

### Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	$I_D$
-50V	2.3Ω@-10V	-0.13A
	2.7Ω@-5V	

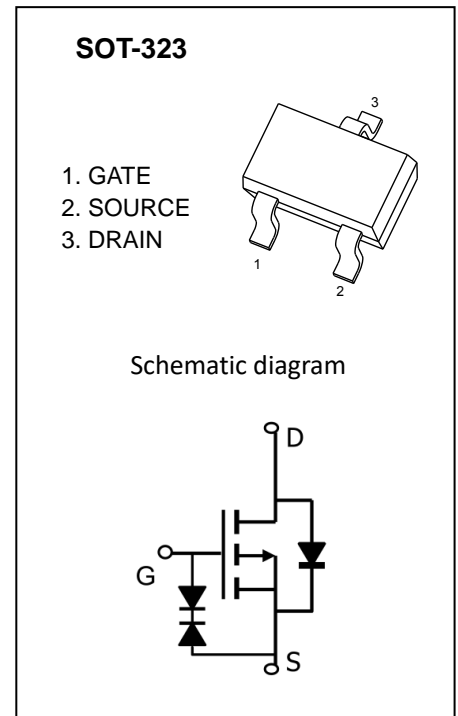
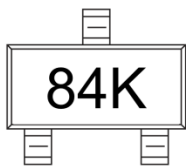
### Feature

- Energy Efficient
- High-Speed Switching
- Miniature Surface Mount Package, Saves Board Space

### Application

- DC-DC Converters
- Load Switching,
- Power Management In Portable

### MARKING:



### ABSOLUTE MAXIMUM RATINGS ( $T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$V_{DS}$	-50	V
Gate-Source Voltage	$V_{GS}$	±20	V
Continuous Drain Current	$I_D$	-0.13	A
Plused Drain Current <sup>(1)</sup> @ $t_p < 10\mu\text{s}$	$I_{DM}$	-0.52	A
Power Dissipation	$P_D$	225	mW
Thermal Resistance from Junction to Ambient <sup>(2)</sup>	$R_{\theta JA}$	556	$^{\circ}\text{C/W}$
Junction Temperature	$T_J$	150	$^{\circ}\text{C}$
Storage Temperature	$T_{STG}$	-55~ +150	$^{\circ}\text{C}$

## MOSFET ELECTRICAL CHARACTERISTICS( $T_a=25^{\circ}\text{C}$ unless otherwise noted)

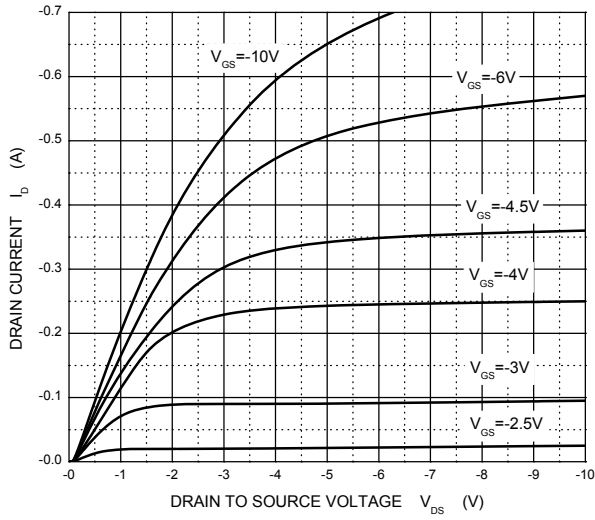
Parameter	Symbol	Test Condition	Min	Type	Max	Unit
<b>Static Characteristics</b>						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	-50			V
Zero gate voltage drain current	$I_{DSS}$	$V_{DS} = -50V, V_{GS} = 0V$			-1	$\mu A$
Gate-body leakage current	$I_{GSS}$	$V_{GS} = \pm 20V, V_{DS} = 0V$			$\pm 10$	$\mu A$
Gate threshold voltage <sup>(3)</sup>	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-0.9	-1.6	-2	V
Drain-source on-resistance <sup>(3)</sup>	$R_{DS(on)}$	$V_{GS} = -10V, I_D = -0.1A$		2.3	6	$\Omega$
		$V_{GS} = -5V, I_D = -0.1A$		2.7	7	
Forward transconductance <sup>(1)</sup>	$g_{FS}$	$V_{DS} = -25V, I_D = -0.1A$	50			mS
<b>Dynamic characteristics</b>						
Input Capacitance	$C_{iss}$	$V_{DS} = -5V, V_{GS} = 0V, f = 1MHz$		22		pF
Output Capacitance	$C_{oss}$			7.5		
Reverse Transfer Capacitance	$C_{rss}$			4		
<b>Switching characteristics</b>						
Turn-on delay time	$t_{d(on)}$	$V_{DD} = -15V, R_L = 50\Omega, I_D = -2.5A$		1.85		ns
Turn-on rise time	$t_r$			0.7		
Turn-off delay time	$t_{d(off)}$			12		
Turn-off fall time	$t_f$			6		
<b>Source-Drain Diode characteristics</b>						
Diode forward current	$I_S$				-0.13	A
Diode pulsed forward current	$I_{SM}$				-0.52	
Diode Forward voltage	$V_{DS}$	$V_{GS} = 0V, I_S = -0.13A$			-1.2	V

