

PRIMARY CHARACTERISTICS	
P_D	150mW
V_{DS}	20V
I_D	0.75A
$R_{DS(ON)}$	380m Ω
$T_{J,Max}$	150°C

FEATURES

- Lead Free Product is Acquired
- Surface Mount Package
- N-Channel Switch with Low RDS(on)
- Operated at Low Logic Level Gate Drive

APPLICATION

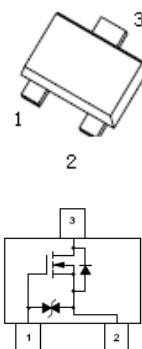
- Load/Power Switching
- Interfacing Switching
- Battery Management for Ultra Small Portable Electronics
- Logic Level Shift

SOT-723 PACKAGE

MARKING



1. GATE
2. SOURCE
3. DRAIN



MECHANICAL DATA

- Case : Molded plastic,SOT-723
- 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}	± 12	V
Continuous Drain Current (note 1)	I_D	0.75	A
Pulsed Drain Current ($t_p=10\mu s$)	I_{DM}	1.8	A
Power Dissipation (note 1)	P_D	150	mW
Thermal Resistance from Junction to Ambient (note 1)	$R_{\theta JA}$	833	$^{\circ}\text{C/W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~+150	$^{\circ}\text{C}$
Lead Temperature for Soldering Purposes(1/8" from case for 10 s)	T_L	260	$^{\circ}\text{C}$

Electrical characteristics (T_a=25°C unless otherwise noted)

