

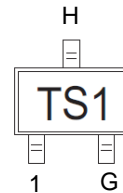


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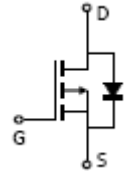
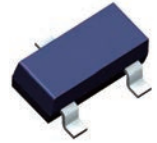
PRIMARY CHARACTERISTICS		
$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
-20V	100m Ω @-4.5V	-1.4A
	140m Ω @-2.5V	
	210m Ω @-1.8V	

SOT-323 PACKAGE

MARKING



1. GATE
2. SOURCE
3. DRAIN



FEATURES

- Leading Trench Technology for Low RDS(on) Extending Battery Life
- High Side Load Switch
- Charging Circuit
- Single Cell Battery Applications such as Cell Phones, Digital Cameras ,PDAs, etc

MECHANICAL DATA

- Case : Molded plastic,SOT-323
- Polarity : As Above Marked
- Terminals :Plated terminals, solderable per MIL-STD-750,Method 2026
- Epoxy : UL94-V0 rated flame retardant

Maximum ratings ($T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	- 20	V
Gate-Source Voltage	V_{GS}	± 8.0	
Continuous Drain Current	I_D	-1.4	A
Pulsed Drain Current ($t_p=10\mu\text{s}$)	I_{DM}	-3.0	
Power Dissipation	P_D	0.29	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	431	$^\circ\text{C/W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-50 ~+150	

