

IRF740

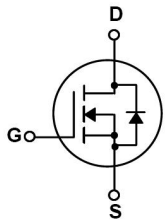
Rev.H Jul.-2018

TO-220 N MOS N-CHANNEL MOSFET in a TO-220 Plastic Package.

Low gate charge, low crss, fast switching.

DC/DC

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



PIN1 G

PIN 2 D

PIN 3 S

/ h_{FE}

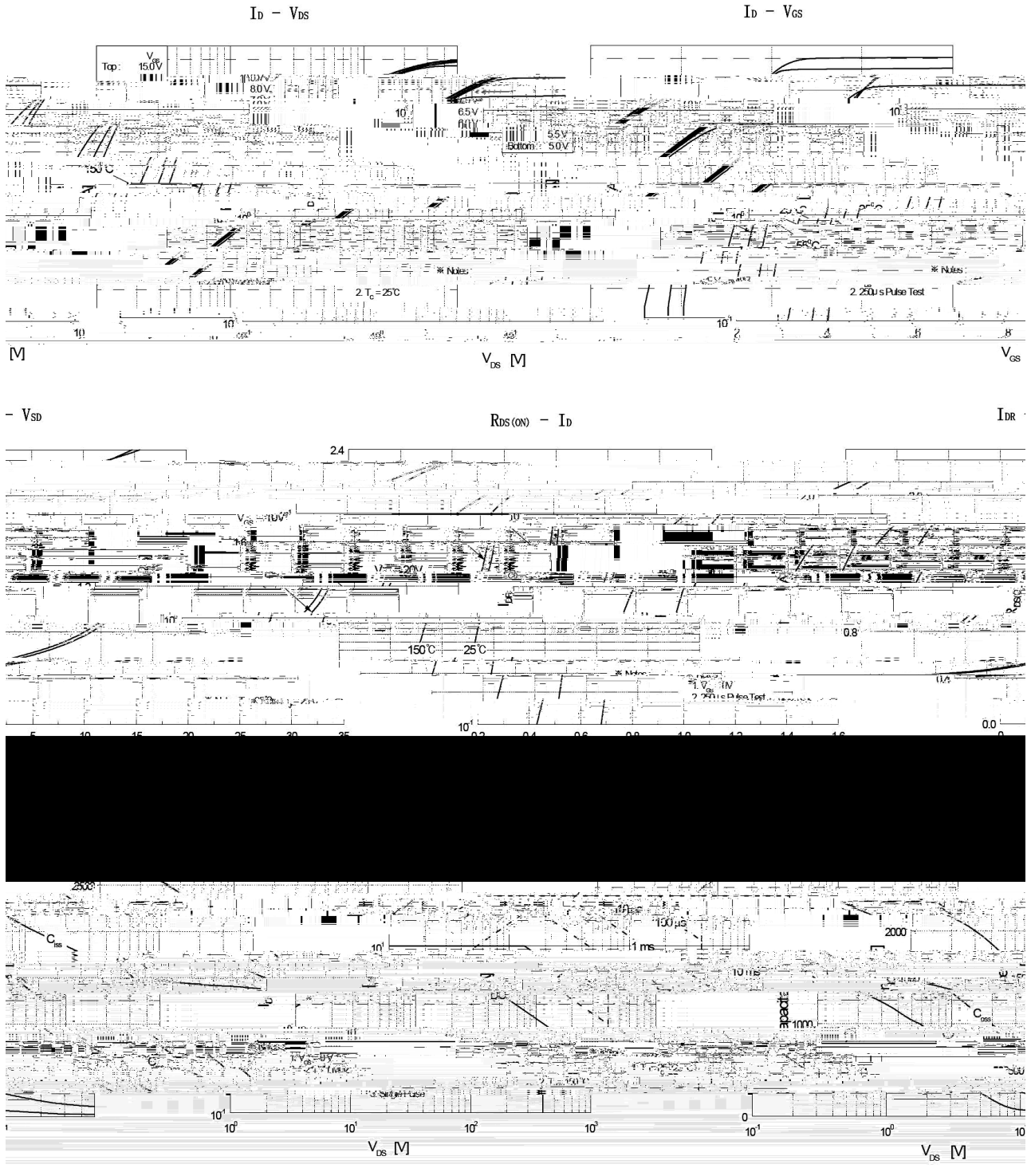
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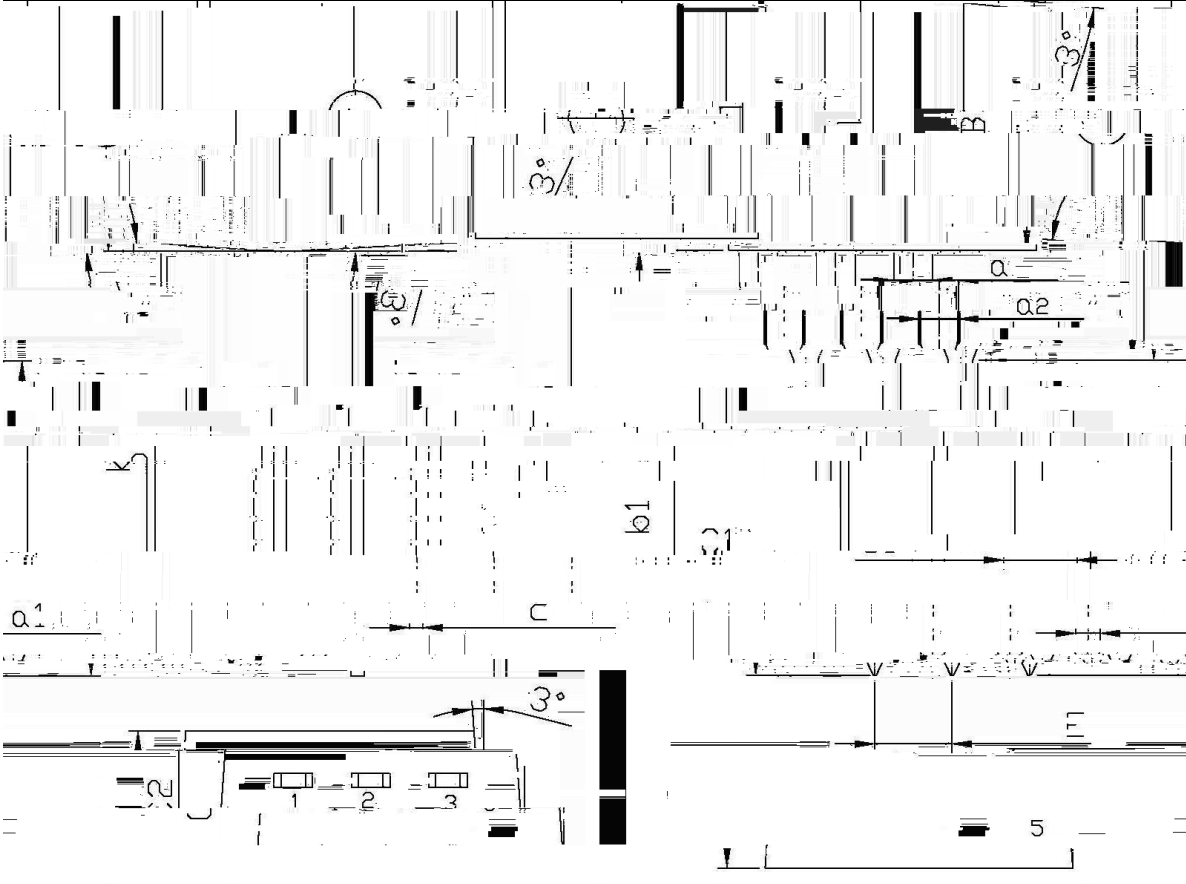
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	400	V
Drain Current	$I_D(T_C=25^\circ\text{C})$	10	A
	$I_D(T_C=100^\circ\text{C})$	6.3	A
Pulsed Drain Current	I_{DM}	40	A
Gate-Source Voltage	V_{GSS}	± 30	V
Avalanche Current	I_{AR}	10	A
Single Pulsed Avalanche Energy	E_{AS}	450	mJ
Repetitive Avalanche Energy	E_{AR}	13.4	mJ
Total Power Dissipation	$P_D(T_C=25^\circ\text{C})$	134	W
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to 150	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Zero Gate Voltage Drain Current	BV_{DSS}	$V_{GS}=0V$ $I_D=250\mu A$	400			V	
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=400V$ $V_{GS}=0V$			10	μA	
		$V_{DS}=320V$ $T_C=125^\circ\text{C}$			100	μA	
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 30V$ $V_{DS}=0V$			± 0.1	μA	
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	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=5.0A$		0.44	0.55		
Forward Transconductance	g_{FS}	$V_{DS}=40V$ $I_D=5.0A$		9.0		S	
Forward On Voltage	V_{SD}	$V_{GS}=0V$ $I_S=10A$			1.5	V	
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0MHz$		1570	2040	pF	
Output Capacitance	C_{oss}				150		195
Reverse Transfer Capacitance	C_{rss}				15		20

