

/ Descriptions

TO-263 MOSFET N-CHANNEL MOSFET in a TO-263 Plastic Package.

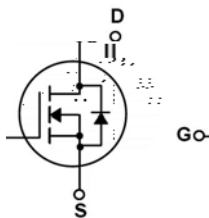
/ Features

Low gate charge, low crss, fast switching.

/ Applications

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

/ Equivalent Circuit



/ Pinning



PIN1 χ G PIN 2,4 χ D PIN 3 χ S

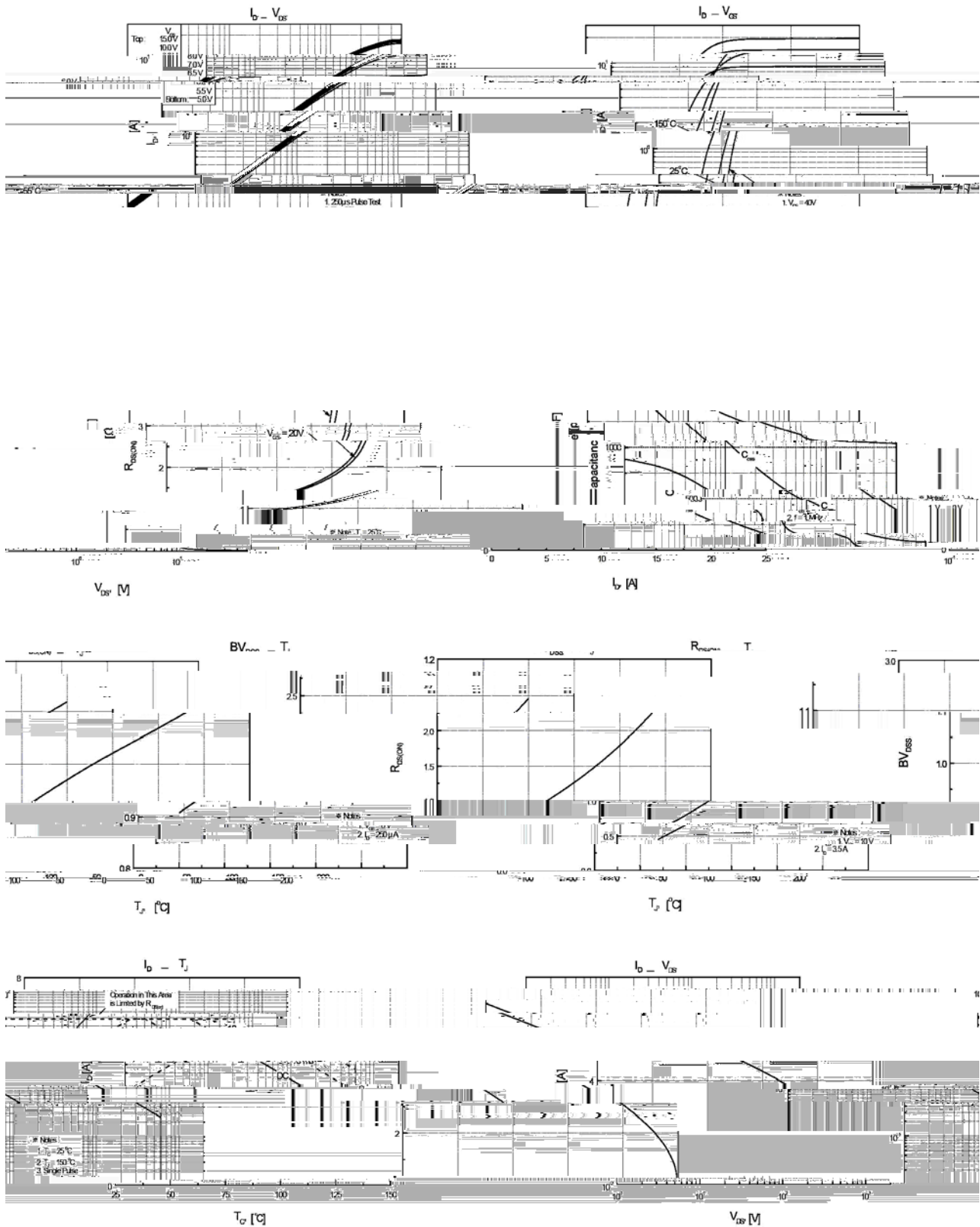
/ h_{FE} Classifications & Marking

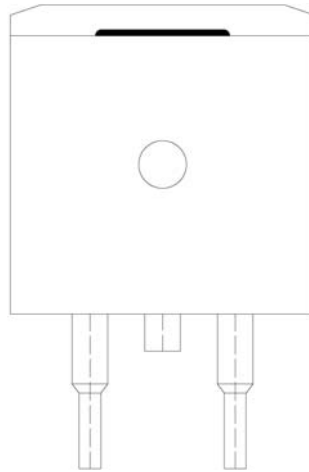
See Marking Instructions.

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	

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	A
		$V_{DS}=520V, T_C=125^\circ\text{C}$			100	A
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	
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

/ Electrical Characteristic Curve





Б " X

BR X

7N65 X