MOSFET ELECTRICAL CHARACTERISTICS

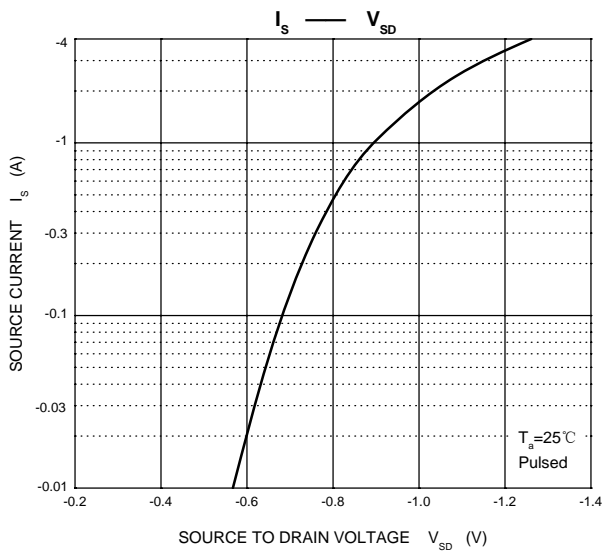
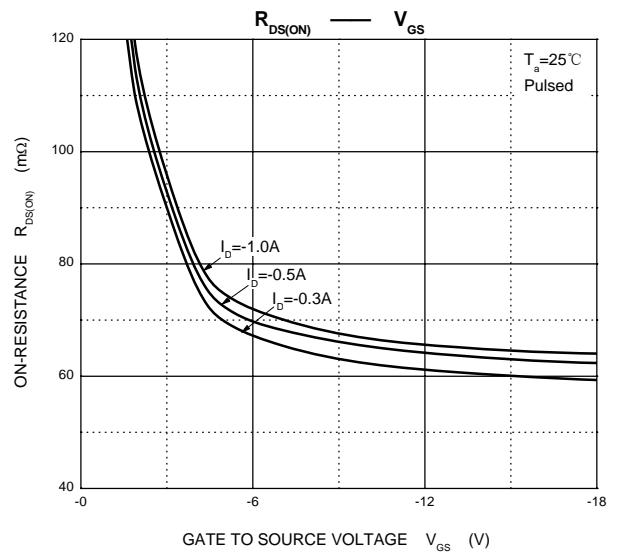
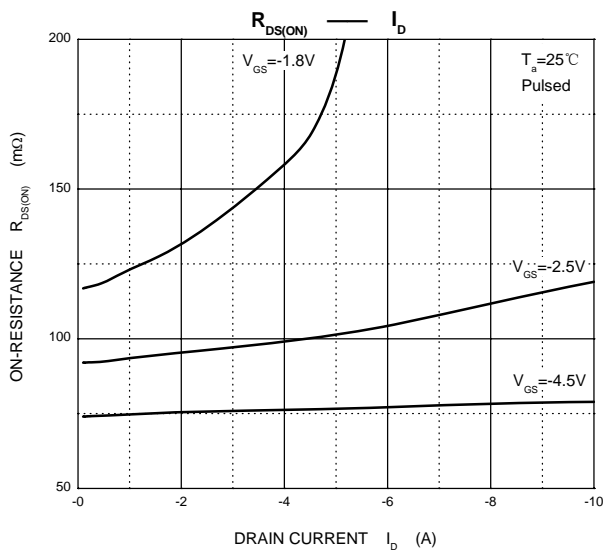
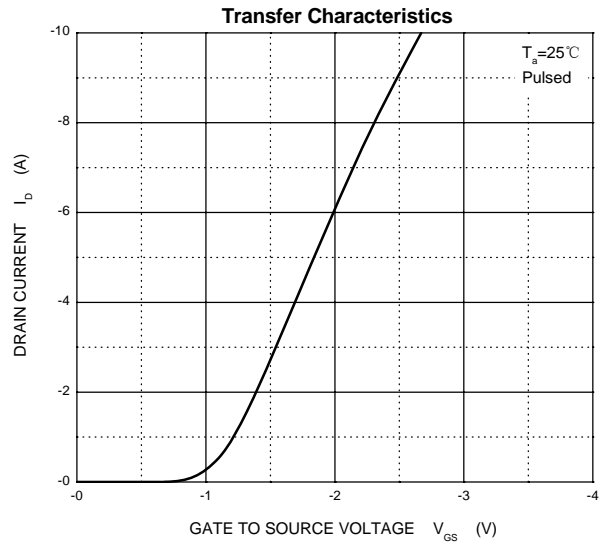
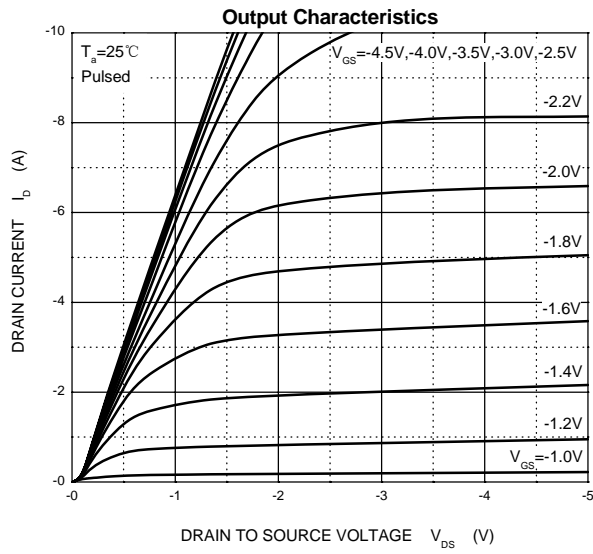
$T_a=25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
OFF CHARACTERISSTICS						
Drain-Source Breakdown Voltage	V_{DSS}	$V_{GS} = 0V, I_D = -250\mu A$	-20			V
Gate-Source Leakage	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 8V$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -20V, V_{GS} = 0V$			-1.0	μA
OFF CHARACTERISSTICS (note 1)						
Gate-Source Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-0.45	-0.7		V
Drain-Source On-State Resistance	$R_{DS(on)}$	$V_{GS} = -4.5V, I_D = -1.0A$			100	m Ω
		$V_{GS} = -2.5V, I_D = -0.5A$			140	
		$V_{GS} = -1.8V, I_D = -0.3A$			210	
CHARGES AND CAPACITANCES (note 3)						
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 (note 2,3)						
Turn-On Delay Time	$t_{d(on)}$	$V_{GS} = -4.5V, V_{DD} = -4.0V, I_D = -1.0A, R_G = 6.2\Omega$		6.2		ns
Rise Time	t_r			15		
Turn-Off Delay Time	$t_{d(off)}$			26		
Fall Time	t_f			18		
Drain-source Body diode characteristics						
Forward Diode Voltage	V_{SD}	$V_{GS} = 0V, I_S = -0.3A$		-0.62	-1.2	V

