

7A 650V N Channel MOSFET

Features

- $V_{DS} = 650V$
- $I_D = 7A @V_{GS} = 10V$
- $R_{DS(ON)} (Max) = 1.5\Omega @V_{GS} = 10V$

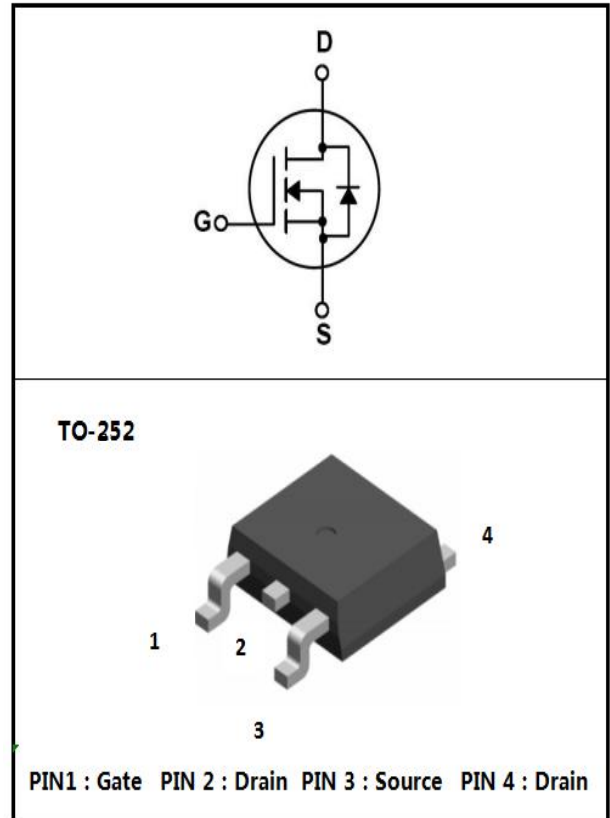
Applications

- Power Supply
- PFC
- High Current, High Speed Switching

Descriptions

These N-channel MOSFET are produced using advanced plane MOSFET Technology, which provides Low on-state resistance, high switching performance and excellent quality.

These devices are suitable device for SMPS, high Speed switching and general purpose applications.