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Note:

BR:

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BR X

7N65 X

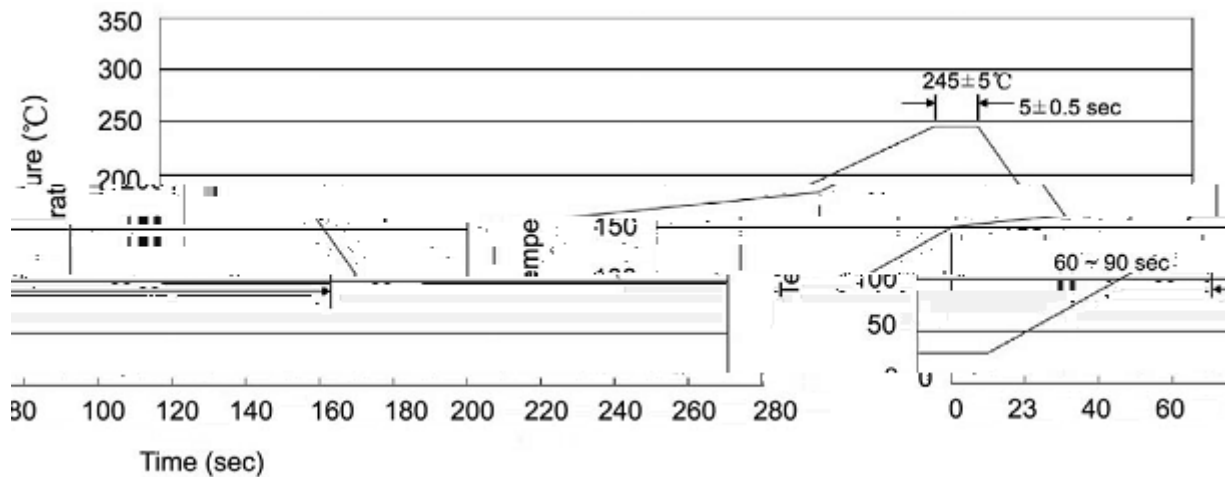
BR X 7N65 X

Company Code

Product Type.

Lot No. Code, code change with Lot No.

() / Temperature Profile for IR Reflow Soldering(Pb-Free)



℃ / sec

1. 25~150℃, Time: 60~90sec;
2. 245±5℃, Duration: 5±0.5sec;
3. Cooling Speed: 2~10℃/sec.

Note:

1. Preheating: 25~150℃, Time: 60~90sec.
2. Peak Temp.: 245±5℃, Duration: 5±0.5sec.
3. Cooling Speed: 2~10℃/sec.

/ Resistance to Soldering Heat Test Conditions

260±5℃, Time: 10±1 sec. Temp.: 260±5 Time: 10±1 sec

/ Packaging SPEC.

REEL

Package Type	Units					Dimension (unit mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
TO-263	800	1	800	5	4,000	13 × 24	360×360×50	385×257×392

TUBE