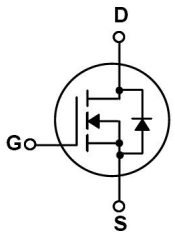
TO-220 N MOS N-CHANNEL MOSFET in a TO-220 Plastic Package.

, ,

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

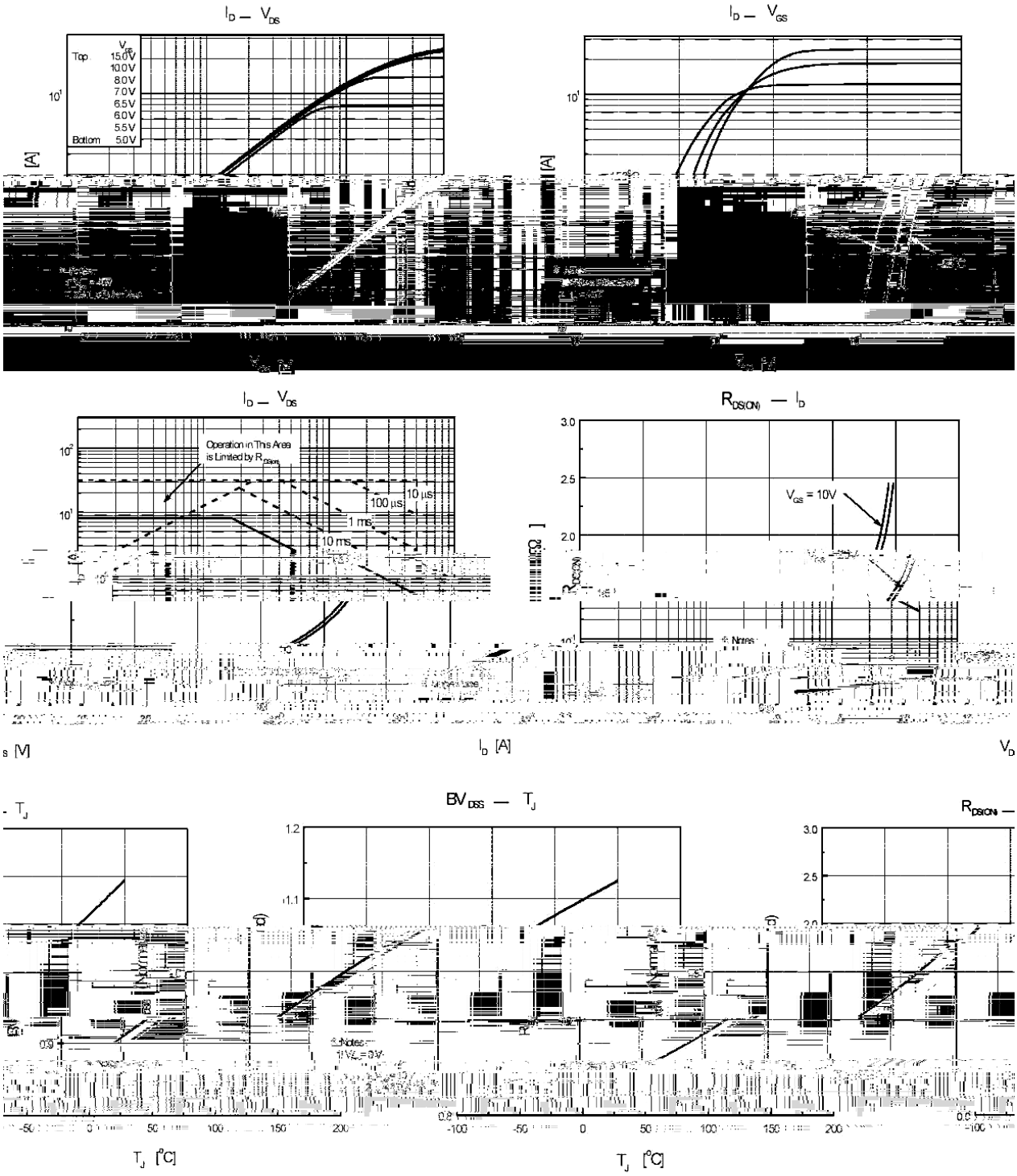
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	500	V
Drain Current	I_D(Tc=25)	8.0	A
	I_D(Tc=100)	5.1	A
Pulsed Drain Current	I_{DM}	32	A
Gate-Source Voltage	V_{GSS}	±30	V
Avalanche Current	I_{AR}	8	A
Single Pulsed Avalanche Energy	E_{AS}	320	mJ
Repetitive Avalanche Energy	E_{AR}	13.4	mJ
Total Power Dissipation	P_D(Tc=25)	134	W
Junction and Storage Temperature Range	T_J,T_{STG}	-55 to 150	