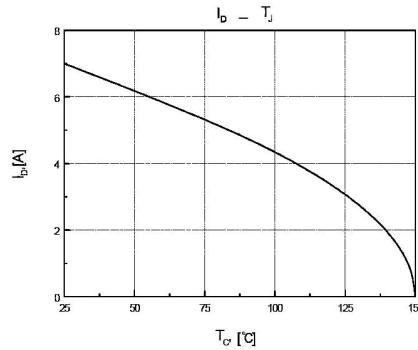
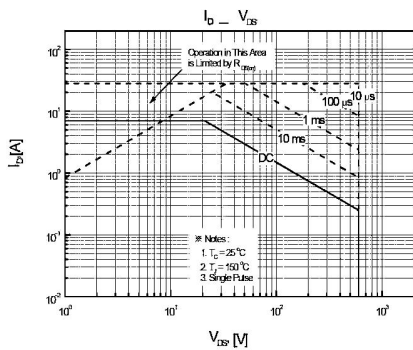
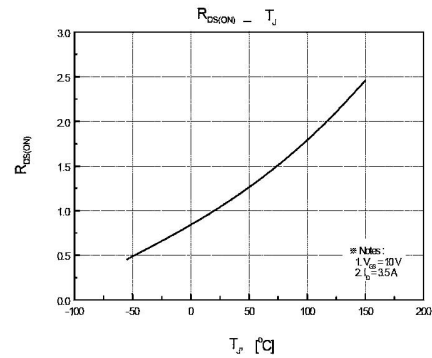
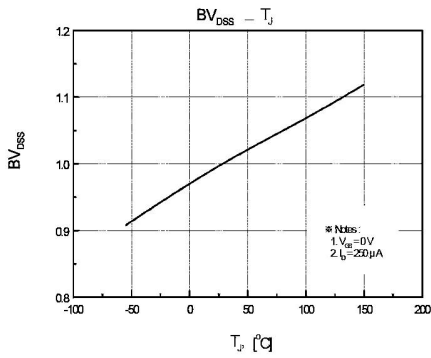
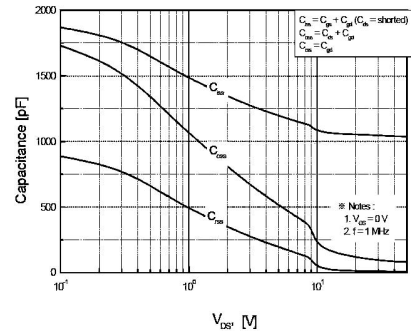
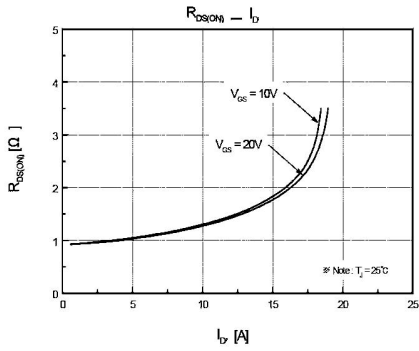
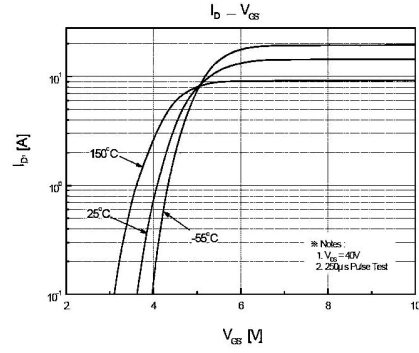
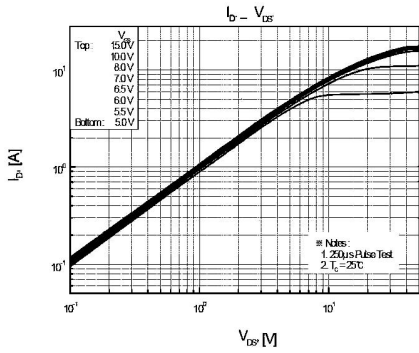
Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V _{DSS}	650	V
Drain Current	I _D (Tc=25°C)	7.0	A
Drain Current	I _D (Tc=100°C)	4.4	A
Drain Current - Pulsed	I _{DM}	28	A
Gate-Source Voltage	V _{GSS}	±30	V
Single Pulsed Avalanche Energy	E _{AS}	420	mJ
Repetitive Avalanche Energy	E _{AR}	14.7	mJ
Avalanche Current	I _{AR}	7.0	A
Power Dissipation	P _D (Tc=25°C)	95	W
Operating and Storage Temperature Range	T _j , T _{stg}	-55 to 150	°C

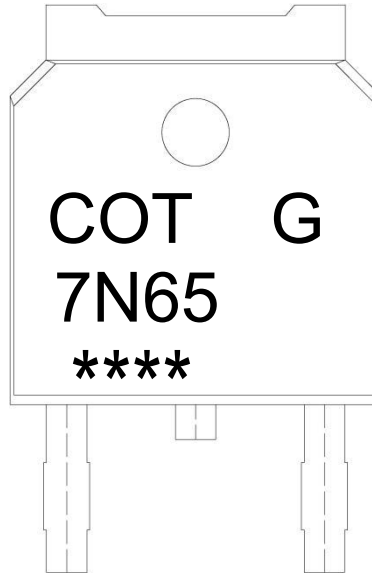
Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} =0V I _D =250μA	650			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =650V V _{GS} =0V			1.0	μA
		V _{DS} =520V T _C =125°C			100	μA
Gate-Body Leakage Current, Forward	I _{GSS}	V _{GS} =±30V V _{DS} =0V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} I _D =250μA	2.0		4.0	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =10V I _D =3.5A			1.5	Ω
Forward Transconductance	g _{FS}	V _{DS} =40V I _D =3.5A		8.2		S
Drain-Source Diode Forward Voltage	V _{SD}	V _{GS} =0V I _S =7.0A			1.4	V
Input Capacitance	C _{iss}	V _{DS} =25V V _{GS} =0V f=1.0MHz		1100	1500	pF
Output Capacitance	C _{oss}			110	150	pF
Reverse Transfer Capacitance	C _{rss}			12	16	pF
Turn-On Delay Time	t _{d(on)}		V _{DD} =300V I _D =7.0A R _G =25Ω		15	40
Turn-On Rise Time	t _r			30	70	ns
Turn-Off Delay Time	t _{d(off)}			110	230	ns
Turn-Off Fall Time	t _f			40	90	ns

