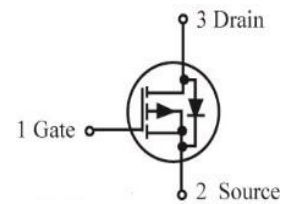
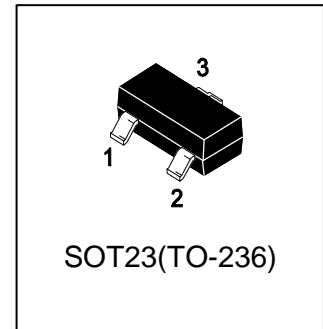


S-LP3407LT1G

30V P-Channel Enhancement-Mode MOSFET

1. FEATURES

- $V_{DS} = -30V$
- $I_{D} = -4.1A @ V_{GS} = -10V$
- $R_{DS(ON)} \leq 70m\Omega (V_{GS} = -10V)$
- $R_{DS(ON)} \leq 100m\Omega (V_{GS} = -4.5V)$
- 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. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
S-LP3407LT1G	A07	3000/Tape&Reel
S-LP3407LT3G	A07	10000/Tape&Reel

3. MAXIMUM RATINGS($T_a = 25^\circ C$)

Parameter	Symbol	Limits	Unit
Drain-Source Voltage	V_{DSS}	-30	V
Gate-to-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	ID	$T_a = 25^\circ C$	-3.5
		$T_a = 70^\circ C$	-2.5
Pulsed Drain Current (Note 2)	IDM	-15	A
Power Dissipation (Note 2)	PD	$T_a = 25^\circ C$	1.1
		$T_a = 70^\circ C$	0.6
Junction and Storage Temperature Range	T_j, T_{stg}	-55~+150	$^\circ C$

4. THERMAL CHARACTERISTICS

Parameter	Symbol	Typ.	Max	Unit
Thermal Resistance, Junction-to-Ambient (Note 1)	$R_{\theta JA}$	$t \leq 10s$	70	90
		Steady State	100	125
Maximum Junction-to-Lead	$R_{\theta JL}$	63	80	$^\circ C/W$