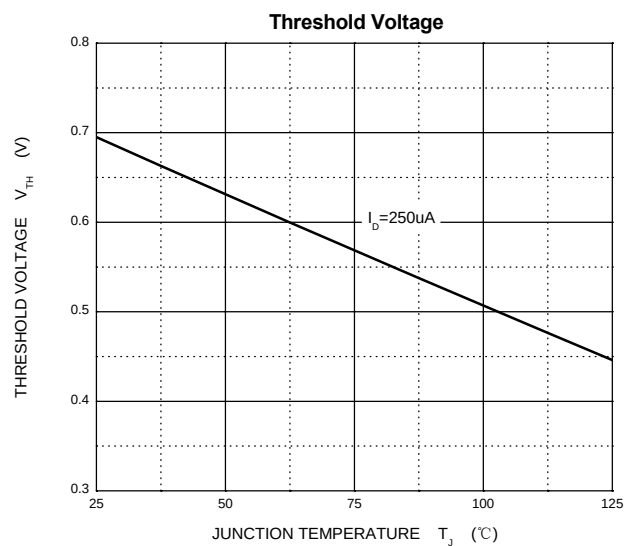
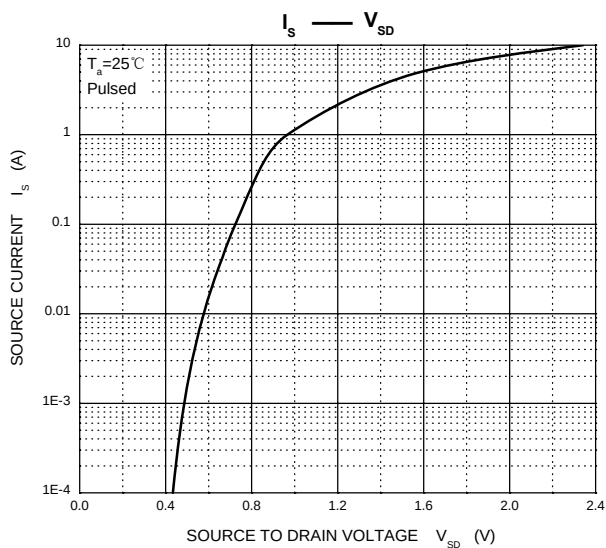
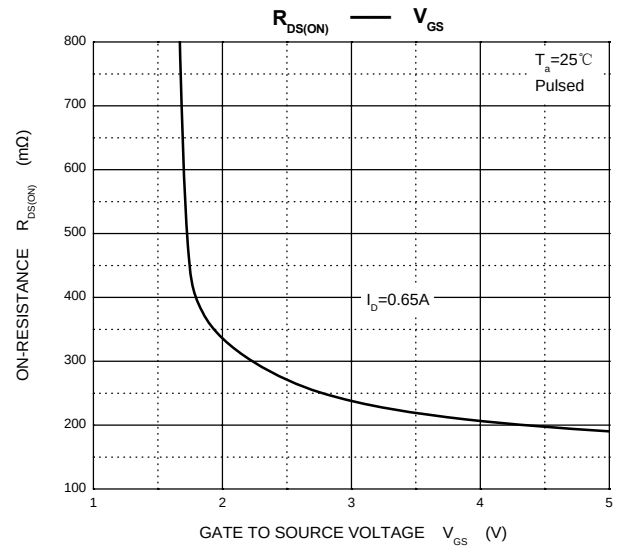
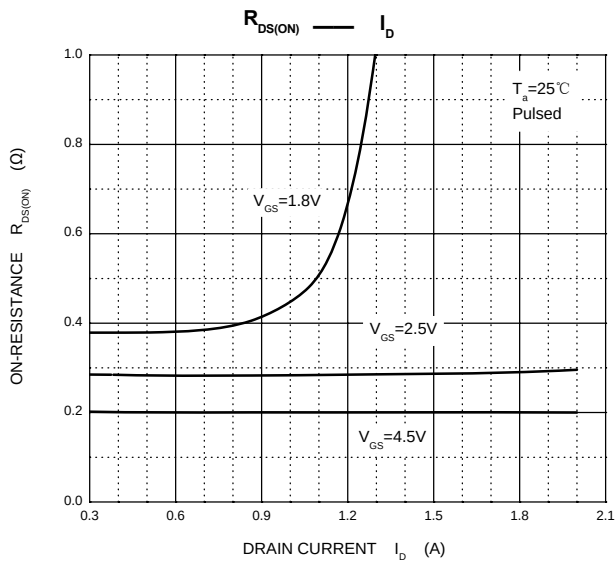
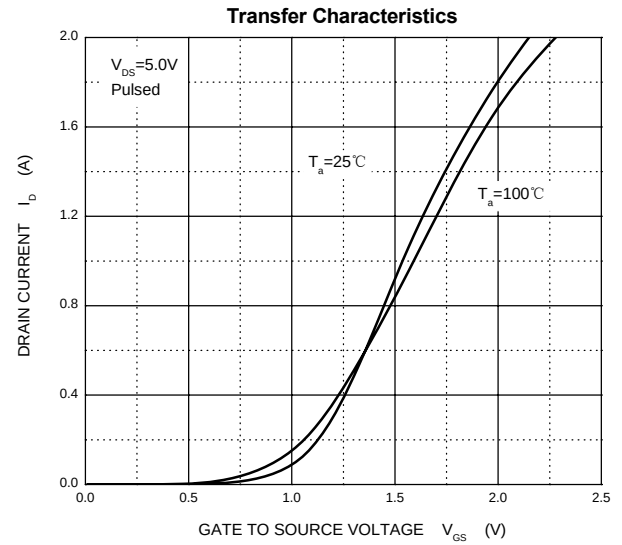
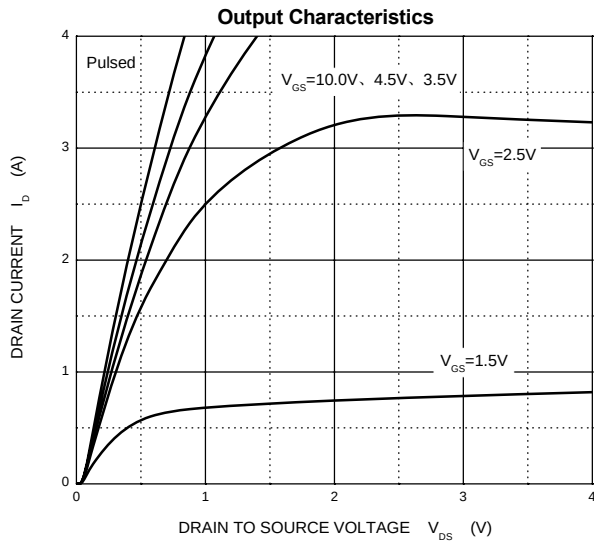
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC CHARACTERISTICS						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =250μA	20			V
Zero gate voltage drain current	I _{DSS}	V _{DS} =20V, V _{GS} = 0V			1	μA
Gate-body leakage current	I _{GSS}	V _{GS} =±12V, V _{DS} = 0V			±50	μA
Gate threshold voltage (note 2)	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	0.35		1	V
Drain-source on-resistance (note 2)	R _{DS(on)}	V _{GS} =4.5V, I _D =0.65A			380	mΩ
		V _{GS} =2.5V, I _D =0.55A			450	mΩ
		V _{GS} =1.8V, I _D =0.45A			800	mΩ
Forward transconductance (note 2)	g _{FS}	V _{DS} =10V, I _D =0.8A		1.6		S
Diode forward voltage	V _{SD}	I _S =0.15A, V _{GS} = 0V			1.2	V
DYNAMIC CHARACTERISTICS (note 4)						
Input capacitance	C _{iss}	V _{DS} =16V, V _{GS} =0V, f =1MHz		79	120	pF
Output capacitance	C _{oss}			13	20	pF
Reverse transfer capacitance	C _{rss}			9	15	pF
SWITCHING CHARACTERISTICS (note 4)						
Turn-on delay time (note 3)	t _{d(on)}	V _{GS} =4.5V, V _{DS} =10V, I _D =500mA, R _{GEN} =10Ω		6.7		ns
Turn-on rise time (note 3)	t _r			4.8		ns
Turn-off delay time (note3)	t _{d(off)}			17.3		ns
Turn-off fall time (note 3)	t _f			7.4		ns