Notes :

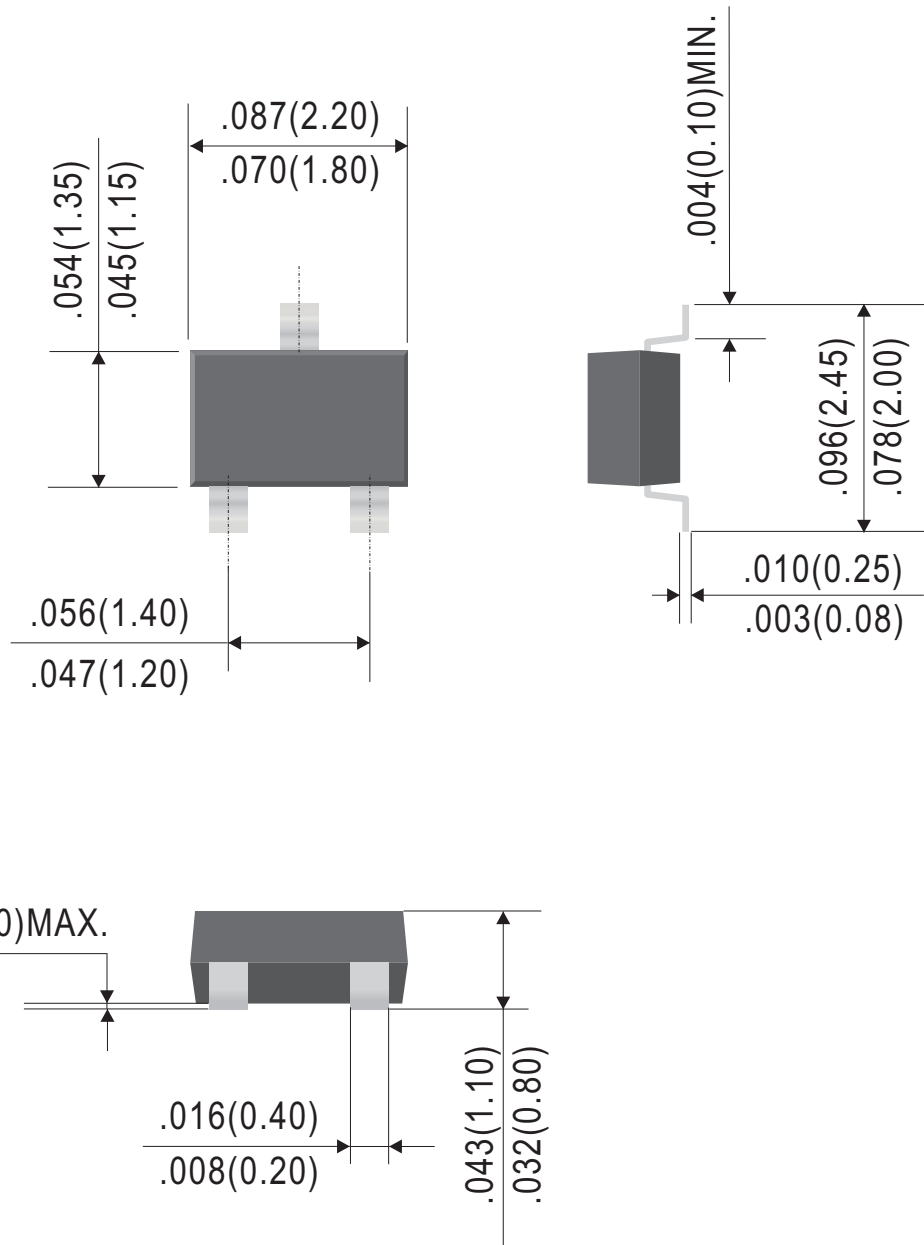
1. Pulse Test : pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.
2. Switching characteristics are independent of operating junction temperatures.
3. These parameters have no way to verify.

