

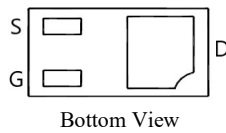


SM0337KLP

N-Channel Enhancement Mode Field Effect Transistor

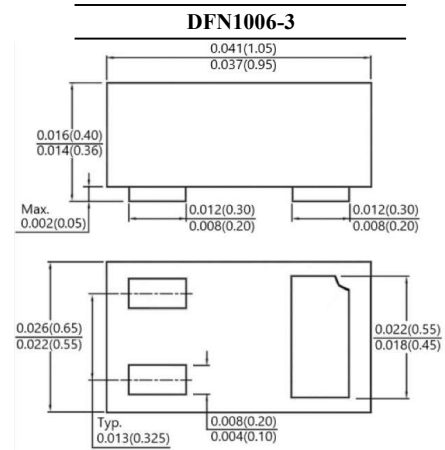
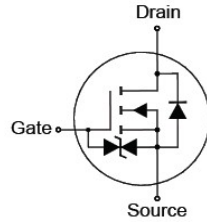
FEATURES

- Fast Switching Speed
- Low Gate Threshold Voltage
- Ultra-Small Surface Mount Package
- Suffix "H" indicates Halogen-free parts, ex. SM0337KLPH



Bottom View

D	Drain
G	Gate
S	Source



Dimensions in inch and (millimeter)

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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DSS}	20	V
Gate-Source Voltage	V_{GSS}	± 10	V
Drain Current	I_D	250	mA
Peak Drain Current	I_{DM}	500	mA
Total Power Dissipation (Note 1)	P_{tot}	150	mW
Operating and Storage Temperature Range	T_j, T_{stg}	- 55 to + 150	$^\circ\text{C}$

Note :

1. Mounted on a FR4 board (25.4mm*25.4mm*1.6mm).

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

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Drain Source Breakdown Voltag	$I_D = 1\text{mA}$	BV_{DSS}	20	-	-	V
Zero Gate Voltage Drain Current	$V_{DS} = 16\text{V}$	I_{DSS}	-	-	1	μA
Gate Source Leakage Current	$V_{GS} = \pm 10\text{V}$	I_{GSS}	-	-	± 1	μA
Gate Threshold Voltage	$V_{DS} = 3\text{V}, I_D = 1\text{mA}$	$V_{GS(th)}$	0.35	-	1.00	V
Static Drain Source On-Resistance	$V_{GS} = 4.5\text{V}, I_D = 100\text{mA}$	$R_{DS(on)}$	-	-	2.20	Ω
	$V_{GS} = 2.5\text{V}, I_D = 50\text{mA}$		-	-	3.02	
	$V_{GS} = 1.8\text{V}, I_D = 20\text{mA}$		-	-	4.05	
	$V_{GS} = 1.5\text{V}, I_D = 10\text{mA}$		-	-	5.60	
Forward Transconductance	$V_{DS} = 3\text{V}, I_D = 100\text{mA}$	g_{FS}	0.14	-	-	S
Input Capacitance	$V_{DS} = 10\text{V}, f = 1\text{MHz}$	C_{iss}	-	12.0	-	pF
Output Capacitance		C_{oss}	-	5.5	-	pF
Reverse Transfer Capacitance		C_{rss}	-	4.1	-	pF
Turn-On Delay Time	$V_{DD} = 10\text{V}, I_D = 100\text{mA},$	$t_{d(on)}$	-	18	-	ns
Turn-Off Delay Time	$V_{GS} = 0 \sim 2.5\text{V}, R_G = 50\Omega$	$t_{d(off)}$	-	36	-	ns
Drain-Source Body Diode						
Diode Forward Voltage	$V_{GS} = 0\text{V}, I_S = 250\text{mA}$	V_{SD}	-	-	1.2	V



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RATINGS AND CHARACTERISTIC CURVES