### Notes :

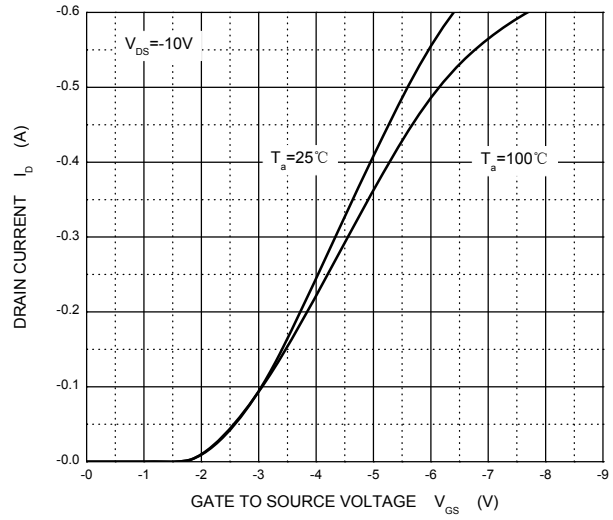
1. Repetitive rating : Pulse width limited by junction temperature.
2. Surface mounted on FR4 board ,  $t_s \leq 10s$ .
3. Pulse Test : Pulse Width  $\leq 300\mu s$ , Duty Cycle  $\leq 2\%$ .