1. Surface mounted on "1.5in x 1.5in" FR4 board using 1*1 in pad, 2 oz Cu

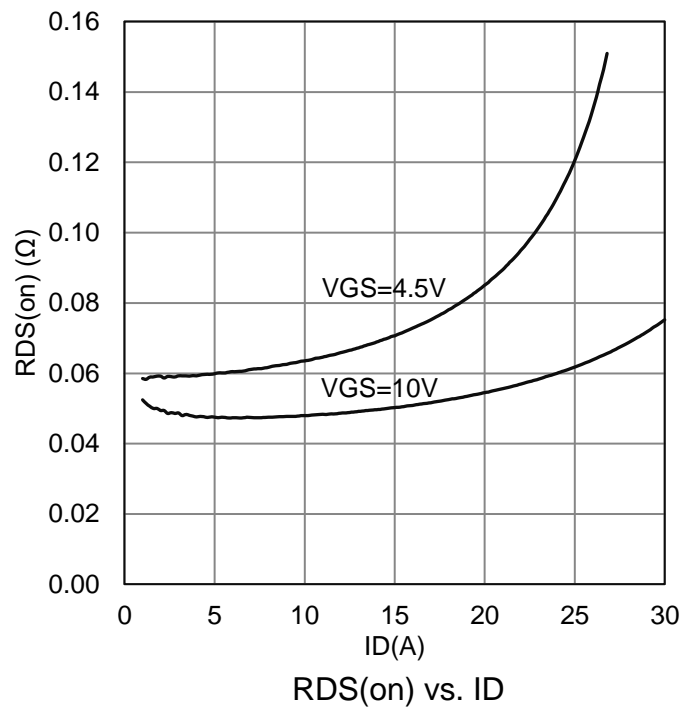
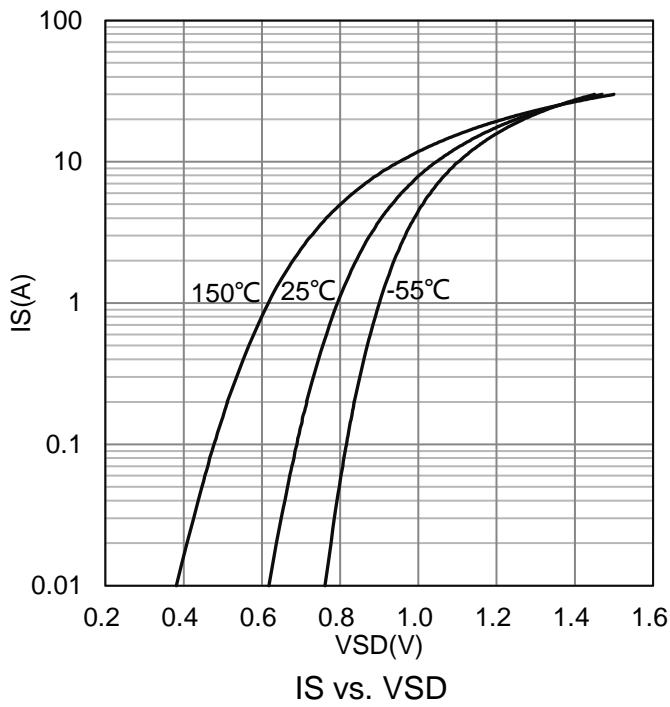
