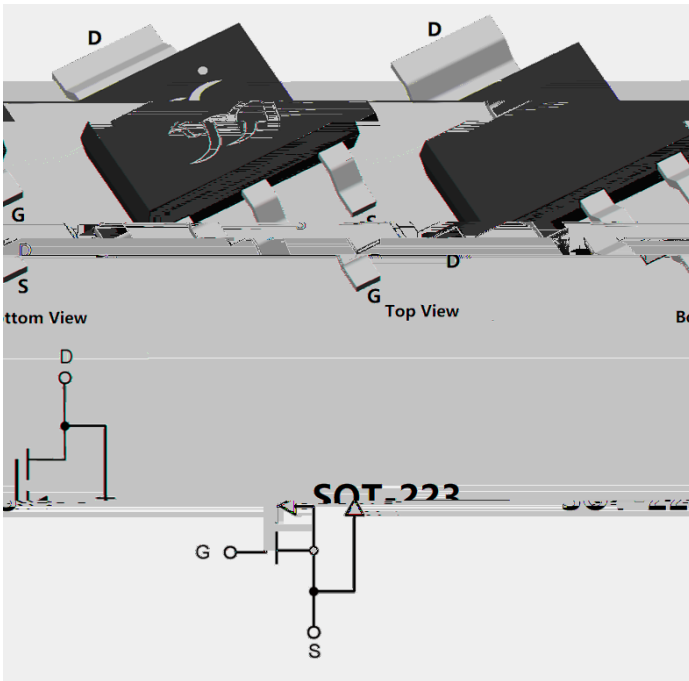


N-Channel Enhancement Mode Field Effect Transistor



Product Summary

V_{DS}	60V
I_D	5.0A
$R_{DS(ON)}$ (at $V_{GS}= 10V$)	44mohm
$R_{DS(ON)}$ (at $V_{GS}= 4.5V$)	49mohm

General Description

Trench Power MV MOSFET technology
 High density cell design for Low $R_{DS(ON)}$
 High Speed switching
 Moisture Sensitivity Level 3
 Epoxy Meets UL 94 V-0 Flammability Rating
 Halogen Free

Applications

Battery protection
 Load switch
 Power management

Absolute Maximum Ratings ($T_A=25$ unless otherwise noted)

Parameter	Symbol	Maximum	Unit
Drain-source Voltage	V_{DS}	60	V
Gate-source Voltage	V_{GS}	± 20	V
Drain Current	I_D	$T_A=25$ @ Steady State	5.0
		$T_A=70$ @ Steady State	4.0
Pulsed Drain Current ^A	I_{DM}	25	A
Total Power Dissipation @ $T_A=25$	P_D	2.5	W
Thermal Resistance Junction-to-Ambient @ Steady State ^B	R_{JA}	50	/ W
Junction and Storage Temperature Range	T_J, T_{STG}	-55 +150	

Ordering Information (Example)

PREFERRED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJM05N06A	F2	6005	2500	/	40000	13" reel
			2500	5000	25000	13" reel



YJM05N06A

Electrical Characteristics ($T_J=25$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
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Typical Performance Characteristics