Typical Characteristics



Outline Drawing

SOT-323



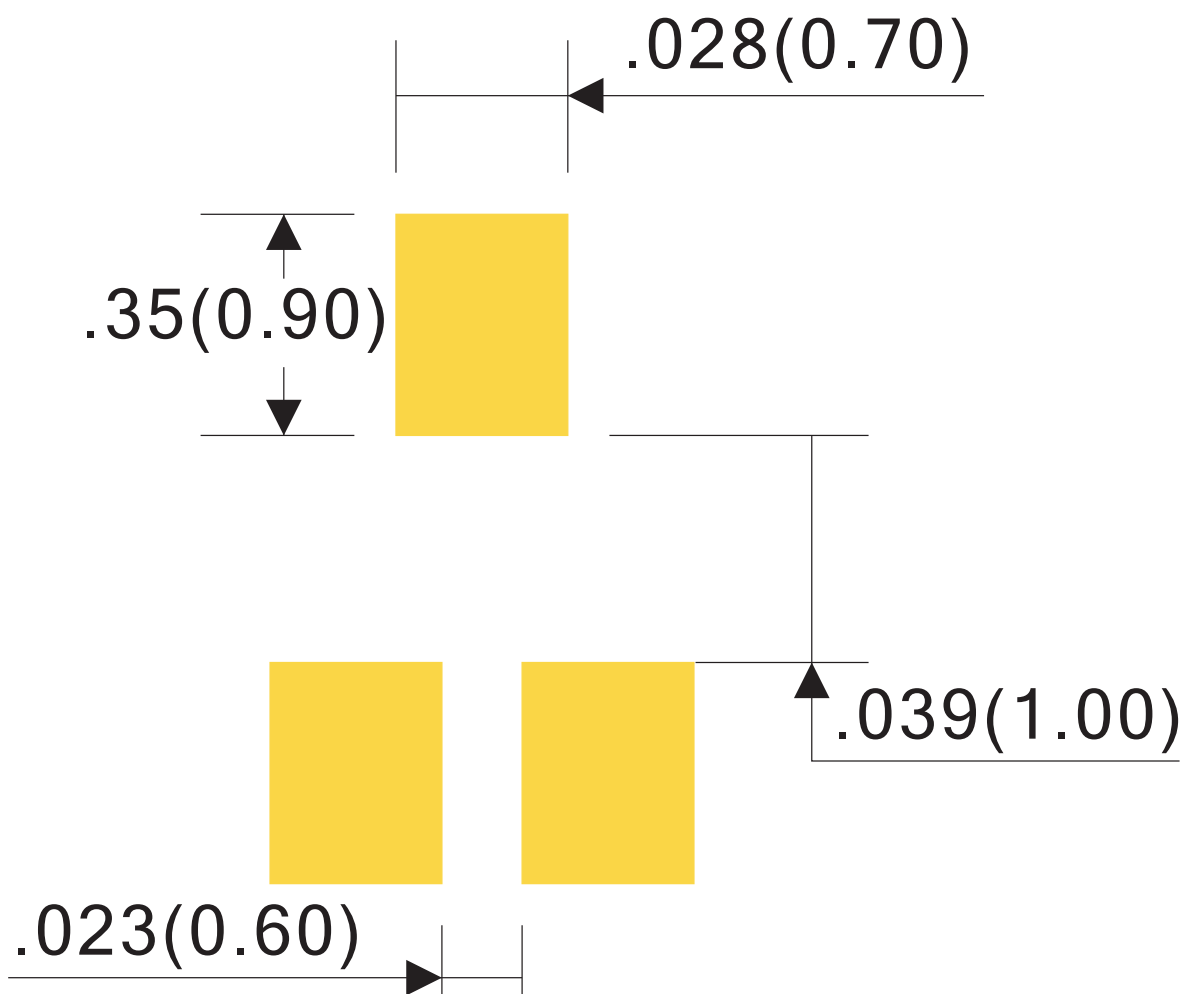
Dimensions in inches and (millimeters)

