continuous Drain Current	Steady-State	ID	-1.4	A
	@t≤5s		-1.5	
Pulse Drain Current @Tp=10μs		IDM	-3.0	

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Power Dissipation	PD		
FR−4 Board (Note 1) @ TA = 25ºC		0.29	W
@ TA = 70ºC		0.19	
Thermal Resistance, Junction–to–Ambient(Note 1)	RΘJA	430	ºC/W
Junction to Lead	RΘJL	100	ºC/W
Junction and Storage temperature	TJ,Tstg	−55~+150	ºC

1. FR–4 @ Minimum Pad.
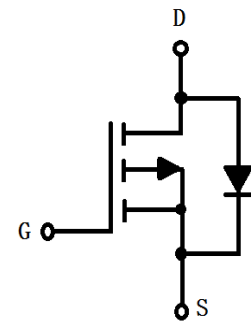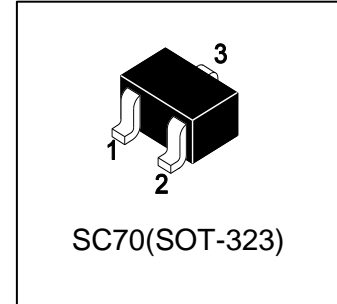
6. ELECTRICAL CHARACTERISTICS (Ta= 25ºC)

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

Characteristic	Symbol	Min.	Typ.	Max.	Unit
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

Characteristic		Symbol	Min.	Typ.	Max.	Unit
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

Characteristic		Symbol	Min.	Typ.	Max.	Unit
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

| Characteristic	Symbol	Min.	Typ.	Max.	Unit
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
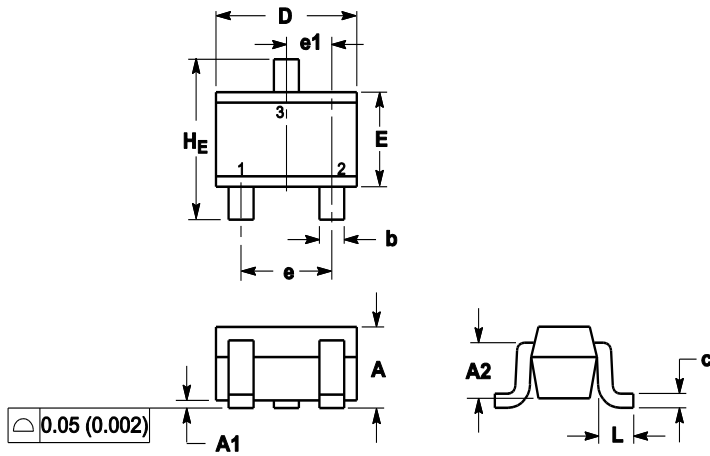
Notes:

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
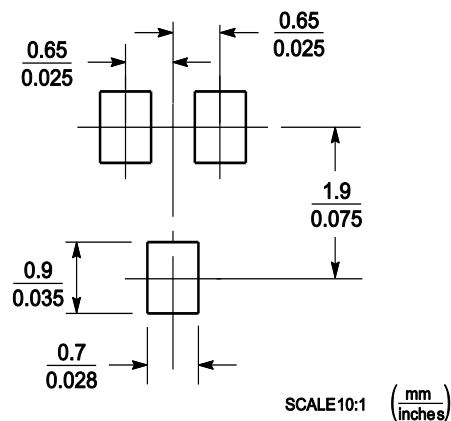
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