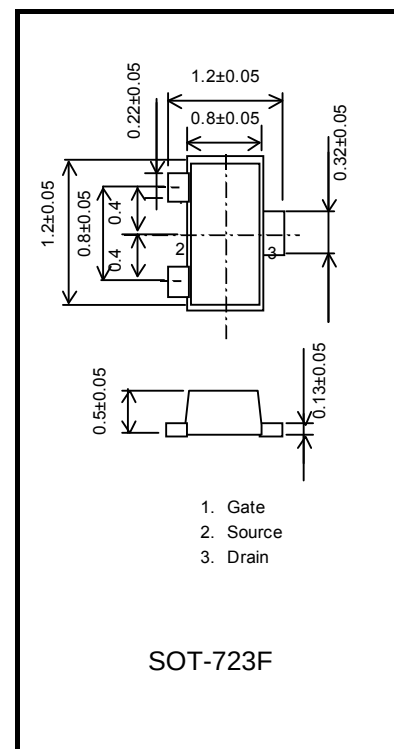


Analog Switch Applications

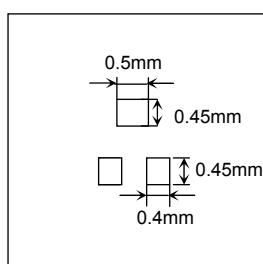
- Small package
- Low on-resistance : $R_{on} = 8\ \Omega$ (max) (@ $V_{GS} = -4\text{ V}$)
 : $R_{on} = 12\ \Omega$ (max) (@ $V_{GS} = -2.5\text{ V}$)
 : $R_{on} = 45\ \Omega$ (max) (@ $V_{GS} = -1.5\text{ V}$)

Unit: mm

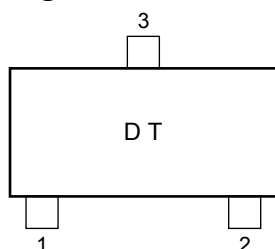
Characteristics		Symbol	Rating	Unit
Drain-Source voltage		V_{DS}	-20	V
Gate-Source voltage		V_{GSS}	± 10	V
Drain current	DC	I_D	-100	mA
	Pulse	I_{DP}	-200	
Drain power dissipation ($T_a = 25^\circ\text{C}$)		P_D (Note 1)	150	mW
Channel temperature		T_{ch}	150	$^\circ\text{C}$
Storage temperature range		T_{stg}	-55~150	$^\circ\text{C}$



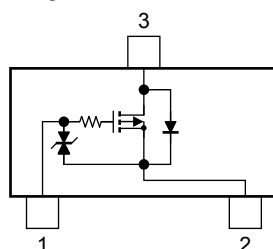
Weight :1.5mg



Marking



Equivalent Circuit (top view)

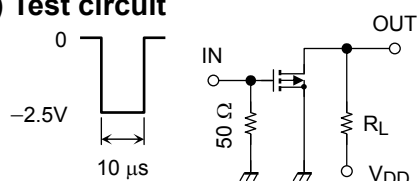


Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Condition	MIN.	TYP.	MAX.	UNIT
Gate leakage current	I_{GSS}	$V_{GS} = \pm 10 \text{ V}, V_{DS} = 0$	—	—	± 1	μA
Drain-Source breakdown voltage	$V_{(BR) DSS}$	$I_D = -0.1 \text{ mA}, V_{GS} = 0$	-20	—	—	V
Drain cut-off current	I_{DSS}	$V_{DS} = -20 \text{ V}, V_{GS} = 0$	—	—	-1	μA
Gate threshold voltage	V_{th}	$V_{DS} = -3 \text{ V}, I_D = -0.1 \text{ mA}$	-0.6	—	-1.1	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS} = -3 \text{ V}, I_D = -10 \text{ mA}$	25	—	—	mS
Drain-Source on-resistance	$R_{DS(ON)}$	$I_D = -10 \text{ mA}, V_{GS} = -4 \text{ V}$	—	6	8	Ω
		$I_D = -10 \text{ mA}, V_{GS} = -2.5 \text{ V}$	—	8	12	
		$I_D = -1 \text{ mA}, V_{GS} = -1.5 \text{ V}$	—	18	45	
Input capacitance	C_{iss}	$V_{DS} = -3 \text{ V}, V_{GS} = 0, f = 1 \text{ MHz}$	—	11	—	pF
Reverse transfer capacitance	C_{rss}		—	3.7	—	pF
Output capacitance	C_{oss}		—	10	—	pF
Switching time	Turn-on time	$V_{DD} = -3 \text{ V}, I_D = -10 \text{ mA}, V_{GS} = 0 \sim -2.5 \text{ V}$	—	130	—	ns
	Turn-off time		—	190	—	

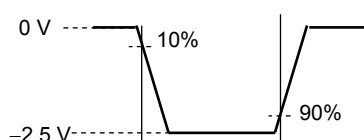
Switching Time Test Circuit

(a) Test circuit



$V_{DD} = -3 \text{ V}$
 Duty $\leq 1\%$
 V_{IN} : $t_r, t_f < 5 \text{ ns}$
 $(Z_{out} = 50 \Omega)$
 Common Source
 $T_a = 25^\circ\text{C}$

(b) V_{IN}



(c) V_{OUT}

