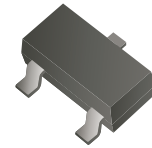


ABSS84W-HF

P-Channel
RoHS Device
Halogen Free



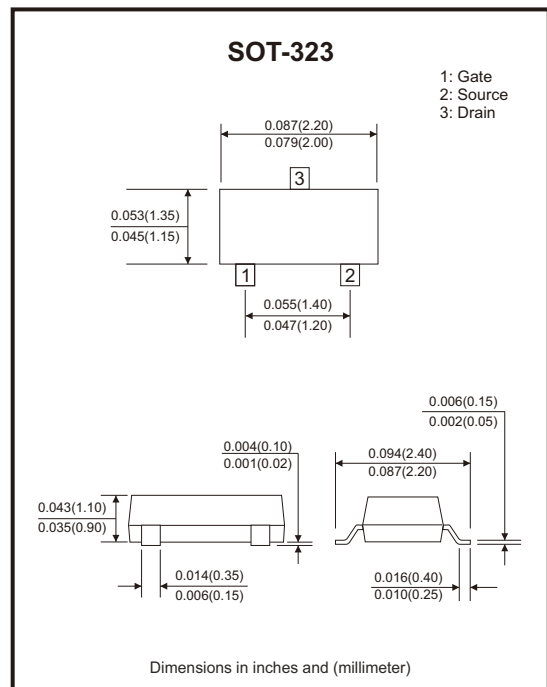
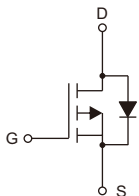
Features

- Low on-resistance.
- High-speed switching.
- Drive circuits can be simple.
- Parallel use is easy.
- AEC-Q101 Qualified.

Mechanical data

- Case: SOT-323, molded plastic.
- Molding compound: UL flammability classification rating 94V-0.
- Terminals: Matte tin plated leads, solderable per MIL-STD-202, method 208.

Circuit Diagram



Maximum Ratings (at Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-source voltage	V _{DSS}	-50	V
Gate-source voltage	V _{GSS}	±12	V
Continuous drain current (Note 1)	I _D	-130	mA
Pulsed drain current (Note 4)	I _{DM}	-520	mA
Power dissipation (Note 1)	P _D	0.2	W
Thermal resistance junction to air (Note 1)	R _{θJA}	625	°C/W
Operating junction temperature range	T _J	-55 to +150	°C
Storage temperature range	T _{STG}	-55 to +150	°C

Electrical Characteristics (at Ta=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	V_{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	μA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 20V, V_{DS} = 0V$			± 10	μA
On Characteristics (Note 2)						
Static drain-source on resistance	$R_{DS(ON)}$	$V_{GS} = -5V, I_D = -0.1A$		2.1	10	Ω
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -1mA$	-0.8		-2	V
Dynamic Characteristics (Note 3)						
Input capacitance	C_{iss}	$V_{GS} = 0V, V_{DS} = -20V, f = 1MHz$		56		pF
Output capacitance	C_{oss}			17		
Reverse transfer capacitance	C_{rss}			5		
Gate resistance	R_G	$V_{GS} = 0V, V_{DS} = -20V, f = 1MHz$		324		Ω
Switching Characteristics (Note 3)						
Turn-on delay time	$t_{d(on)}$	$V_{DD} = 30V, I_D = 0.2A, V_{GS} = 10V, R_G = 25\Omega, R_L = 150\Omega$		6		nS
Turn-on rise time	t_r			5		
Turn-off delay time	$t_{d(off)}$			25		
Turn-off fall time	t_f			15		
Source-Drain Diode Characteristics						
Diode forward voltage (Note 2)	V_{SD}	$I_S = -0.26A, V_{GS} = 0V$		-1.15	-1.4	V
Maximum body-diode continuous current	I_S	$T_C = 25^\circ C$			-0.3	A

Notes: 1. Surface mounted on FR4 board, and standard footprint, $t \leq 10$ sec.

2. Pulse test: pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.

3. Guaranteed by design, not subject to production.

4. Pulse width limited by maximum junction temperature.

Rating and Characteristic Curves (ABSS84W-HF)