/ Electrical Characteristic Curve

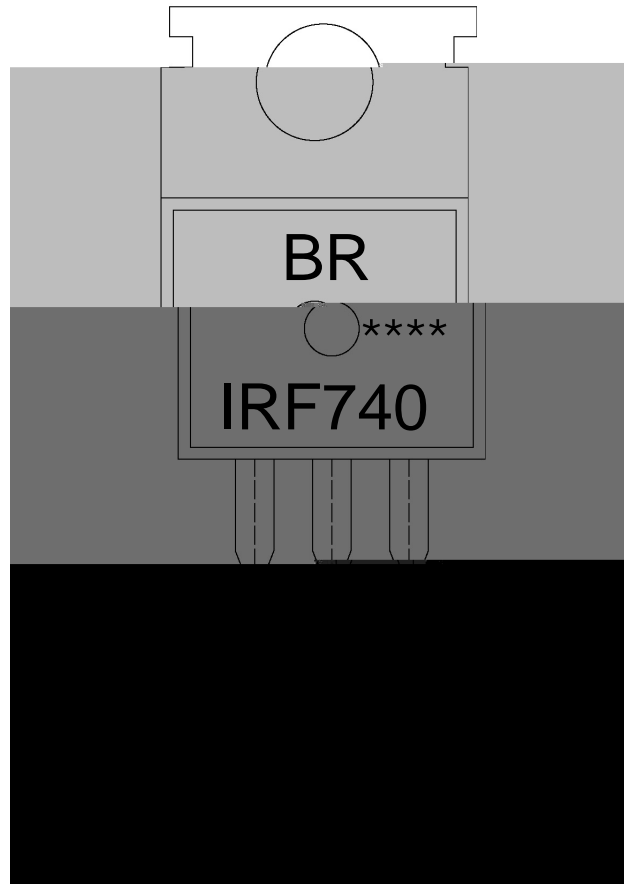


/ Package Dimensions



Dimensions in Millimeters			Dimensions in Millimeters		
Symbol	Min	Max	Symbol	Min	Max
Δ	9.8	10.2	C	1.2	1.4
β	3.56	4.44	D	6.3	6.7
b_1	15.7	16.1	B	9.0	9.4
α_1	8.6	9.0	α_2	1.0	1.1
α_2	25	145	α	0.2	1.1

/ Marking Instructions



BR

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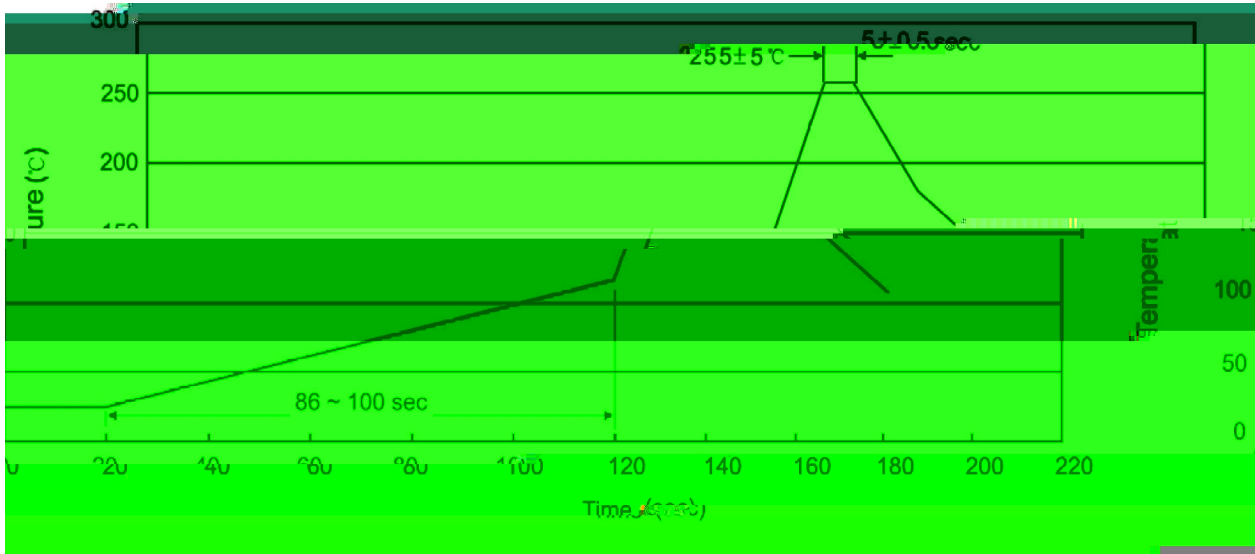
Note:

BR: Company Code

IRF740: Product Type.

****: Lot No. Code, code change with Lot No.

() / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- | | | | | | |
|---|-------|-----|-------|--------|---|
| 1 | 25 | 150 | 60 | 90sec; | 1.Preheating:25~150 , Time:60~90sec. |
| 2 | 255±5 | | 5±0.5 | sec; | 2.Peak Temp.:255±5 , Duration:5±0.5sec. |
| 3 | | 2 | 10 | /sec. | 3. Cooling Speed: 2~10 /sec. |

/ Resistance to Soldering Heat Test Conditions

270±5 10±1 sec. Temp.:270±5 Time:10±1 sec

/ Packaging SPEC.

/ BULK

Package Type	Units					Dimension (unit mm ³)		
	Units/Bag	Bags/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Bag	Inner Box	Outer Box
TO-220/F	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

/ TUBE

Package Type	Units				Dimension (unit mm ³)		
	Units/Tube	Tubes/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Bag	Inner Box	Outer Box
TO-220/F	200	10	2,000	5	135×190	237×172×102	560×245×195