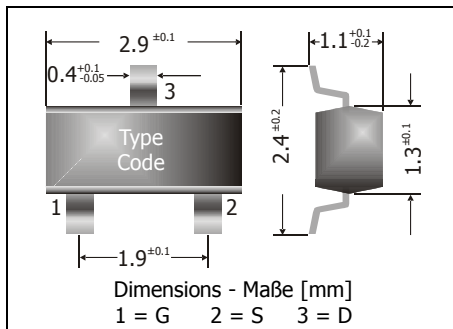


MMFTN138**N**
N-Channel Logic Level Enhancement Mode Field Effect Transistor
N-Kanal Logikpegel Feldeffekt-Transistor - Anreicherungstyp
N

Version 2015-05-12



Power dissipation – Verlustleistung

360 mW

Plastic case
KunststoffgehäuseSOT-23
(TO-236)

Weight approx. – Gewicht ca.

0.01 g

Plastic material has UL classification 94V-0
Gehäusematerial UL94V-0 klassifiziertStandard packaging taped and reeled
Standard Lieferform gegurtet auf Rolle**Maximum ratings (T_A = 25°C)****Grenzwerte (T_A = 25°C)**

		MMFTN138
Drain-Source-voltage – Drain-Source-Spannung	V _{DSS}	50 V
Drain-Gate-voltage (R _{GS} ≤ 20 kΩ) Drain-Gate-Spannung	V _{DGR}	50 V
Gate-Source-voltage Gate-Source-Spannung	V _{GSS} V _{GSS}	± 20 V ± 40 V
Power dissipation – Verlustleistung	P _{tot}	360 mW
Drain current continuous – Drainstrom (dc)	I _D	220 mA
Peak Drain current – Drain-Spitzenstrom	I _{DM}	880 mA
Junction temperature – Sperrschichttemperatur Storage temperature – Lagerungstemperatur	T _j T _s	150°C -55...+150°C

Characteristics (T_j = 25°C)**Kennwerte (T_j = 25°C)**

		Min.	Typ.	Max.
Drain-Source breakdown voltage – Drain-Source-Durchbruchspannung I _D = 250 µA		50 V		
	V _{(BR)DSS}			
Drain-Source leakage current – Drain-Source-Leckstrom V _{DS} = 50 V V _{DS} = 30 V				500 nA 100 nA
Gate-Source leakage current – Gate-Source-Leckstrom V _{GS} = ± 20 V				± 100 nA
Gate-Source threshold voltage – Gate-Source Schwellspannung V _{GS} = V _{DS} , I _D = 1 mA		0.8 V		1.6 V
Drain-Source on-state resistance – Drain-Source Einschaltwiderstand V _{GS} = 10 V, I _D = 220 mA V _{GS} = 4.5 V, I _D = 220 mA				3.5 Ω 6 Ω
Forward Transconductance – Übertragungssteilheit V _{DS} = 10 V, I _D = 220 mA		0.12 S		
Input Capacitance – Eingangskapazität V _{DS} = 25 V, f = 1 MHz			60 pF	
Output Capacitance – Ausgangskapazität V _{DS} = 25 V, f = 1 MHz			25 pF	
Reverse Transfer Capacitance – Rückwirkungskapazität V _{DS} = 25 V, f = 1 MHz			10 pF	
Turn-On Delay Time – Einschaltverzögerung V _{DD} = 30 V, I _D = 290 mA, V _{GS} = 10 V, R _G = 50 Ω				8 ns
Turn-On Rise Time – Anstiegszeit V _{DD} = 30 V, I _D = 290 mA, V _{GS} = 10 V, R _G = 50 Ω				12 ns
Turn-Off Delay Time – Ausschaltverzögerung V _{DD} = 30 V, I _D = 290 mA, V _{GS} = 10 V, R _G = 50 Ω				16 ns
Turn-Off Fall Time – Abfallzeit V _{DD} = 30 V, I _D = 290 mA, V _{GS} = 10 V, R _G = 50 Ω				22 ns
Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft			< 350 K/W	

Drain-Source Diode**Maximum Ratings and Characteristics (T_j = 25°C)****Grenz- und Kennwerte (T_j = 25°C)**

		Min.	Typ.	Max.
Maximum Continuous Source Current	I _S			220 mA
Maximum Pulse Source Current	I _{SM}			880 mA
Drain-Source Diode Forward Voltage I _S = 440 mA	V _{GD}			1.4 V