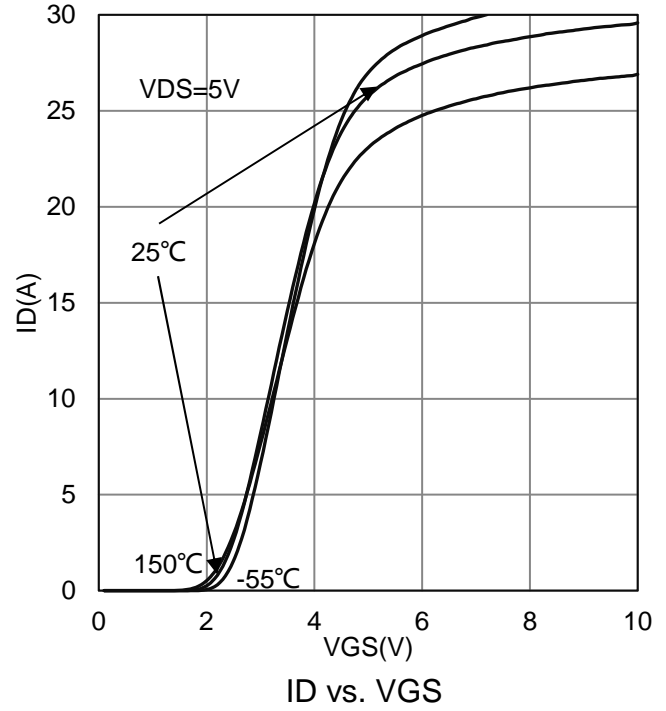
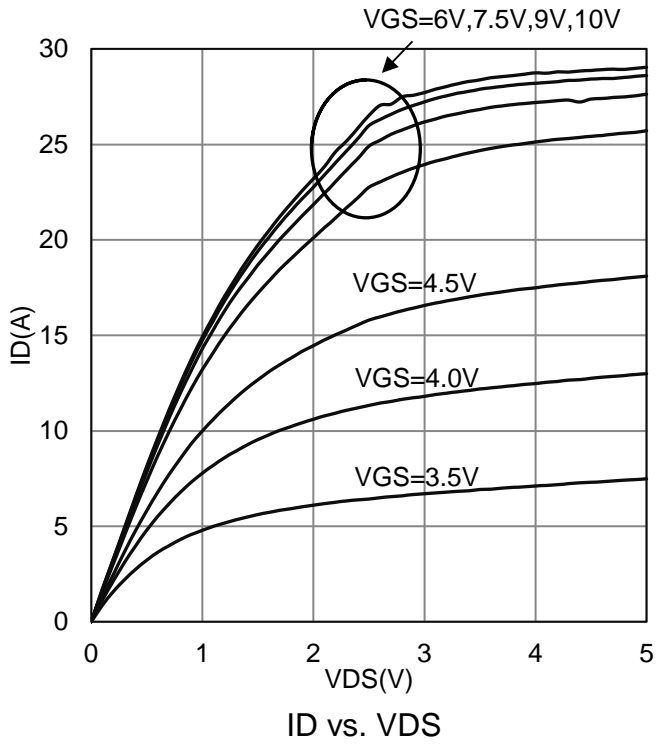
2. Repetitive rating, pulse width limited by junction temperature.

