

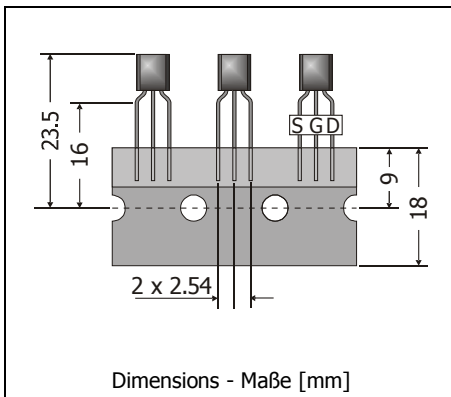
2N7000

N

N-Channel Enhancement Mode Field Effect Transistor
N-Kanal Feldeffekt Transistor – Anreicherungstyp

N

Version 2011-02-16



Power dissipation

350 mW

Verlustleistung

Plastic case

TO-92

Kunststoffgehäuse

(10D3)

Weight approx.

0.18 g

Gewicht ca.

Plastic material has UL classification 94V-0

Gehäusematerial UL94V-0 klassifiziert

Standard packaging taped in ammo pack

Standard Lieferform getupet in Ammo-Pack



Maximum ratings (T_A = 25°C)

Grenzwerte (T_A = 25°C)

		2N7000	
Drain-Source-voltage – Drain-Source-Spannung		V _{DSS}	60 V
Drain-Gate-voltage – Drain-Gate-Spannung	R _{GS} ≤ 1 MΩ	V _{DGR}	60 V
Gate-Source-voltage – Gate-Source-Spannung	dc	V _{GSS}	± 20 V
	t _p < 50 μs	V _{GSS}	± 40 V
Power dissipation – Verlustleistung		P _{tot}	350 mW
Drain current continuous – Drainstrom (dc)		I _D	200 mA
Peak Drain current – Drain-Spitzenstrom		I _{DM}	500 mA
Operating Junction temperature – Sperrschichttemperatur		T _j	150°C
Storage temperature – Lagerungstemperatur		T _S	-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 = 10 μA	V _{(BR)DSS}	60 V		
Drain-Source leakage current – Drain-Source Leckstrom V _{DS} = 48 V V _{DS} = 48 V, T _j = 125°C	G short I _{DSS} I _{DSS}		1 μA 1 mA	
Gate-Body leakage current – Gate-Substrat Leckstrom V _{GS} = ±15 V	±I _{GSS}		10 nA	
Gate-Threshold voltage – Gate-Source Schwellspannung V _{GS} = V _{DS} , I _D = 1 mA	V _{GS(th)}	0.8 V		3 V
Drain-Source on-voltage – Drain-Source-Spannung V _{GS} = 10 V, I _D = 500 mA V _{GS} = 4.5 V, I _D = 75 mA	V _{DS(on)}		2.5 V 0.45 V	
Drain-Source on-state resistance – Drain-Source Einschaltwiderstand V _{GS} = 10 V, I _D = 500 mA V _{GS} = 4.5 V, I _D = 75 mA	R _{DS(on)} R _{DS(on)}			5 Ω 6 Ω
Forward Transconductance – Übertragungssteilheit V _{DS} = 10 V, I _D = 200 mA	g _{FS}	100 mS		
Input Capacitance – Eingangskapazität V _{DS} = 25 V, f = 1 MHz	C _{iss}		60 pF	
Output Capacitance – Ausgangskapazität V _{DS} = 25 V, f = 1 MHz	C _{oss}		25 pF	
Reverse Transfer Capacitance – Rückwirkungskapazität V _{DS} = 25 V, f = 1 MHz	C _{rss}		5 pF	
Turn-On Delay Time – Einschaltverzögerung V _{DD} = 15 V, R _L = 30 Ω, I _D = 0.5 A, V _{GS} = 10 V, R _G = 25 Ω	t _{on}		10 ns	
Turn-Off Delay Time – Ausschaltverzögerung V _{DD} = 15 V, R _L = 30 Ω, I _D = 0.5 A, V _{GS} = 10 V, R _G = 25 Ω	t _{off}		10 ns	
Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft	R _{thA}	< 357 K/W ¹⁾		

1 Device mounted on standard PCB material
Bauteil montiert auf Standard-Leiterplattenmaterial