**Typical Electrical and Thermal Characteristics**

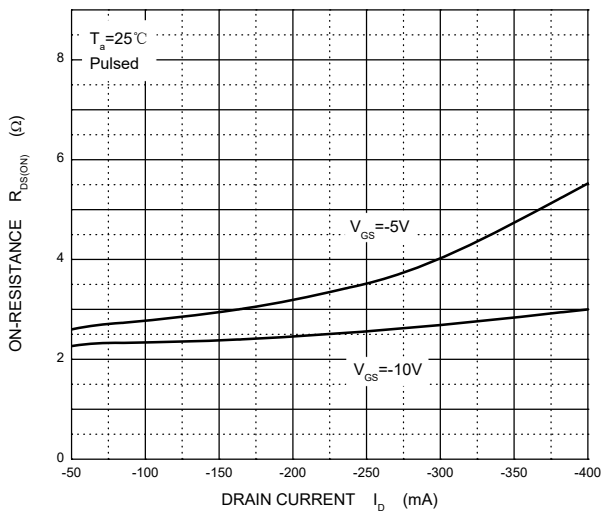
**Output Characteristics**



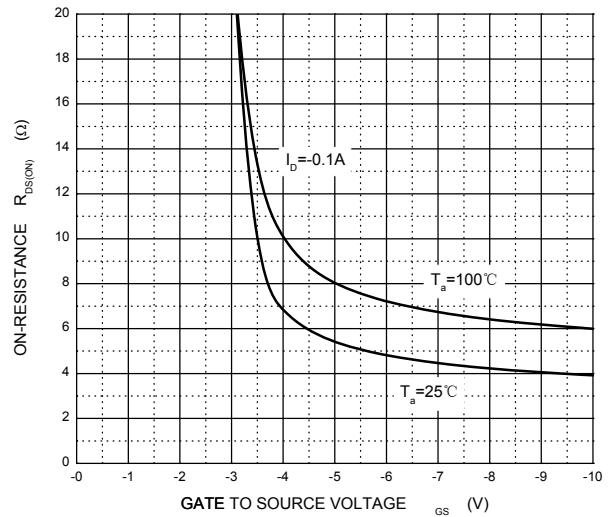
**Transfer Characteristics**



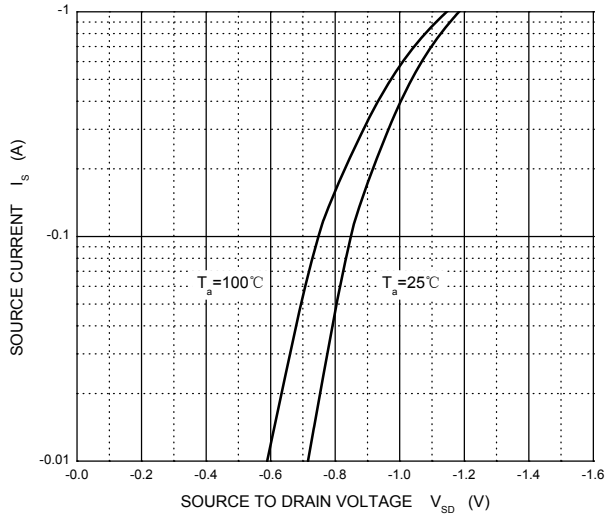
$R_{DS(ON)}$  —  $I_D$



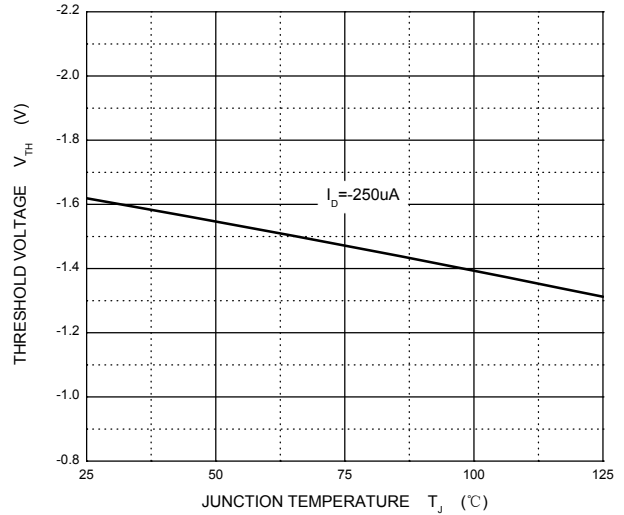
$R_{DS(ON)}$  —  $V_{GS}$



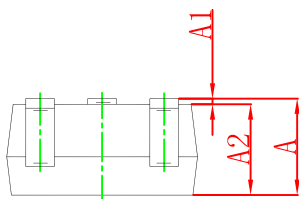
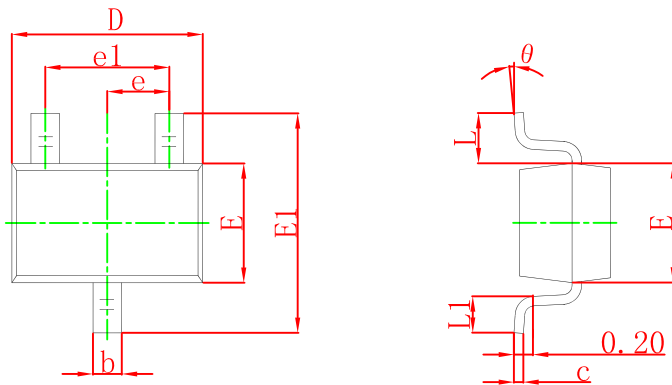
$I_S$  —  $V_{SD}$