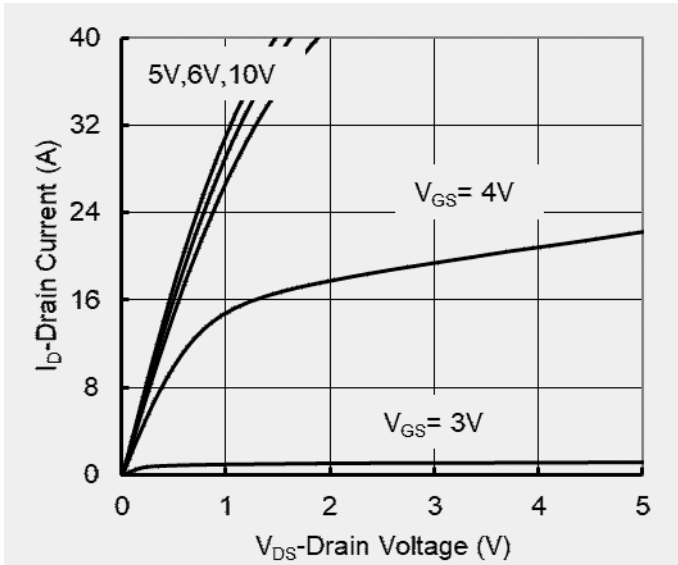


Figure 1. Output Characteristics

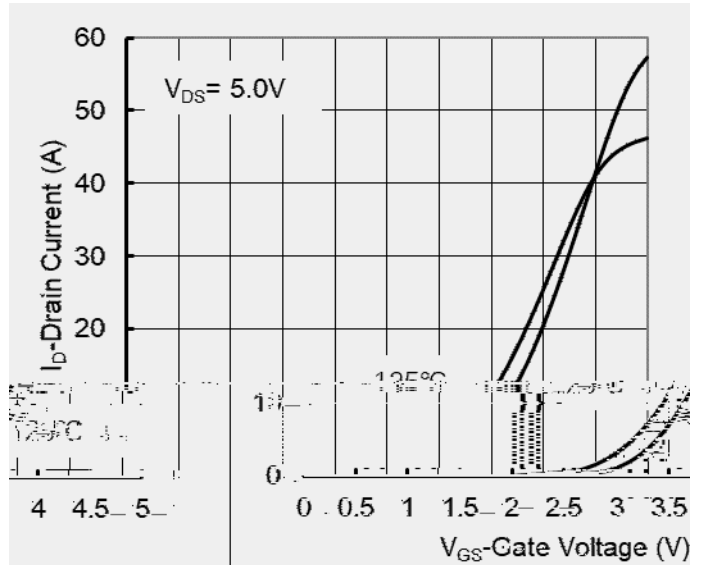


Figure 2. Transfer Characteristics

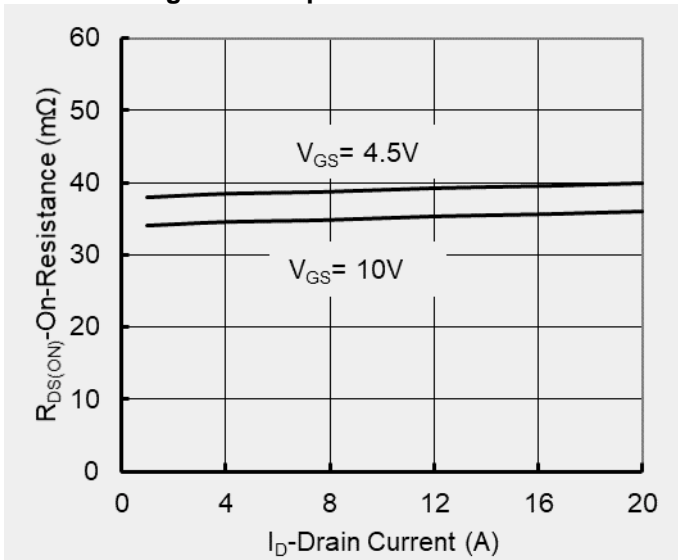


Figure 3. On-Resistance vs. Drain Current and Gate Voltage

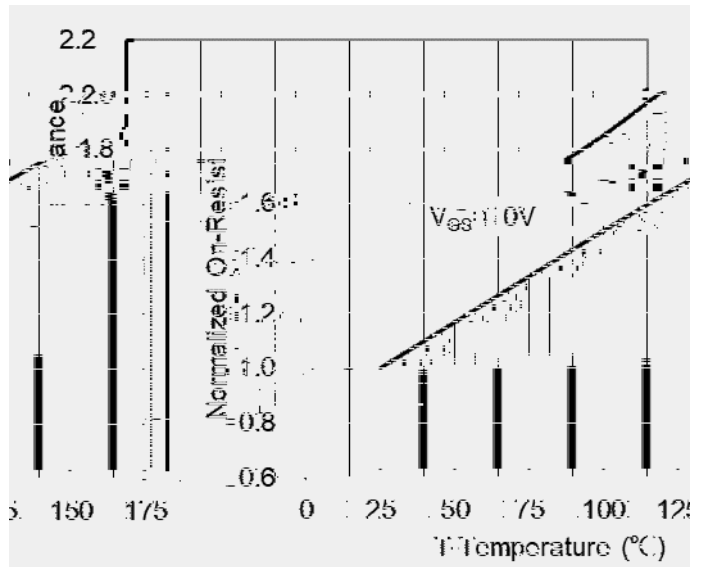