3. The $R_{\theta JA}$ is the sum of the thermal impedance from junction to lead $R_{\theta JL}$ and lead to ambient.

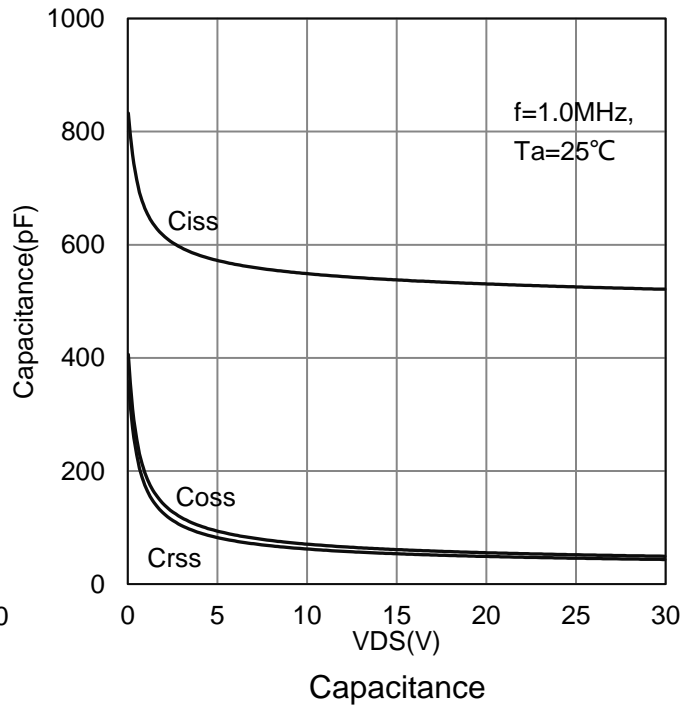
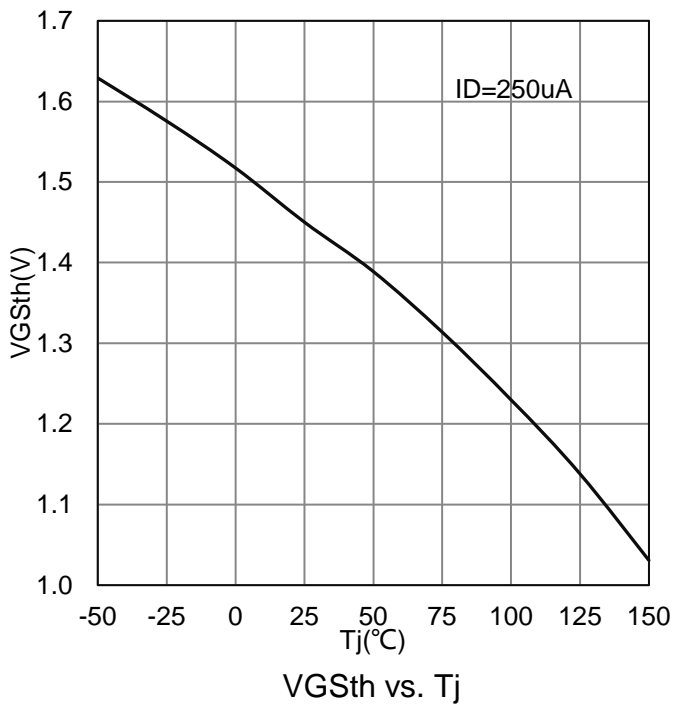
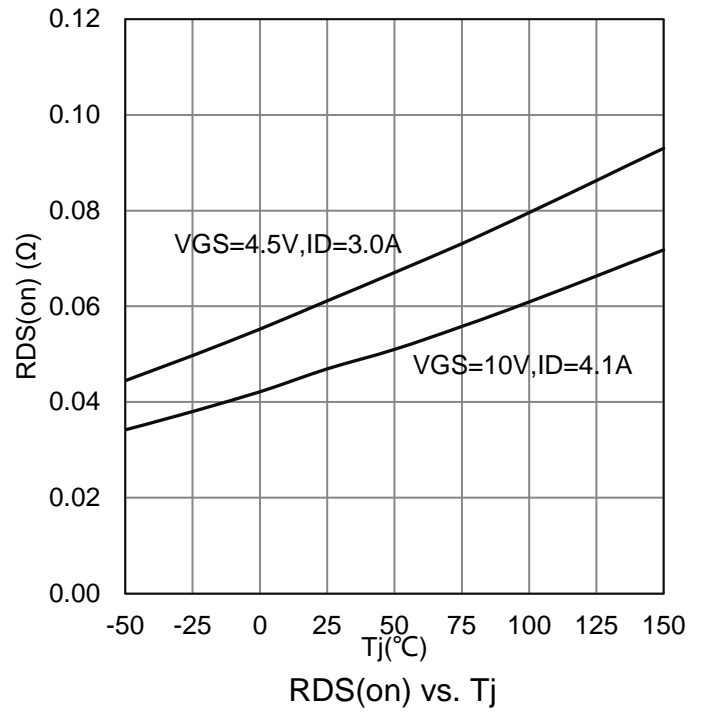
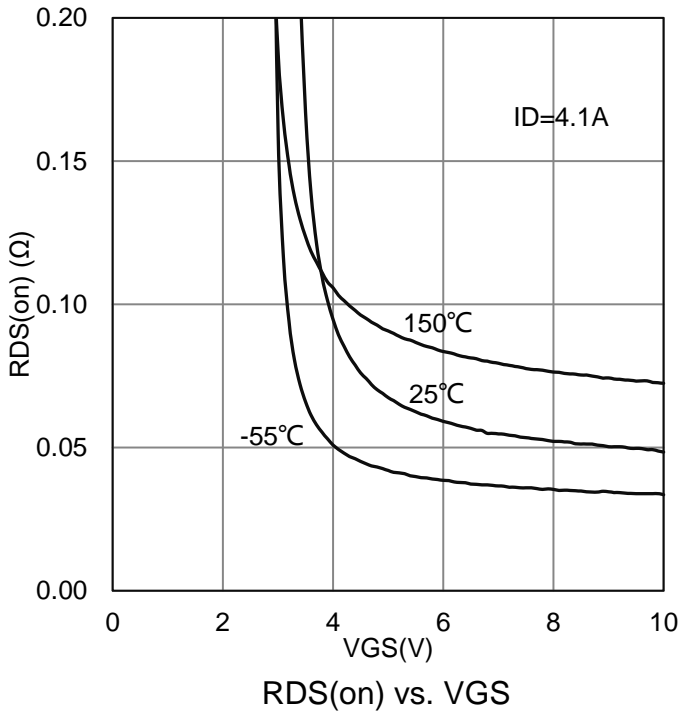
5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic	Symbol	Min.	Typ.	Max.	Unit	
Static						
Drain–Source Breakdown Voltage (VGS = 0, ID = -250μA)	VBRDSS	-30	-	-	V	
Zero Gate Voltage Drain Current (VGS = 0, VDS = -24 V) (VGS = 0, VDS = -24 V, TJ =55°C)	IDSS	-	-	-1 -5	μA	
Gate Leakage Current (VDS =0V, VGS = ±20V)	IGSS	-	-	±100	nA	
Gate Threshold Voltage (VDS = VGS, ID = -250μA)	VGS(th)	-1	-1.4	-2.1	V	
Static Drain–Source On–State Resistance (VGS =-10V, ID =-4.1A) (VGS =-10V, ID =-4.1A, TJ =125°C) (VGS =-4.5V, ID =-3A)	RDS(on)	-	52 65 70	70 95 100	mΩ	