Fig.1 - Output Characteristics

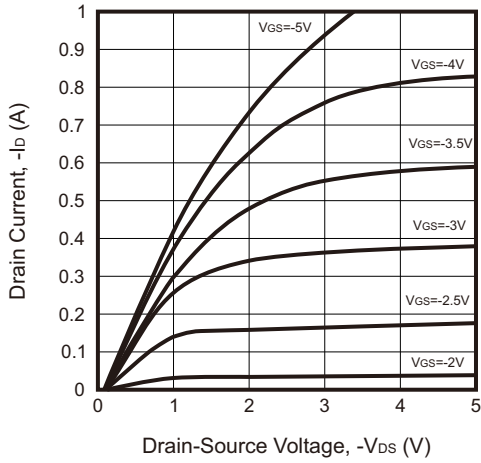


Fig.2 - Drain-Source On-Resistance

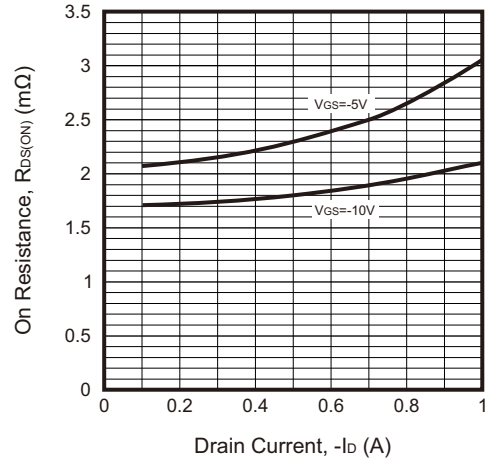


Fig.3 - Drain-Source On-Resistance

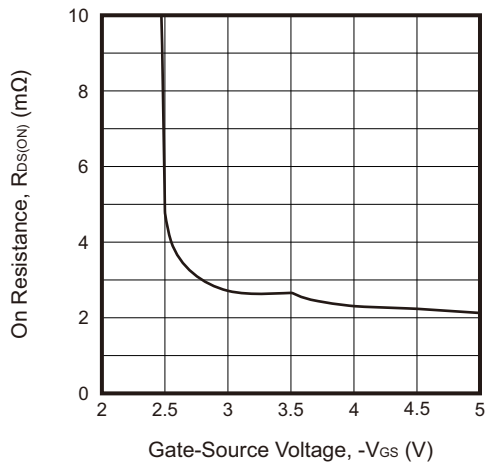


Fig.4 - Gate Threshold Voltage

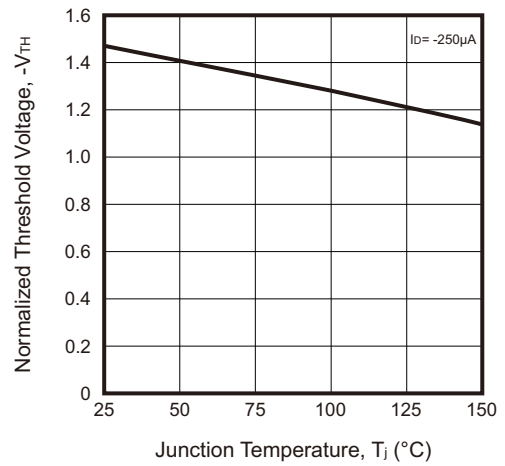


Fig.5 - Drain-Source On-Resistance

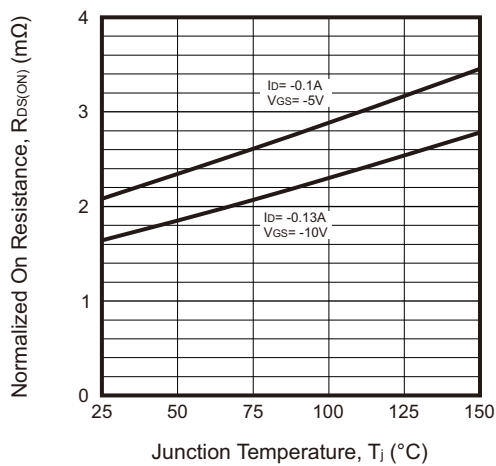
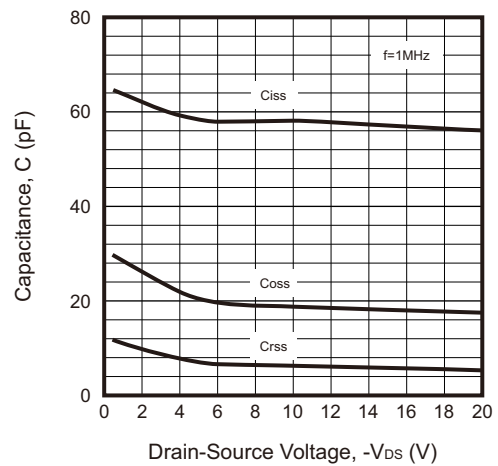
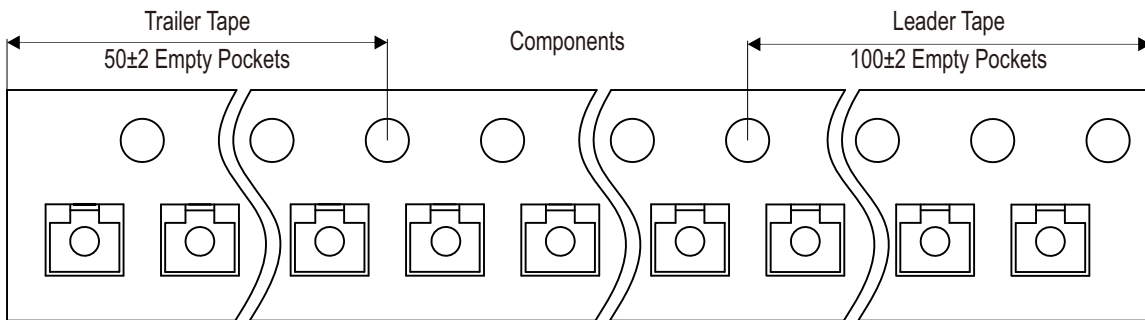
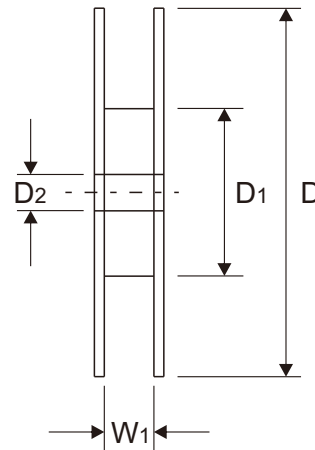
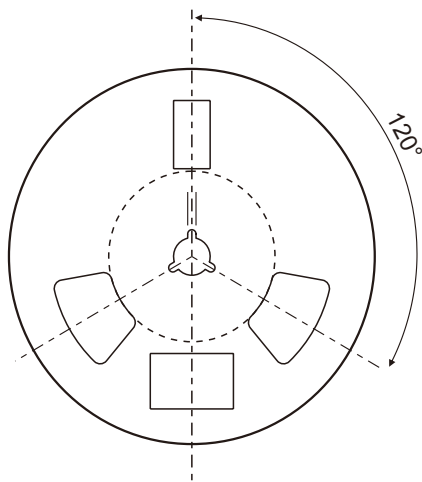
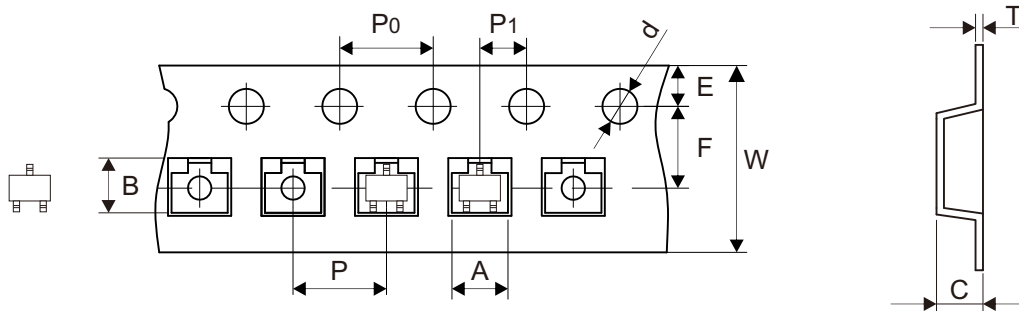


Fig.6 - Capacitance



Reel Taping Specification

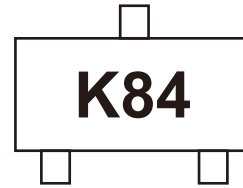