Figure 4. On-Resistance vs. Junction Temperature

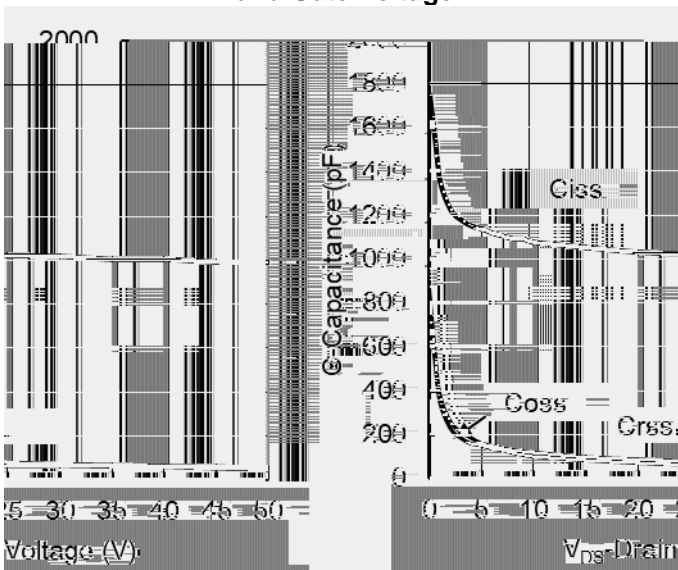


Figure 5. Capacitance Characteristics

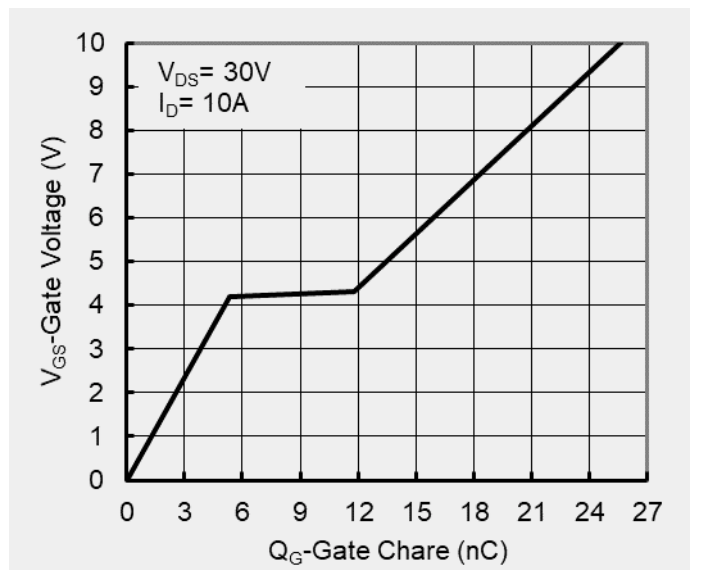


Figure 6. Gate Charge

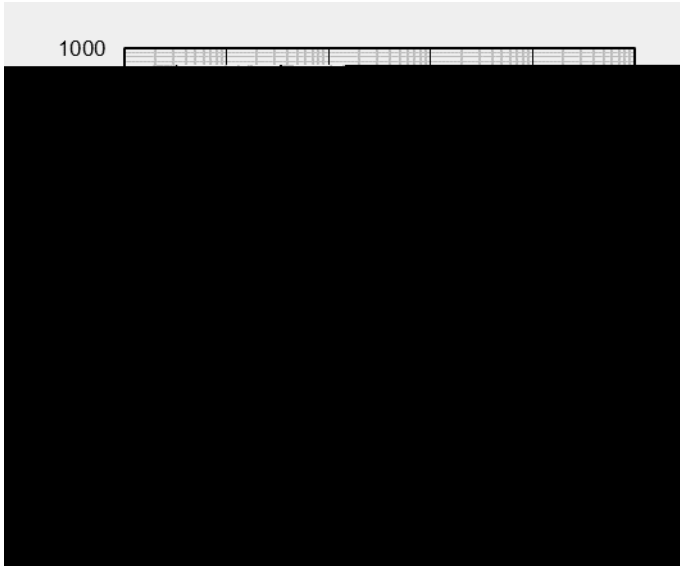


Figure 7. Safe Operation Area