Forward Voltage (VGS = 0 V, IS = -1A)	VSD	-	-0.7	-1	V	
Dynamic						
Input Capacitance (VGS = 0 V, f = 1.0MHz, VDS= -15 V)	Ciss	-	521	-	pF	
Output Capacitance (VGS = 0 V, f = 1.0MHz, VDS= -15 V)	Coss	-	61	-		
Reverse Transfer Capacitance (VGS = 0 V, f = 1.0MHz, VDS= -15 V)	Crss	-	54	-		
Gate resistance (VGS =0V, VDS =0V, f=1MHz)	Rg	-	10	-	Ω	
Total Gate Charge	(VDS =-15V, ID =-4A)	Qg(10V)	-	11	-	nC
Total Gate Charge		Qg(4.5V)	-	5.7	-	
Gate-Source Charge		Qgs	-	1.24	-	
Gate-Drain Charge		Qgd	-	2.5	-	
Turn-On Delay Time	(VDS = -15V, RL= 3.6 Ω, VGS = -10V, RG = 3.1Ω)	td(on)	-	3.6	-	ns
Rise Time		tr	-	9.8	-	
Turn-Off Delay Time		td(off)	-	19.2	-	
Fall Time		tf	-	6.7	-	
Body Diode Reverse Recovery Time (IF =-4A, di/dt=100A/μs)	trr	-	11	-		
Body Diode Reverse Recovery Charge (IF =-4A, di/dt=100A/μs)	Qrr	-	5.3	-	nC	