Rev.D



Suggested Soldering Pad Layout

SOT-323



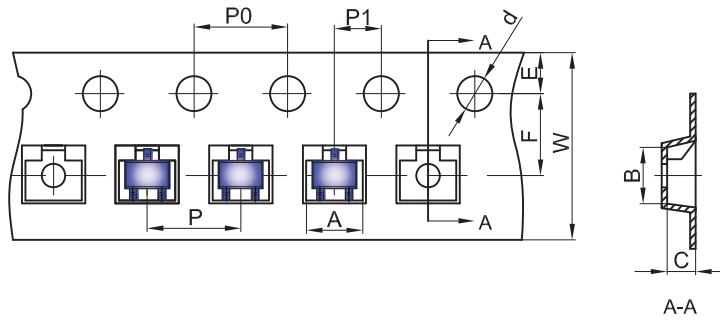
Dimensions in inches and (millimeters)

Rev.A



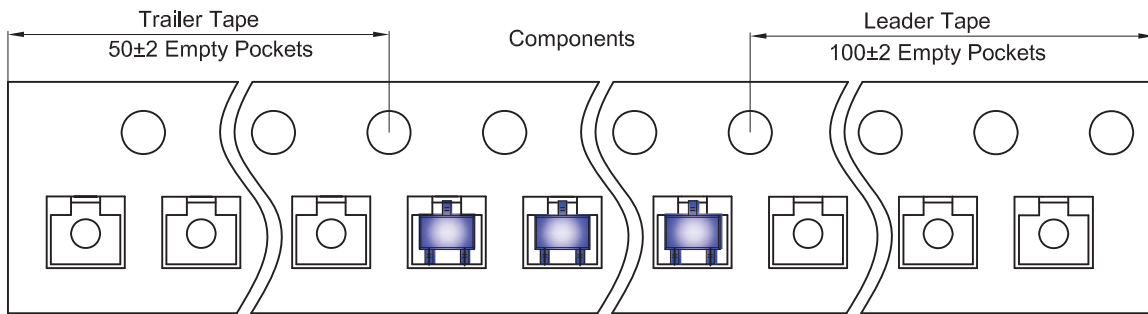
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SOT-323 Embossed Carrier Tape

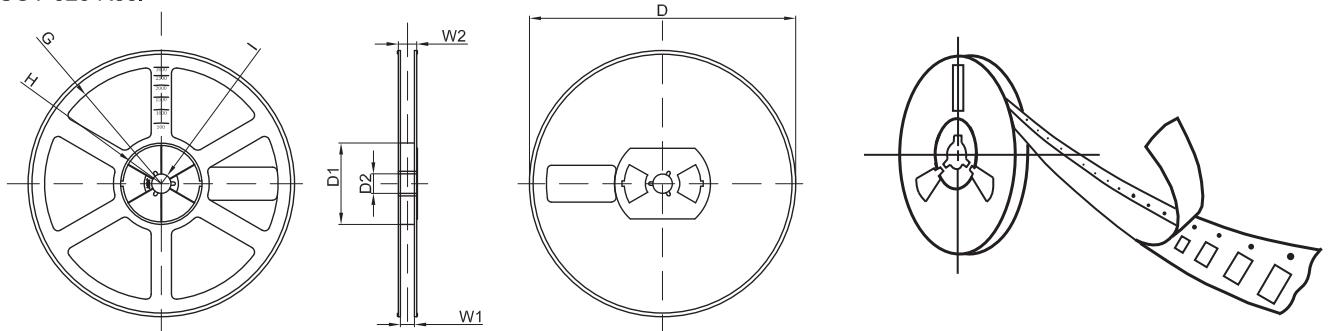


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-323	2.25	2.55	1.19	Ø1.55	1.75	3.50	4.00	4.00	2.00	8.00
(Tolerance)	+/-0.05	+/-0.05	+/-0.05	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+0.3/-0.1

SOT-323 Tape Leader and Trailer



SOT-323 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30
Tolerance	+/-2	+/-1	+/-1	+/-1	+/-1	+/-1	+/-1	+/-1

Ordering Information:

Device PN	Packing
.....O- -T ⁽¹⁾ G ⁽²⁾ -WS	Tape&Reel: 3 Kpcs/Reel

Note: (1) Packing code, Tape & Reel Packing

(2) RoHS product for packing code suffix "G" ; Halogen free product for packing code suffix "H"

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