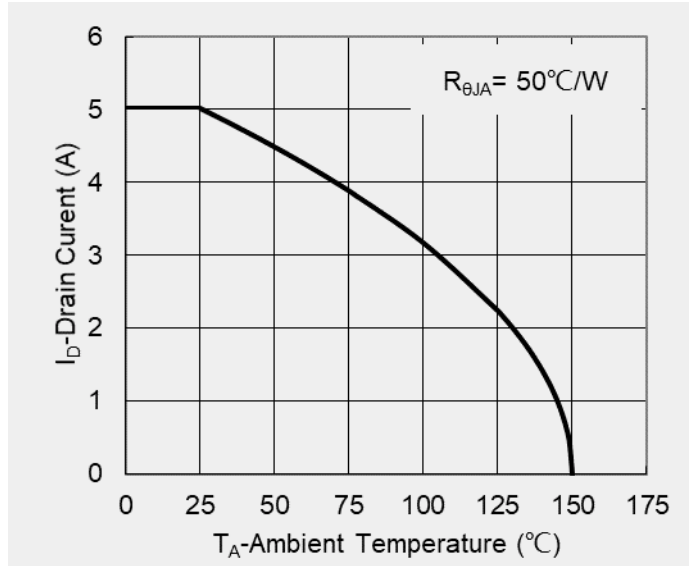


Figure 8. Maximum Continuous Drain Current vs Ambient Temperature

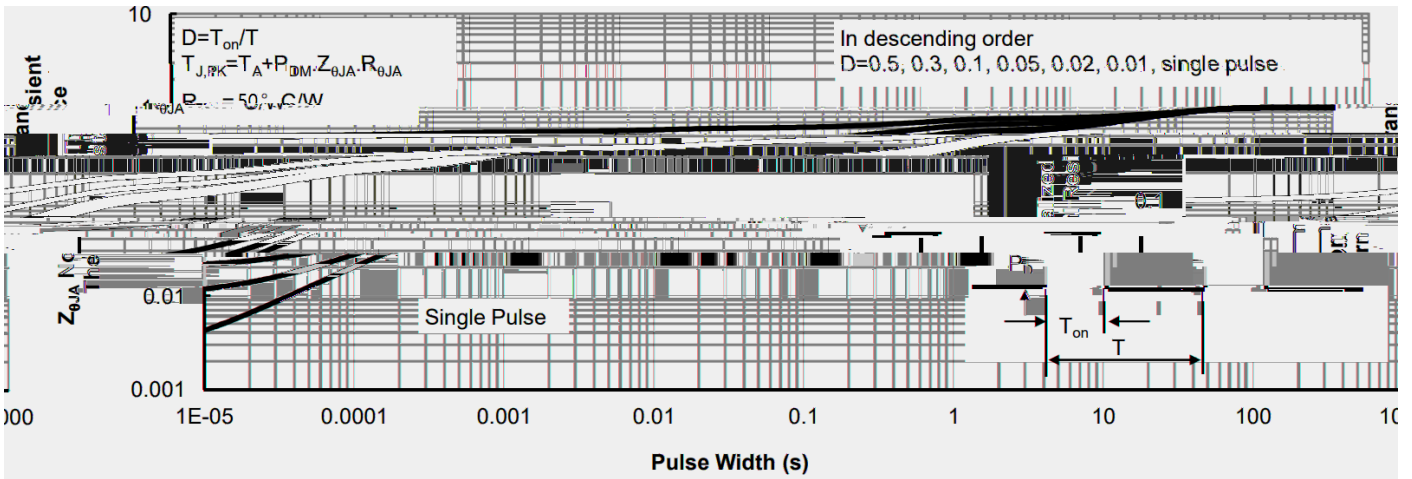
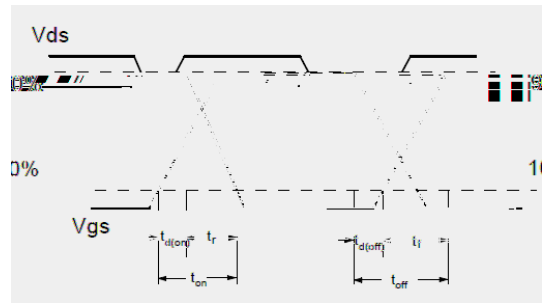
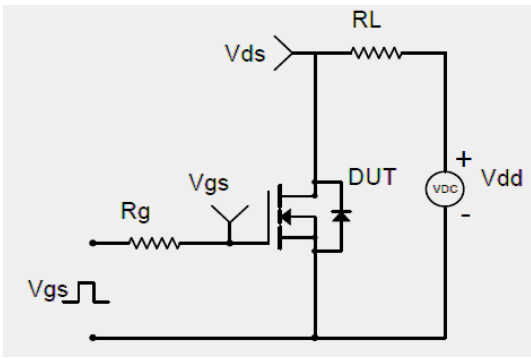
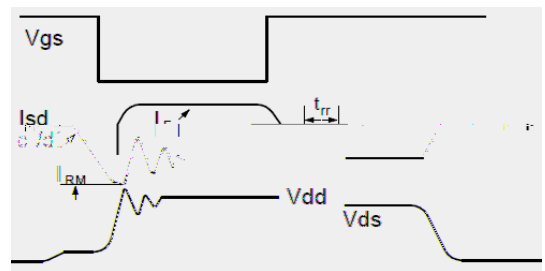
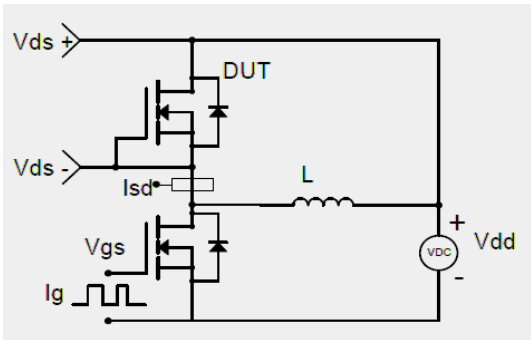