Electrical Characteristic Curve



Marking Instructions



Note:

- COT: Company Logo
- G: Halogen Free
- 7N65: Product Type.
- ****: Lot No. Code, code change with Lot No.

Packaging SPEC.

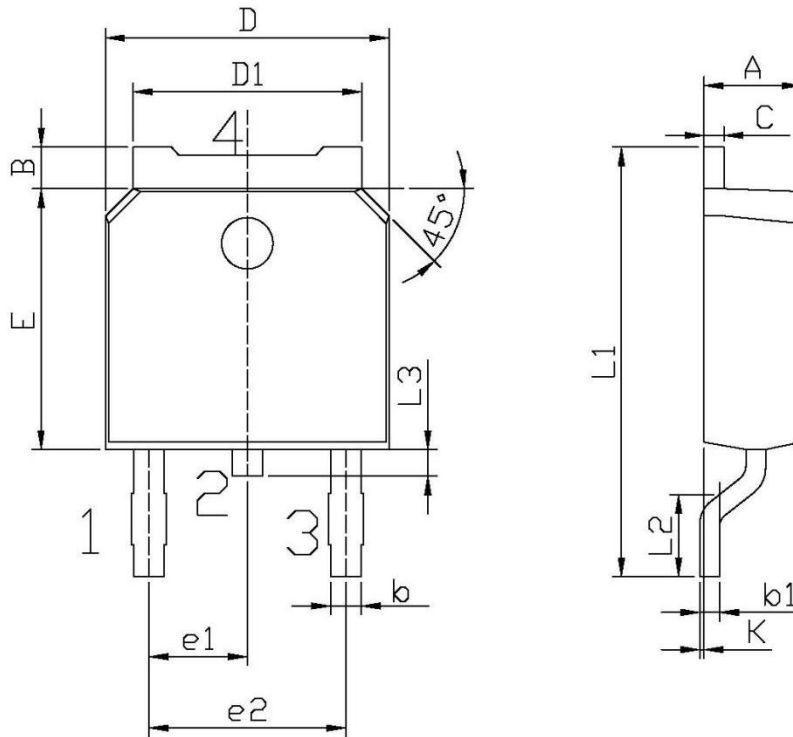
REEL INFORMATION

Package Type	Units					Dimension		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel unit: mm	Inner Box unit: mm ³	Outer Box unit: mm ³
TO-252	2,500	2	5,000	5	25,000	13" x16	360x360x50	385x257x392

TUBE INFORMATION

Package Type	Units					Dimension		
	Units/Tube	Tubes/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Tube unit: mm ³	Inner Box unit: mm ³	Outer Box unit: mm ³
TO-252	75	48	3,600	5	18,000	526x20.5x5.25	555x164x50	575x290x180

Package Outline Dimensions



单位: mm

Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	2.20	2.40	E	5.95	6.25
B	0.95	1.25	e1	2.24	2.34
b	0.70	0.90	e2	4.43	4.73
b1	0.45	0.55	L1	9.85	10.35
C	0.45	0.55	L2	1.70	2.00
D	6.45	6.75	L3	0.60	0.90
D1	5.10	5.50	K	0.00	0.10

TO-252