**Threshold Voltage**



## SOT-323 Package Information

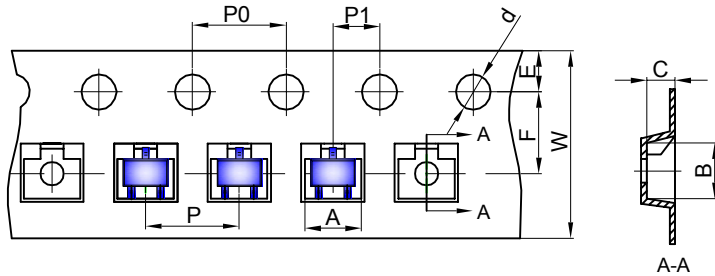


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

**SOT-323 Tape and Reel**

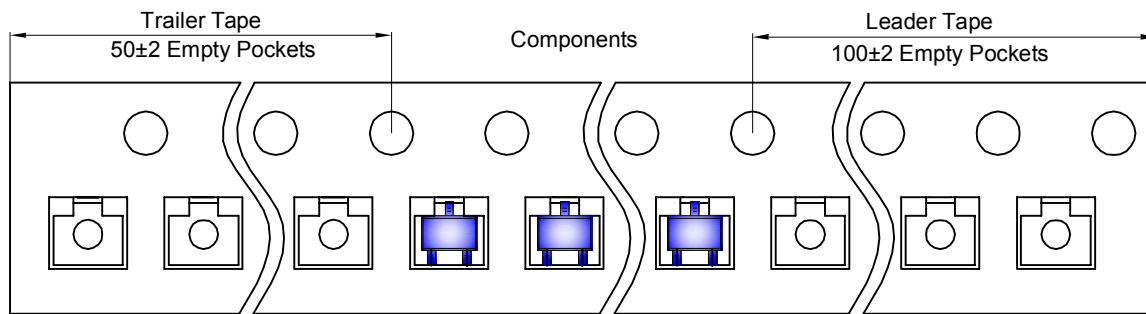
**SOT-323 Tape and reel**

SOT-323 Embossed Carrier Tape

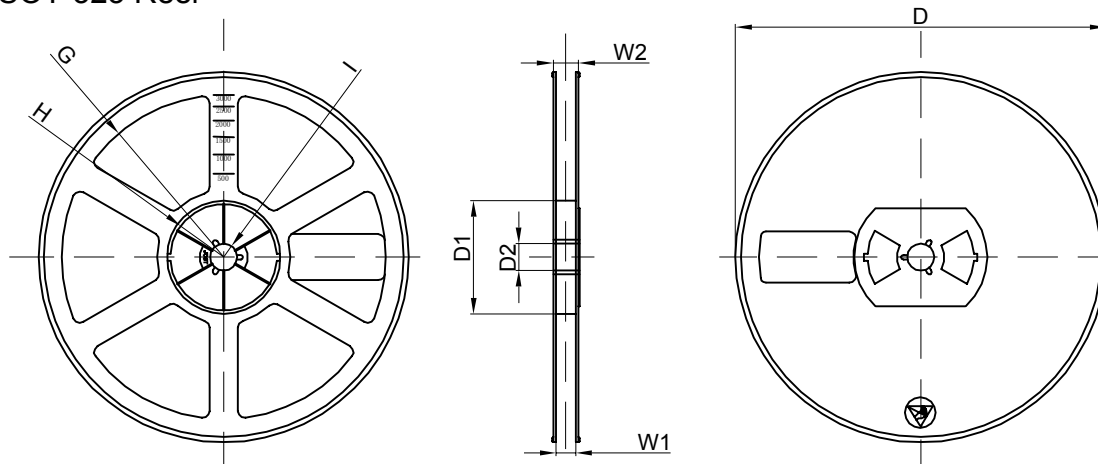


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-323	2.25	2.55	1.19	Ø1.55	1.75	3.50	4.00	4.00	2.00	8.00

**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

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	30,000 pcs	203×203×195	120,000 pcs	438×438×220	

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)