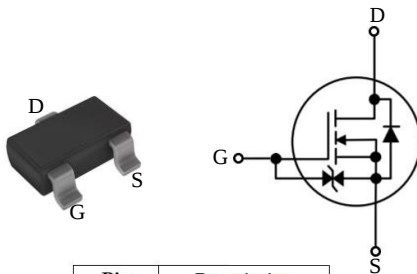
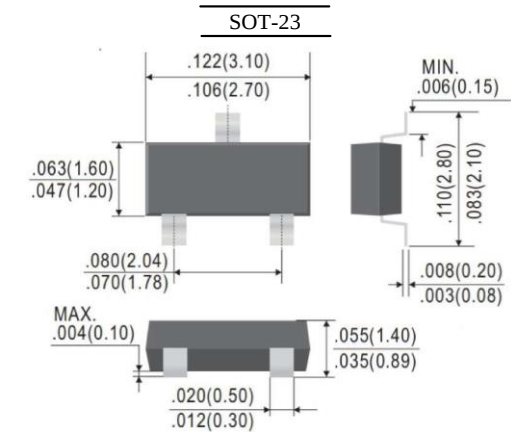


FEATURES

- Extremely Low Threshold Voltage



Pin	Description
G	Gate
S	Source
D	Drain



Dimensions in inch and (millimeter)

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

Parameter	Symbol	$t < 5s$	Steady State	Unit
Drain-Source Voltage	V_{DS}	60		V
Gate-Source Voltage	V_{GS}	± 20		V
Drain Current at $V_{GS}=4.5V$ (Note 1)	I_D	430 340	380 300	mA
Pulsed Drain Current (Note 1, Note 3)	I_{DM}	1.2		A
Total Power Dissipation	P_{tot}	590 380		mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	117 292	216 338	$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_J, T_{stg}	- 55 to + 150		$^\circ\text{C}$

Note :

1. Device mounted on $1" \times 1"$ FR-4 PCB with high coverage 2oz. Copper, single sided.
2. Device mounted on FR-4 PCB, with minimum recommended pad layout.

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Electrical Characteristics($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Static						
Drain Source Breakdown Voltag	I _D =10μA	V _{DSS}	60	-	-	V
Gate Threshold Voltage	V _{DS} =10V, I _D =250μA	V _{GS(th)}	0.5	-	1.0	V
Zero Gate Voltage Drain Current	V _{DS} =60V, V _{GS} =0V	I _{DSS}	-	-	1	μA
Gate-Body Leakage Current	V _{GS} =±20V	I _{GSS}	-	-	±10	μA
Drain-Source On-State Resistance	V _{GS} =4.5V, I _D =100mA	R _{DS(ON)}	-	-	2.0	Ω
	V _{GS} =2.5V, I _D =50mA		-	-	2.5	
	V _{GS} =1.8V, I _D =50mA		-	-	3.0	
Forward Transconductance	V _{DS} =10V, I _D =200mA	g _{FS}	-	1.8	-	mS
Dynamic						
Total Gate Charge	V _{GS} =4.5V, V _{DS} =10V, I _D =250mA	Q _g	-	0.5	-	nC
Gate-Source Charge		Q _{gs}	-	0.09	-	
Gate-Drain Charge		Q _{gd}	-	0.09	-	
Input Capacitance	V _{DS} =30V, V _{GS} =0V, f=1MHz	C _{iss}	-	32.0	-	pF
Output Capacitance		C _{oss}	-	3.9	-	
Reverse Transfer Capacitance		C _{rss}	-	2.4	-	
Turn-On Delay Time		V _{DD} =30V, I _D =200mA, V _{GS} = 10V, R _G =25Ω	t _{d(on)}	-	2.4	-
Turn-On Rise Time	t _r		-	2.5	-	
Turn-Off Delay Time	t _{d(off)}		-	22.6	-	
Turn-Off Fall Time	t _f		-	12.5	-	
Drain-Source Body Diode						
Drain-Source Diode Forward Voltage	V _{GS} =0V, I _S =115mA,	V _{SD}		-	1.3	V

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RATINGS AND CHARACTERISTIC CURVES

