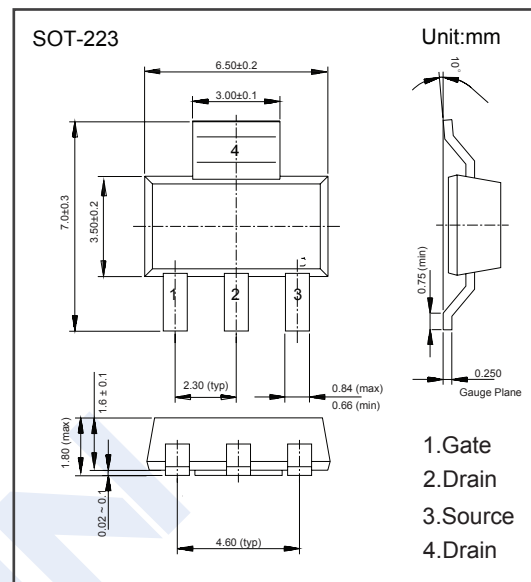
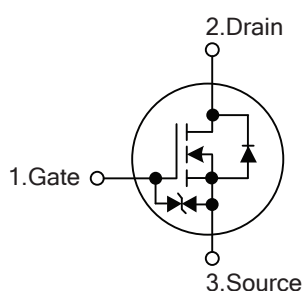


N-Channel Power MOSFET

UTT6N10Z

■ Features

- $R_{DS(on)} = 80\text{m}\Omega$ @ $V_{GS} = 10\text{V}$, $I_D = 6\text{A}$
- High Switching Speed
- Low C_{rss} (Typically 3.1pF)
- Low Gate Charge (Typically 4.3nC)

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	100	V
Gate-Source Voltage	V_{GS}	± 20	
Continuous Drain Current	I_D	6	A
Pulsed Drain Current	I_{DM}	24	
Single Pulsed Avalanche Energy (Note1)	E_{AS}	12	mJ
Power Dissipation	P_D	2.2	W
Thermal Resistance.Junction- to-Ambient	R_{thJA}	55	$^\circ\text{C}/\text{W}$
Thermal Resistance.Junction- to-Case	R_{thJC}	12	
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	

Note1: Starting $T_J = 25^\circ\text{C}$, $L = 11\text{mH}$, $I_{AS} = 6\text{A}$, $V_{DD} = 90\text{V}$, $V_{GS} = 10\text{V}$.

N-Channel Power MOSFET

UTT6N10Z

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	I _D =250 μA, V _{GS} =0V	100			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =80V, V _{GS} =0V			1	μA
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±10	μA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250 μA	1.0		2.2	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =10V, I _D =6A			108	mΩ
		V _{GS} =4.5V, I _D =3A			153	
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =25V, f=1MHz		234	315	pF
Output Capacitance	C _{oss}			46	65	
Reverse Transfer Capacitance	C _{rss}			3.1	5	
Total Gate Charge	Q _g	V _{GS} =10V, V _{DS} =25V, I _D =6A		4.3	7	nC
Gate Source Charge	Q _{gs}	V _{DS} =50V, I _D =6A		0.7		
Gate Drain Charge	Q _{gd}			0.9		
Turn-On DelayTime	t _{d(on)}	V _{DS} =50V, I _D =6A, V _{GS} =10V, R _{GEN} =6 Ω		3.8	10	ns
Turn-On Rise Time	t _r			1.3	10	
Turn-Off DelayTime	t _{d(off)}			10	20	
Turn-Off Fall Time	t _f			1.5	10	
Maximum Body-Diode Continuous Current	I _S				6	A
Source Current Pulsed	I _{SM}				24	
Diode Forward Voltage	V _{SD}	I _S =6A, V _{GS} =0V (Note2)			1.3	V

Note2: Pulse Test: Pulse width ≤300μs, Duty cycle ≤2%.

■ Ordering Information

UTT6N10ZL-AA3-R (1) Packing Type (2) Package Type (3) Lead Free	(1) R: Tape Reel (2) AA3: SOT-223 (3) L: Lead Free, G: Halogen Free
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N-Channel Power MOSFET

UTT6N10Z

■ Typical Characteristics