SOT-323	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	2.25 ± 0.10	2.55 ± 0.10	1.19 ± 0.10	1.50 ± 0.10	178.00 ± 1.00	54.00 ± 0.50	13.00 ± 0.50
	(inch)	0.089 ± 0.004	0.100 ± 0.004	0.047 ± 0.004	0.059 ± 0.004	7.008 ± 0.039	2.126 ± 0.020	0.512 ± 0.020

SOT-323	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.22 ± 0.02	8.00 + 0.30 - 0.10	9.50 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.009 ± 0.001	0.315 + 0.012 - 0.004	0.374 ± 0.039

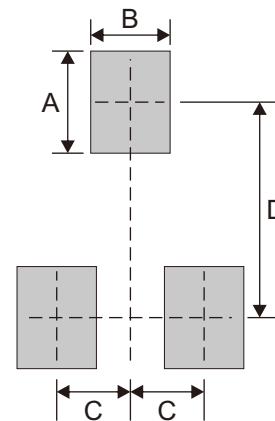
Marking Code

Part Number	Marking Code
ABSS84W-HF	K84



Suggested P.C.B. PAD Layout

SIZE	SOT-323	
	(mm)	(inch)
A	0.90	0.035
B	0.70	0.028
C	0.65	0.026
D	1.90	0.075



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOT-323	3,000	7