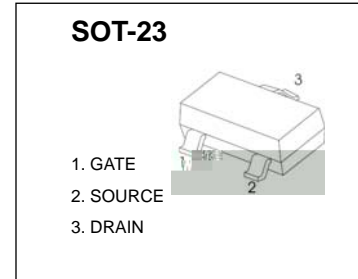




SOT-23 Plastic-Encapsulate MOSFETS

CJ2305 P-Channel MOSFET

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
-12V	45m @-4.5V	-4.1A
	60m @-2.5V	
	90m @-1.8V	



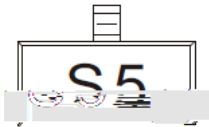
FEATURE

- TrenchFET Power MOSFET

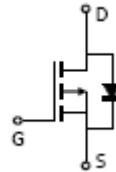
APPLICATION

- Load Switch for Portable Devices
- DC/DC Converter

MARKING



Equivalent Circuit



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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-12	V
Gate-Source Voltage	V_{GS}	± 8	
Continuous Drain Current	I_D	-4.1	A
Continuous Source-Drain Diode Current	I_S	-0.8	
Maximum Power Dissipation	P_D	0.35	W
Thermal Resistance from Junction to Ambient(t 10s)	R_{JA}	357	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-50 ~+150	

MOSFET ELECTRICAL CHARACTERISTICS

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Static						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	-12			V
Gate-source threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-0.5		-0.9	
Gate-source leakage	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 8V$			± 100	nA
Zero gate voltage drain current	I_{DSS}	$V_{DS} = -8V, V_{GS} = 0V$			-1	μA
Drain-source on-state resistance ^e	$R_{DS(on)}$	$V_{GS} = -4.5V, I_D = -3.5A$		30	45	m
		$V_{GS} = -2.5V, I_D = -3A$		40	60	
		$V_{GS} = -1.8V, I_D = -2.0A$		60	90	
Forward transconductance ^a	g_{fs}	$V_{DS} = -5V, I_D = -4.1A$	6			S
Dynamic						
Input capacitance ^{b,c}	C_{iss}	$V_{DS} = -4V, V_{GS} = 0V, f = 1MHz$		740		pF
Output capacitance ^{b,c}	C_{oss}			290		
Reverse transfer capacitance ^{b,c}	C_{rss}			190		
Total gate charge ^b	Q_g	$V_{DS} = -4V, V_{GS} = -4.5V, I_D = -4.1A$		7.8	15	nC
		$V_{DS} = -4V, V_{GS} = -2.5V, I_D = -4.1A$		4.5	9	
Gate-source charge ^b	Q_{gs}	$V_{DS} = -4V, V_{GS} = -2.5V, I_D = -4.1A$		1.2		
Gate-drain charge ^b	Q_{gd}			1.6		
Gate resistance ^{b,c}	R_g	$f = 1MHz$	1.4	7	14	
Turn-on delay time ^{b,c}	$t_{d(on)}$	$V_{DD} = -4V, R_L = 1.2\ \Omega, I_D = -3.3A, V_{GEN} = -4.5V, R_g = 1$		13	20	ns
Rise time ^{b,c}	t_r			35	53	
Turn-off Delay time ^{b,c}	$t_{d(off)}$			32	48	
Fall time ^{b,c}	t_f			10	20	
Turn-on delay time ^{b,c}	$t_{d(on)}$	$V_{DD} = -4V, R_L = 1.2\ \Omega, I_D = -3.3A, V_{GEN} = -8V, R_g = 1$		5	10	ns
Rise time ^{b,c}	t_r			11	17	
Turn-off delay time ^{b,c}	$t_{d(off)}$			22	33	
Fall time ^{b,c}	t_f			16	24	
Drain-source body diode characteristics						
Continuous source-drain diode current	I_S	$T_C = 25^\circ C$			-1.4	A
Pulse diode forward current ^a	I_{SM}				-10	
Body diode voltage	V_{SD}	$I_F = -3.3A$			-1.2	V

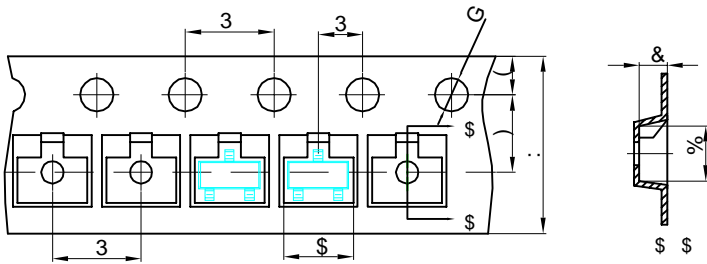
Note :

- a. Pulse Test ; Pulse Width 300 μs , Duty Cycle 2%.
- b. Guaranteed by design, not subject to production testing.
- c. These parameters have no way to verify.