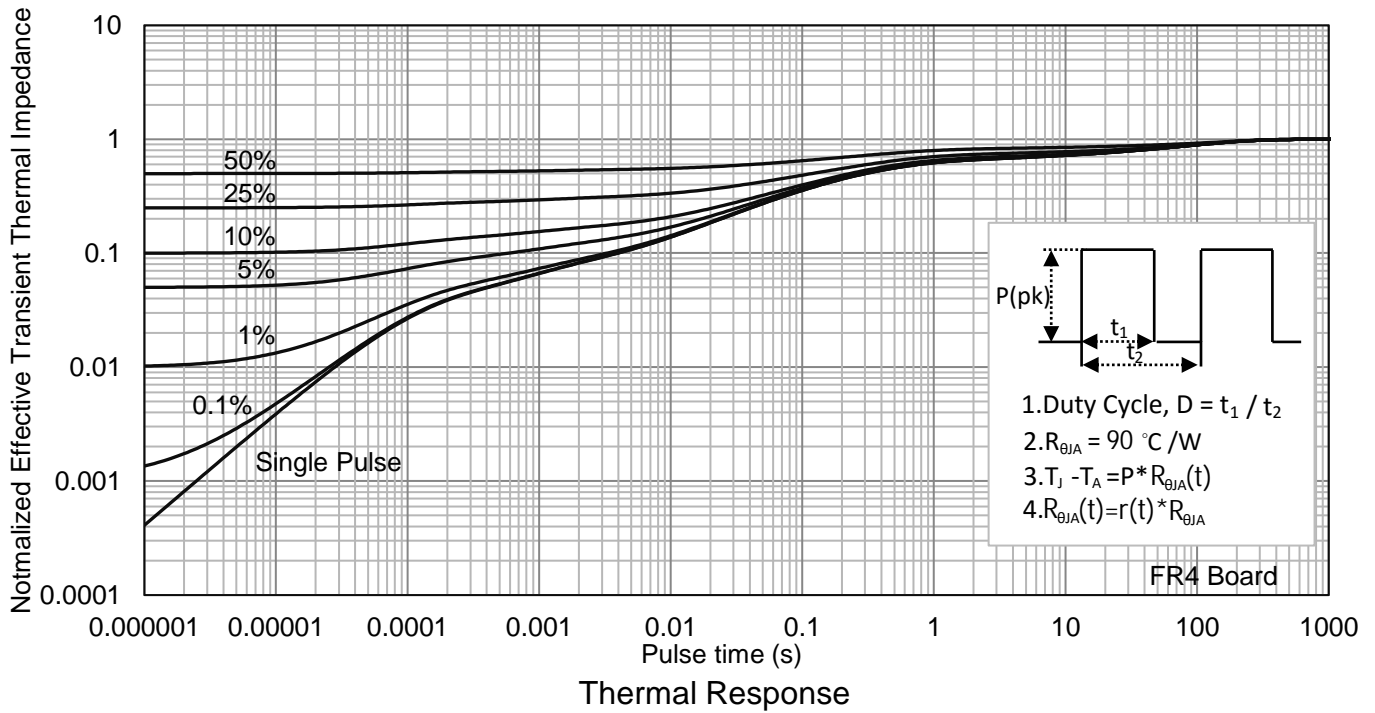
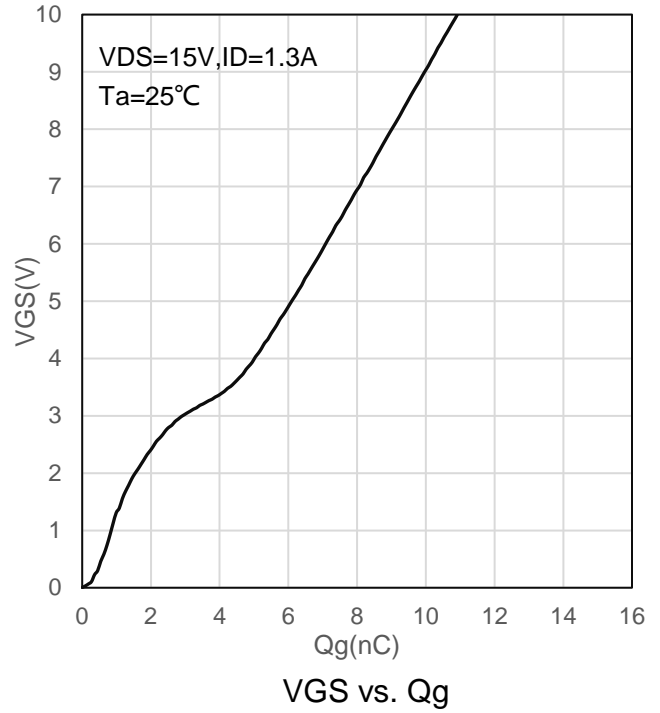
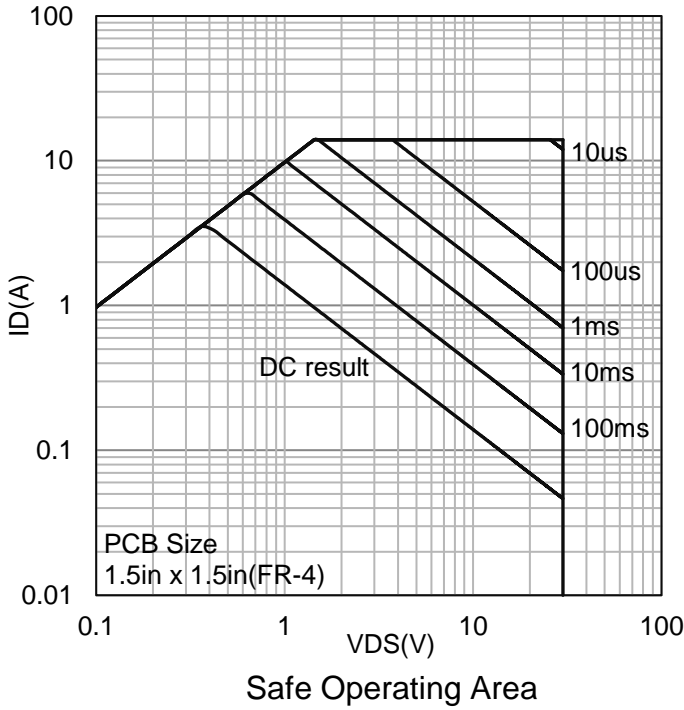
6. ELECTRICAL CHARACTERISTICS CURVES