Notes :

1. Surface mounted on FR4 board using the minimum recommended pad size.
2. Pulse Test : Pulse Width=300μs, Duty Cycle=2%.
3. Switching characteristics are independent of operating junction temperatures.
4. Guaranteed by design, not subject to producing.



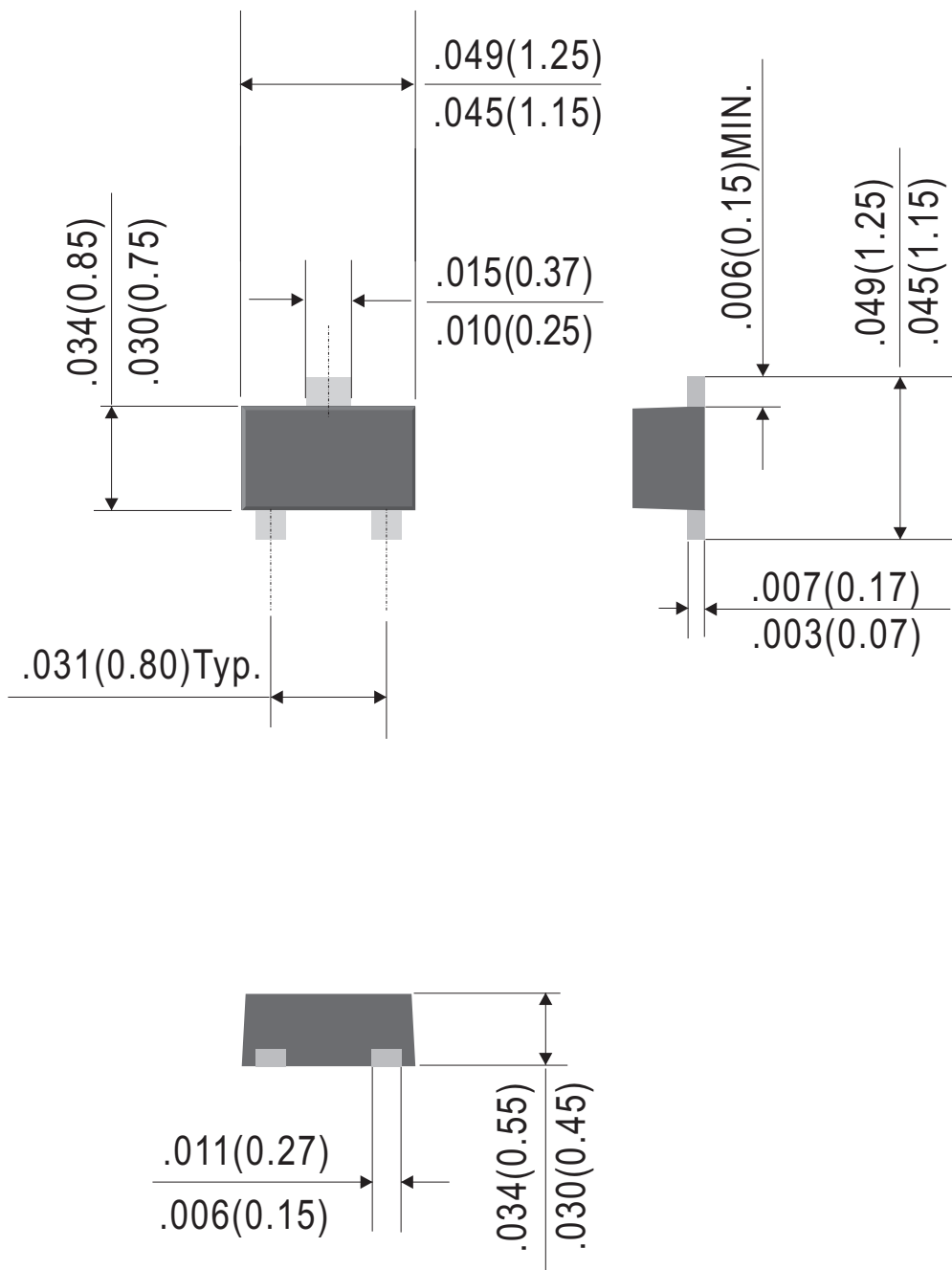
Typical Characteristics





Outline Drawing

SOT-723



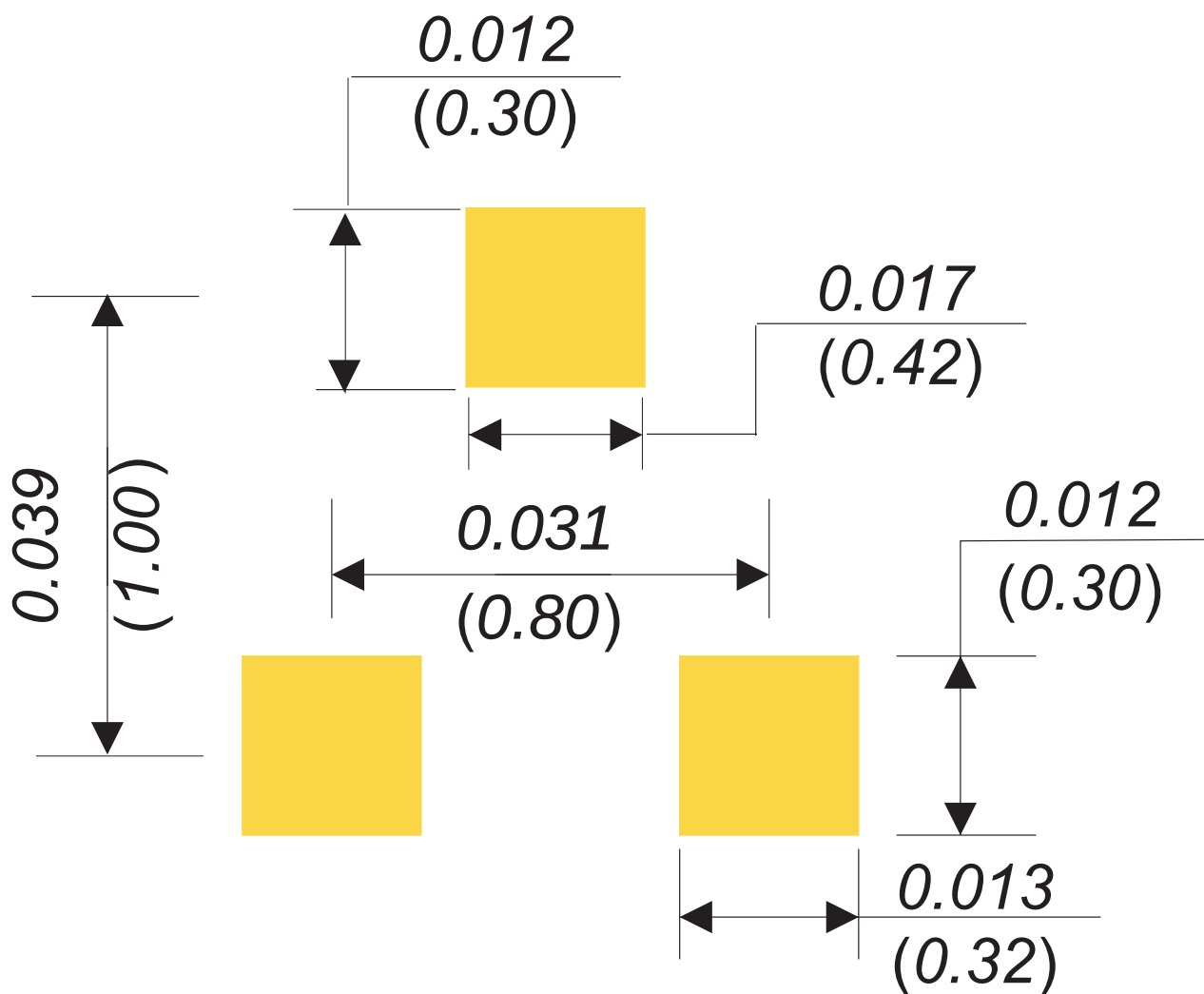
Dimensions in inches and (millimeters)