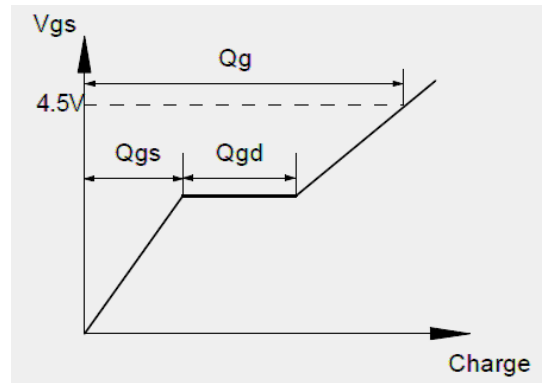
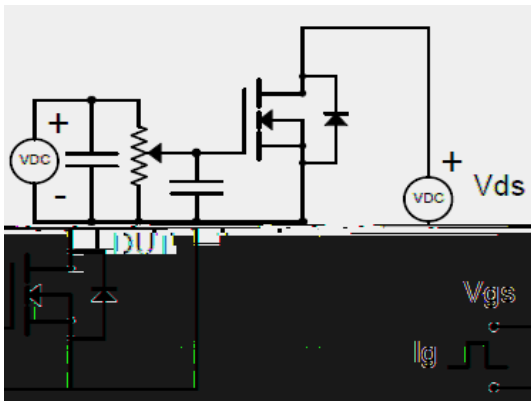
Figure 9. Normalized Maximum Transient Thermal Impedance



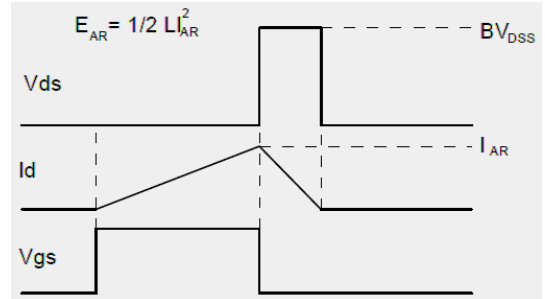
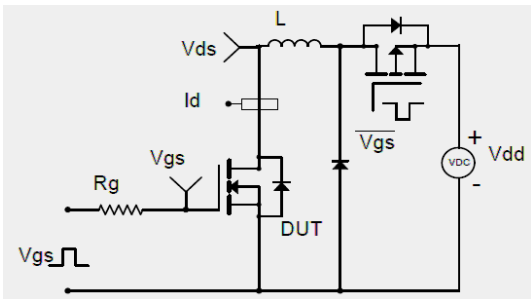
Resistive Switching Test Circuit & Waveforms