6. ELECTRICAL CHARACTERISTICS CURVES(Con.)



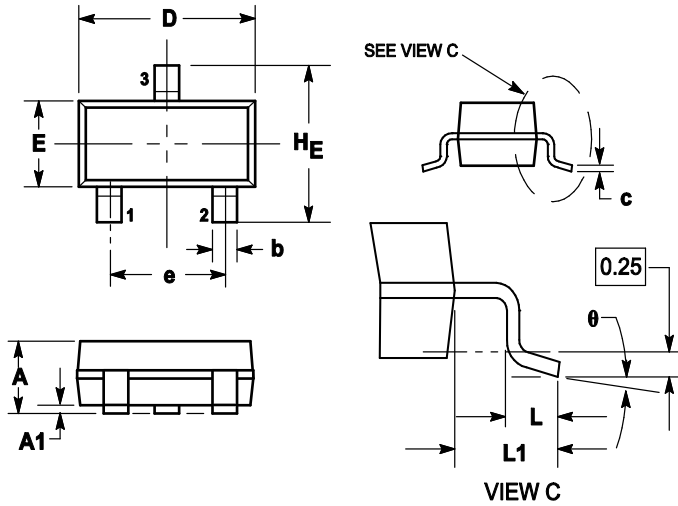
6.ELECTRICAL CHARACTERISTICS CURVES(Con.)



7. OUTLINE AND DIMENSIONS

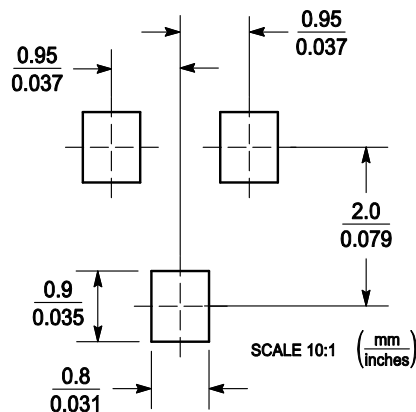
Notes:

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	0.89	1	1.11	0.035	0.04	0.044
A1	0.01	0.06	0.1	0.001	0.002	0.004
b	0.37	0.44	0.5	0.015	0.018	0.02
c	0.09	0.13	0.18	0.003	0.005	0.007
D	2.80	2.9	3.04	0.11	0.114	0.12
E	1.20	1.3	1.4	0.047	0.051	0.055
e	1.78	1.9	2.04	0.07	0.075	0.081
L	0.10	0.2	0.3	0.004	0.008	0.012
L1	0.35	0.54	0.69	0.014	0.021	0.029
HE	2.10	2.4	2.64	0.083	0.094	0.104
θ	0°	---	10°	0°	---	10°

8. SOLDERING FOOTPRINT



DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.
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- All information contained in this document is current as of the issuing date and subject to change without any prior notice. Before purchasing or using LRC's Products, please confirm the latest information with a LRC sales representative.

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