Rev.E



Suggested Soldering Pad Layout

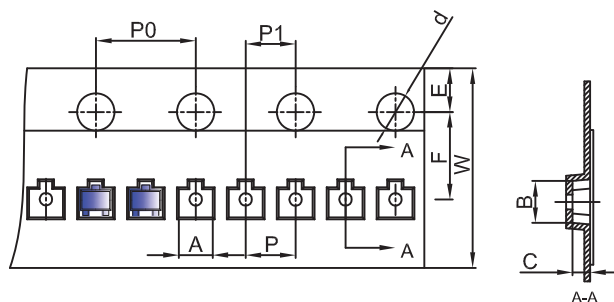
SOT-723



Dimensions in inches and (millimeters)

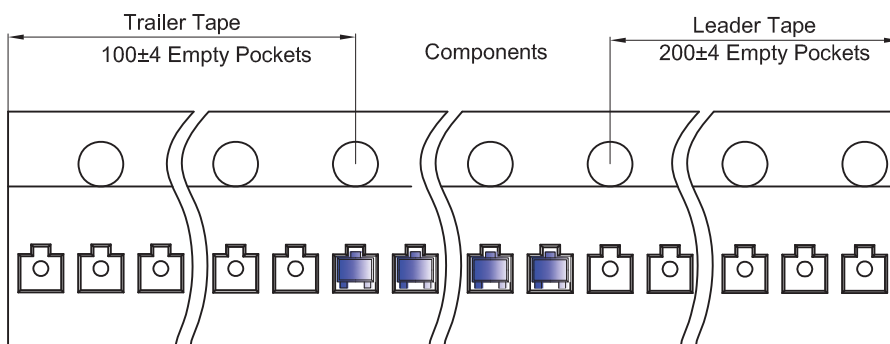
RevA

SOT-723 Embossed Carrier Tape

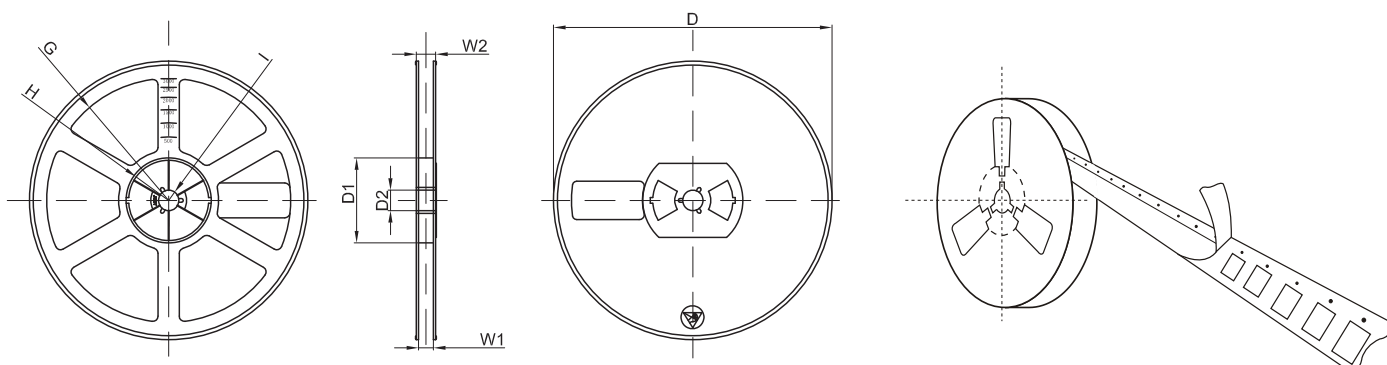


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-723	1.33	1.45	0.61	Ø1.50	1.75	3.50	4.00	2.00	2.00	8.00
(Tolerance)	+/-0.05	+/-0.05	+/-0.05	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+0.3/-0.1

SOT-723 Tape Leader and Trailer



SOT-723 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
SE3134K-T ⁽¹⁾ G ⁽²⁾ -WS	Tape&Reel: 8 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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