Diode Recovery Test Circuit & Waveforms



Gate Charge Test Circuit & Waveform



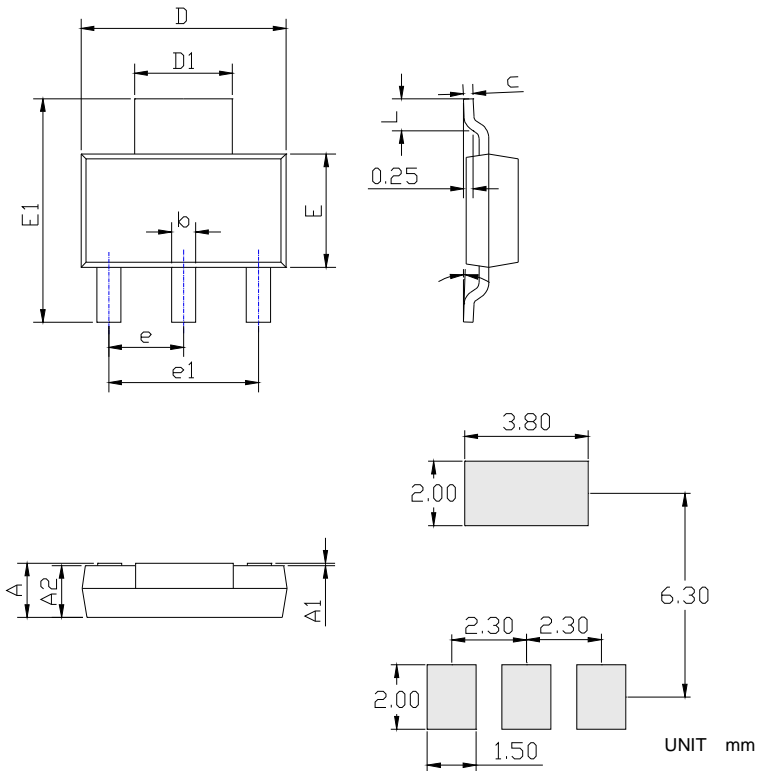
Unclamped Inductive Switching (UIS) Test Circuit & Waveforms



YJM05N06A

SOT-223 Package information

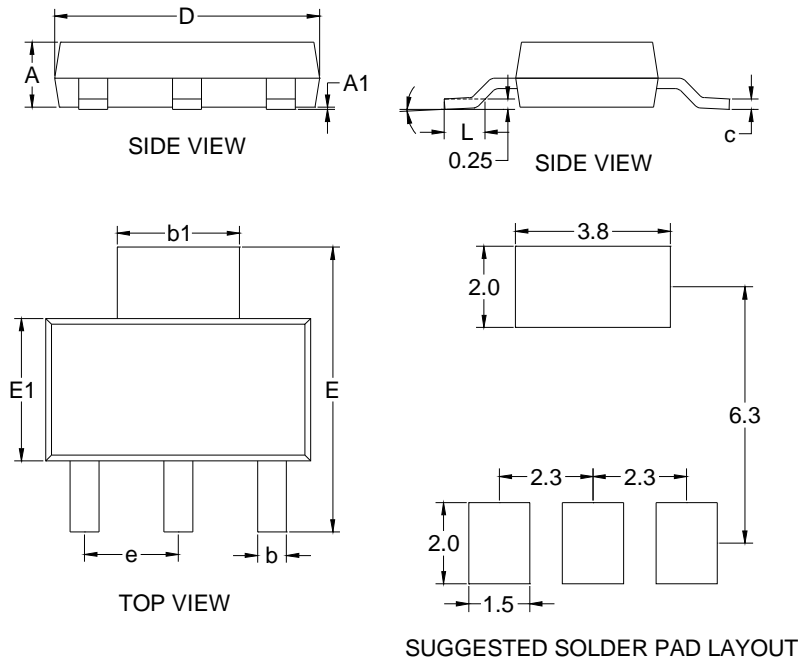
TYPE B:



SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.060	0.071	1.520	1.800
A1	0.000	0.004	0.000	0.100
A2	0.059	0.067	1.500	1.700
b	0.026	0.032	0.660	0.820
c	0.010	0.014	0.250	0.350
D	0.244	0.252	6.200	6.400
D1	0.114	0.122	2.900	3.100
E	0.130	0.146	3.300	3.700
E1	0.269	0.278	6.830	7.070
e	0.091BSC		2.300BSC	
e1	0.177	0.185	4.500	4.700
L	0.035	0.045	0.900	1.150
	0°	10°	0°	10°

NOTE:
 1. PACKAGE BODY SIZES EXCLUDE MOLD FLASH AND GATE BURRS.
 2. TOLERANCE 0.1mm UNLESS OTHERWISE SPECIFIED.
 3. THE PAD LAYOUT IS FOR REFERENCE PURPOSES ONLY.

TYPE A



DIM	DIMENSIONS			
	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.0591	0.0670	1.5000	1.7000
A1	0.0008	0.0039	0.0200	0.1000
b	0.0259	0.0330	0.6600	0.8400
b1	0.1140	0.1220	2.9000	3.1000
c	0.0090	0.0138	0.2300	0.3500
D	0.2480	0.2640	6.3000	6.7000
E	0.2637	0.2874	6.7000	7.3000
E1	0.1290	0.1460	3.3000	3.7000
e	0.0866	0.0945	2.2000	2.4000
L	0.0295	0.0492	0.7500	1.2500
	0°	10°	0°	10°

