

Descriptions

CT7N65A is N-CHANNEL MOSFET in a TO-262 Plastic Package.

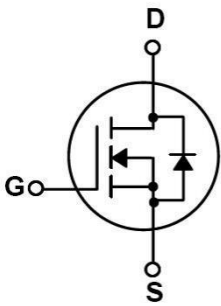
Features

- Low gate charge
- Low Crss
- Fast switching
- Halogen-free product

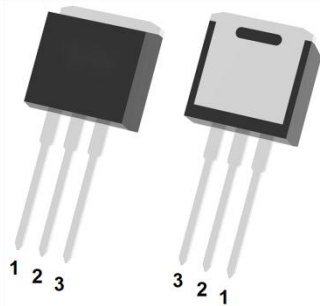
Applications

These devices are well suited for high efficiency switching DC/DC converters and switch mode power supplies.

Equivalent Circuit



Pinning



PIN1: G PIN 2: D PIN 3: S

Marking

See Marking Instructions.

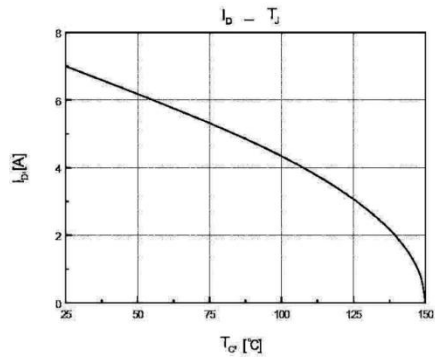
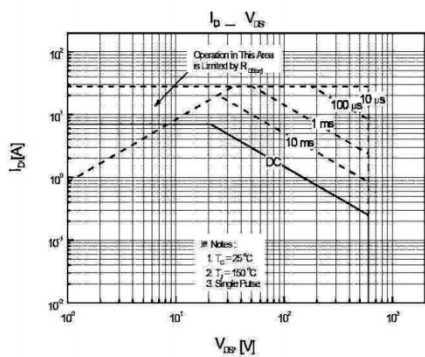
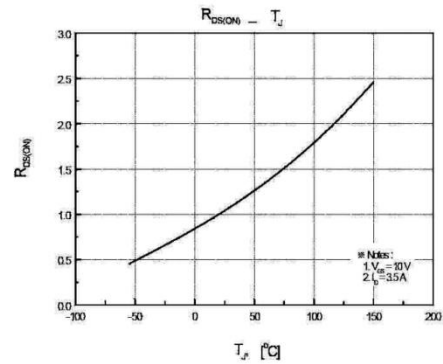
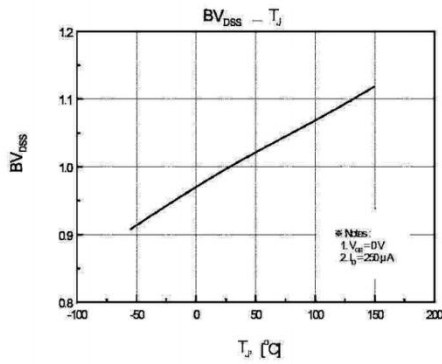
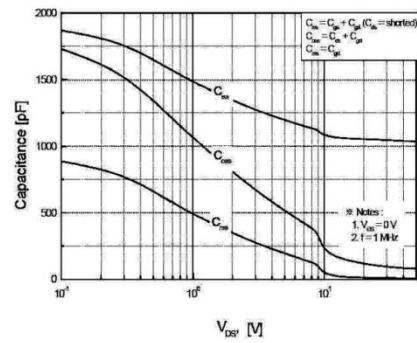
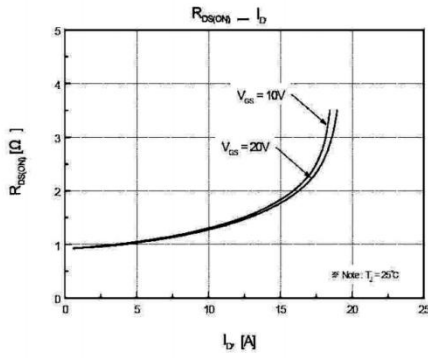
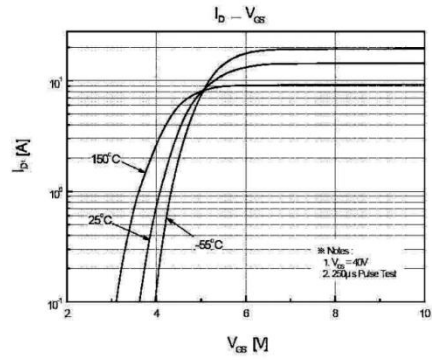
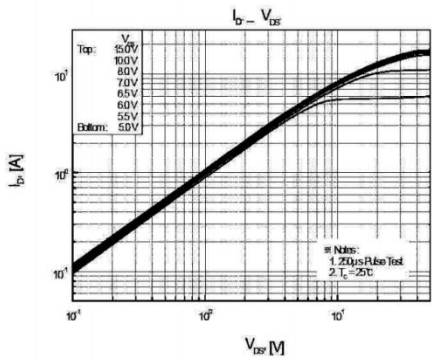
Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	650	V
Drain Current	$I_D(T_C=25^\circ\text{C})$	7.0	A
Drain Current	$I_D(T_C=100^\circ\text{C})$	4.4	A
Drain Current - Pulsed	I_{DM}	28	A
Gate-Source Voltage	V_{GS}	± 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	$P_D(T_C=25^\circ\text{C})$	147	W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to 150	°C