Note:
1. Controlling dimension

627 7DSH DQG UHHO

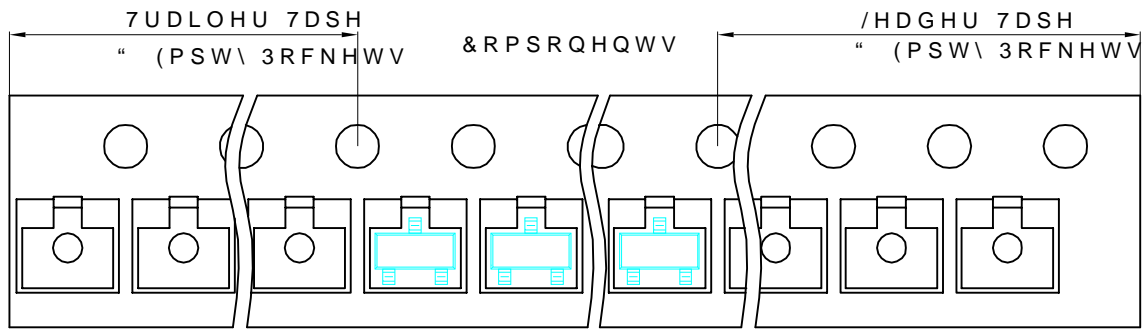
627 (PERVVHG &DUULHU 7DSH



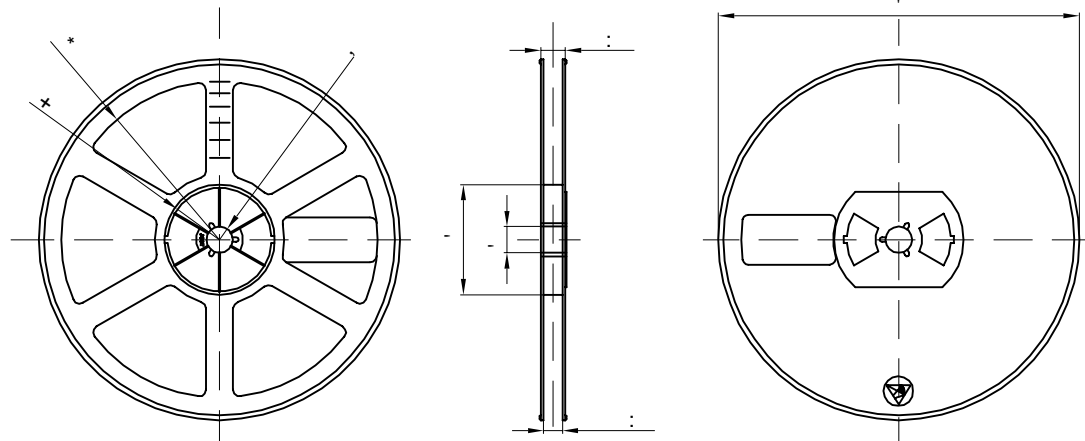
3DFNDJLQJ 'HVFULSWLRQ
 627 SDUWV DUH VKLSSHG LQ WDSH
 WDSH LV PDGH IURP D GLVVLSDWLYH FDUE
 SRO\FDUERQDWH UHVLQ 7KH FRYHU WDSH
 ILOP +HDW \$FWLYDWHG \$GKHVLYH LQ QDW
 FRPSRVHG RI SRO\HVWHU ILOP DGKHVLYH
 DQG DQWL VWDWLF VSUD\HG DJHQW 7KHV
 VWDQGDUG RSWLRQ DUH VKLSSHG ZLWK
 RU FP GLDPHWHU UHHO 7KH UHHOV DUH
 DQG LV PDGH RI SRO\VW\UHGH SODWLF D
 FRDWHG

'LPHQVLRQV DUH LQ PLOOLPHWHU										
3NJ W\SH	\$	%	&	G	()	3	3	3	:
627										

627 7DSH /HDGHU DQG 7UDLOHU



627 5HHO



'LPHQVLRQV DUH LQ PLOOLPHWHU										
5HHO 2SWLRQ				*	+	,	:	:		
'LD				5	5	5				

5((/	5HHO 6L]H	%R[%R[6L]H	PP &DUWRQ	&DUWRQ	6L]H*P: NJ
SFV	LQFK	SFV	i i	SFV	i i	