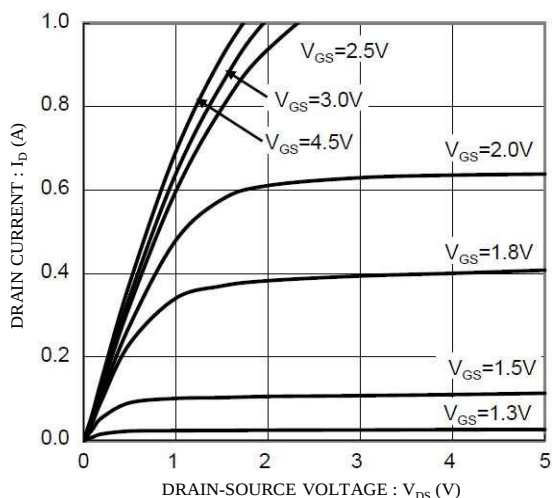


Fig.1 Typical Output Characteristics

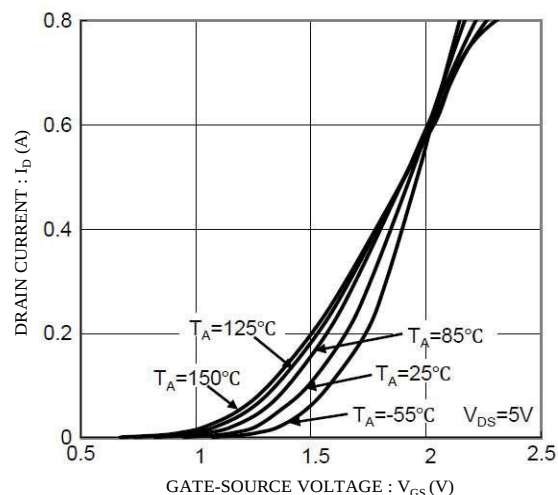


Fig.2 Typical Transfer Characteristics

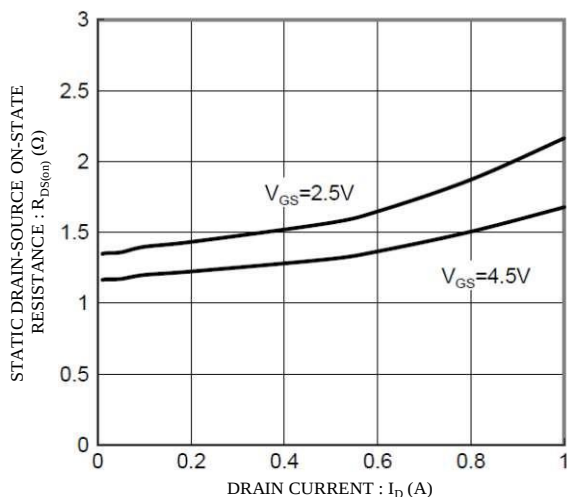


Fig.5 Static Drain-Source On-State Resistance vs. Drain current

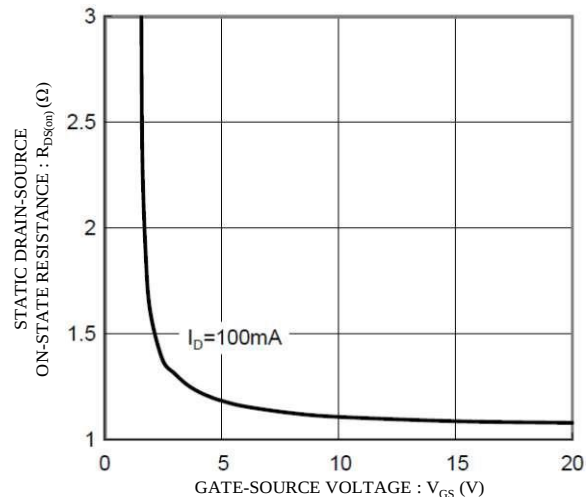


Fig.4 Static Drain-Source On-State Resistance vs. Gate-Source Voltage

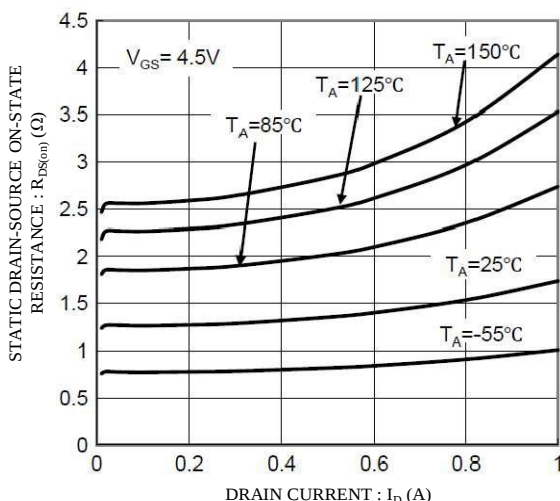


Fig.5 Static Drain-Source On-State Resistance vs. Drain current

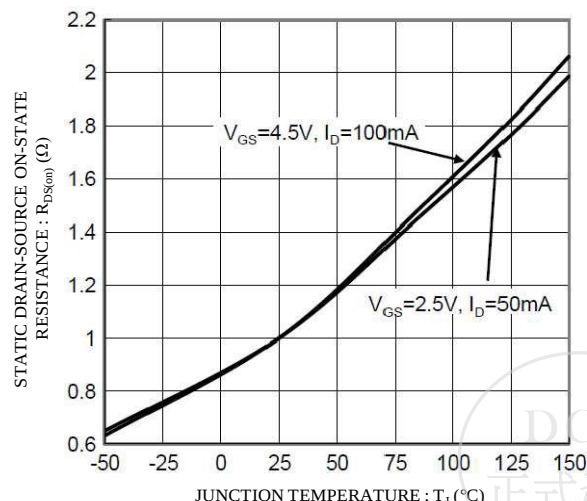
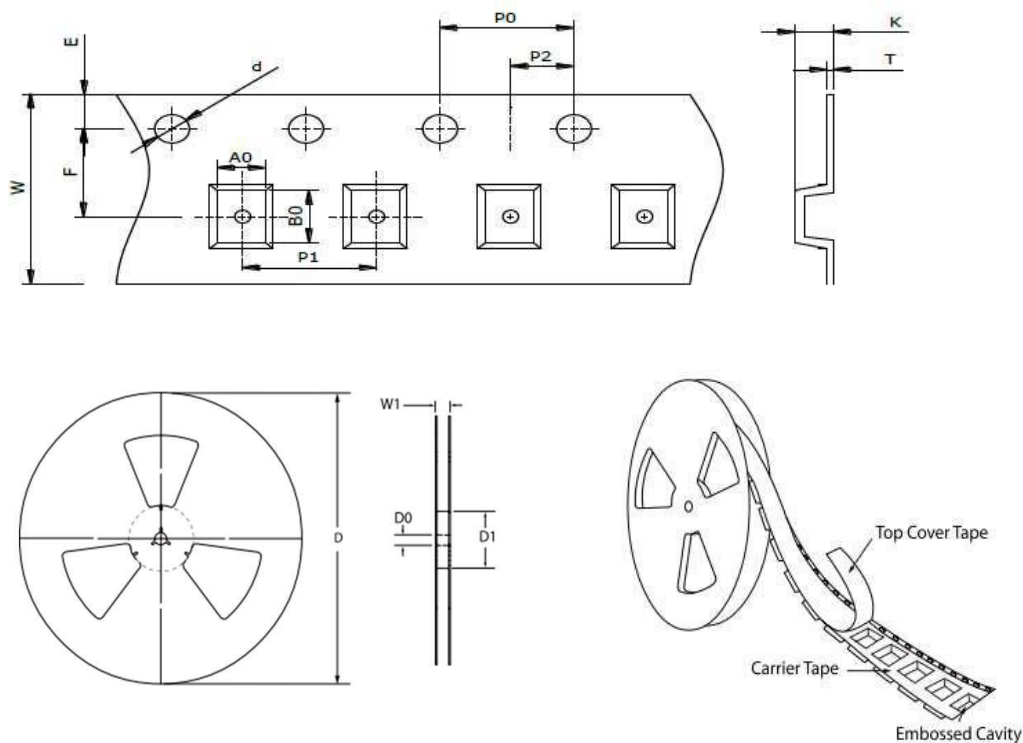


Fig.6 Drain-Source On-State Resistance vs. Junction temperature

TAPE & REEL SPECIFICATION



Item	Symbol	SOT-23
Carrier width	A ₀	3.30 ± 0.10