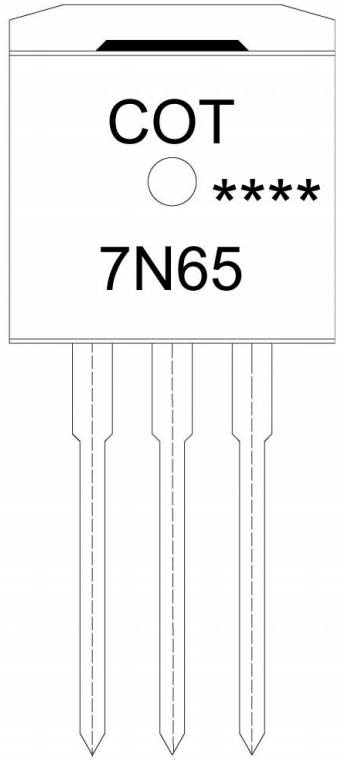
Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250\mu A$	650			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=650V$ $V_{GS}=0V$			1.0	μA
		$V_{DS}=520V$ $T_C=125^\circ\text{C}$			100	μA
Gate-Body Leakage Current, Forward	I_{GSS}	$V_{GS}=\pm 30V$ $V_{DS}=0V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	2.0		4.0	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=3.5A$			1.3	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}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0\text{MHz}$		1100	1500	pF
Output Capacitance	C_{oss}			110	150	pF
Reverse Transfer Capacitance	C_{rss}			12	16	pF
Turn-On Delay Time	$t_{d(on)}$	$V_{DD}=300V$ $I_D=7.0A$ $R_G=25\Omega$		15	40	ns
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



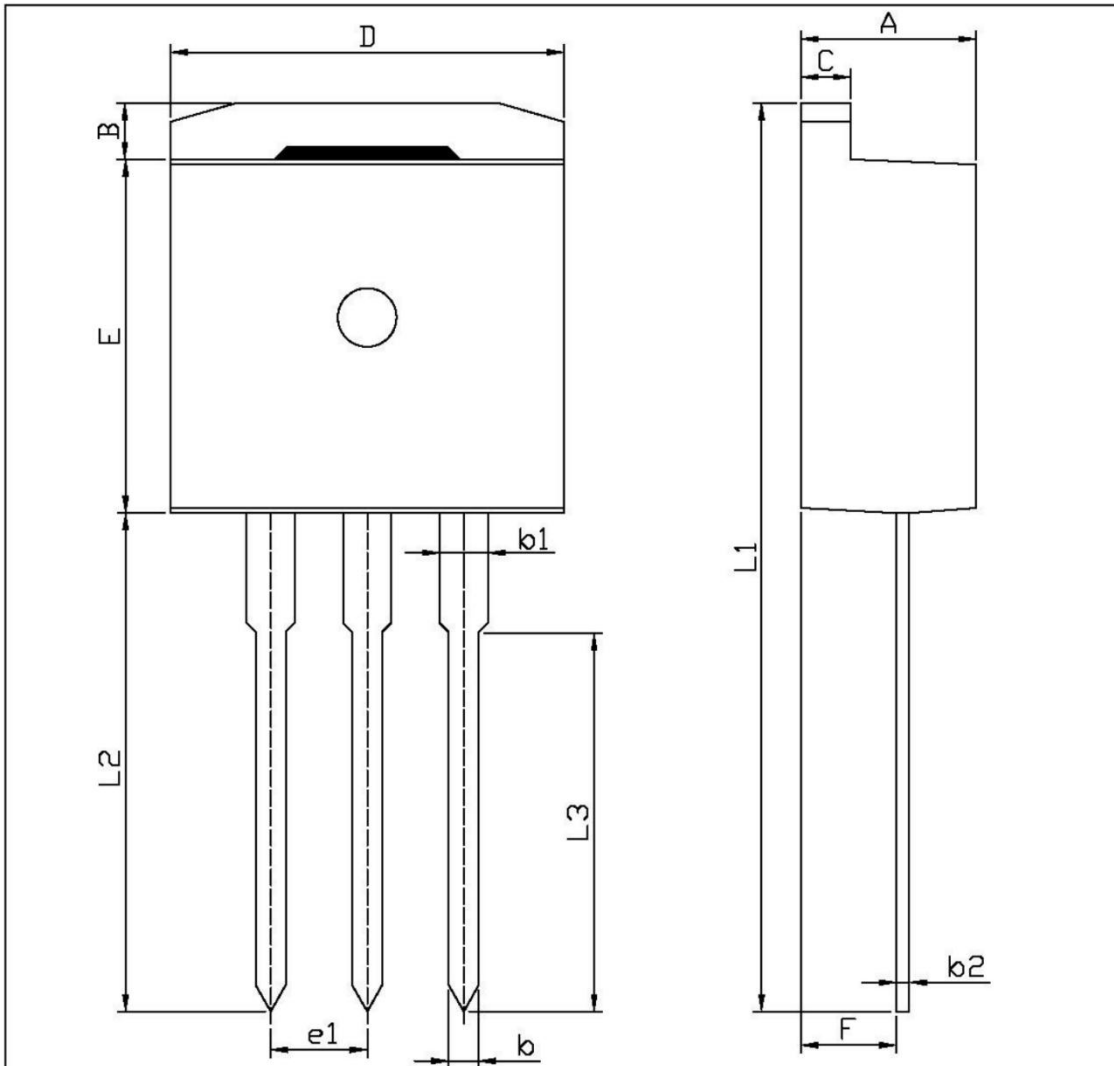
Note:
 COT: Company Code
 7N65: Product Type
 ****: Lot No. Code, code change with Lot No

Packaging SPEC

TUBE

Package Type	Units					Dimension (unit: mm ³)		
	Units/Tube	Tubes/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Tube	Inner Box	Outer Box
TO-262	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180

Package Outline Dimensions



单位: mm

Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	4.30	4.70	E	9.00	9.40
B	1.00	1.40	e1	2.34	2.74
b	0.70	0.90	F	2.20	2.60
b1	1.27		L1	22.60	23.60
b2	0.40	0.60	L2	12.60	13.60
C	1.20	1.40	L3	9.60	10.60
D	9.80	10.20			

TO-262