Carrier length	B ₀	3.00 ± 0.10
Carrier depth	K	1.70 ± 0.10
Sprocket hole	d	1.50 ± 0.10
Reel outside diameter	D	178.00 ± 2.00
Feed hole width	D ₀	13.00 ± 0.50
Reel inner diameter	D ₁	MIN. 50.00
Sprocket hole position	E	1.75 ± 0.10
Punch hole position	F	3.50 ± 0.10
Sprocket hole pitch	P ₀	4.00 ± 0.10
Punch hole pitch	P ₁	4.00 ± 0.10
Embossment center	P ₂	2.00 ± 0.10
Overall tape thickness	T	0.20 ± 0.05
Tape width	W	8.00 ± 0.20
Reel width	W1	MAX. 14.50

ORDER INFORMATION

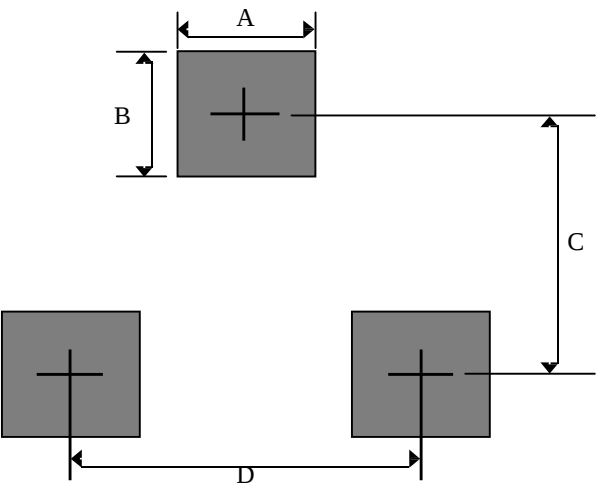
Package	Reel Size	Quantity
SOT-23	7"	3,000

MARKING CODE

Part Number	Marking Code
ME620KTDS	VD



SUGGESTED SOLDER PAD LAYOUT



Unit : mm

PACKAGE	A	B	C	D
SOT-23	0.80	1.00	2.40	1.90