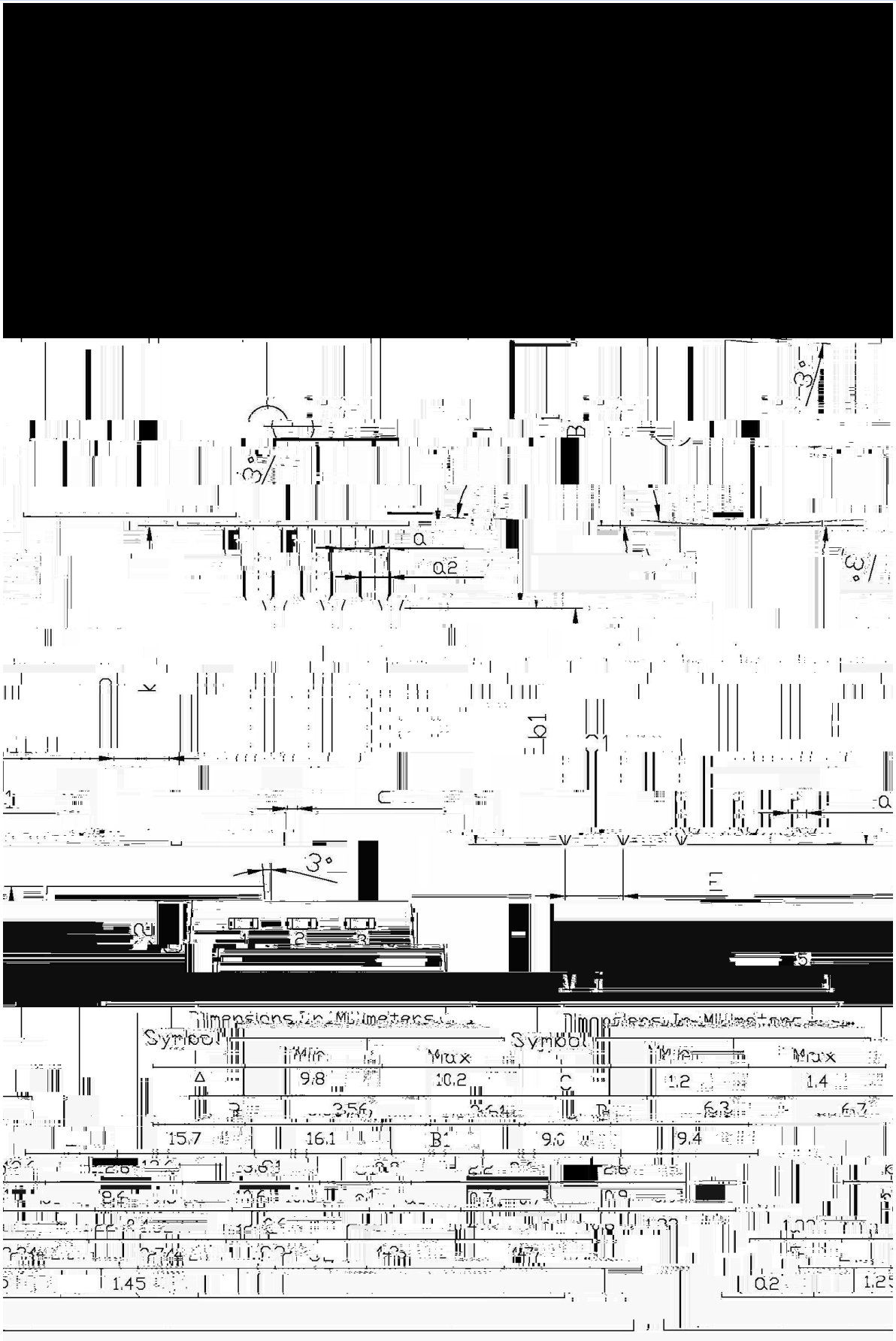
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Zero Gate Voltage Drain Current	BV_{DSS}	V_{GS}=0V I_D=250μA	500			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=500V V_{GS}=0V			10	μA
		V_{DS}=400V T_C=125			100	μA
Gate-Body Leakage Current Forward	I_{GSS}	V_{GS}=±30V V_{DS}=0V			±0.1	μA
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=4.0A		0.70	0.85	Ω
Forward Transconductance	g_{FS}	V_{DS}=40V I_D=4.0A		7.0		S
Forward On Voltage	V_{SD}	V_{GS}=0V I_S=8A			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	
Turn-On Delay Time	$t_{d(on)}$	V_{DD}=250V I_D=8A R_G=25Ω		25	60	ns
Turn-On Rise Time	t_r			75	160	
Turn-Off Delay Time	$t_{d(off)}$			125	260	
Turn-Off Fall Time	t_f			75	160	

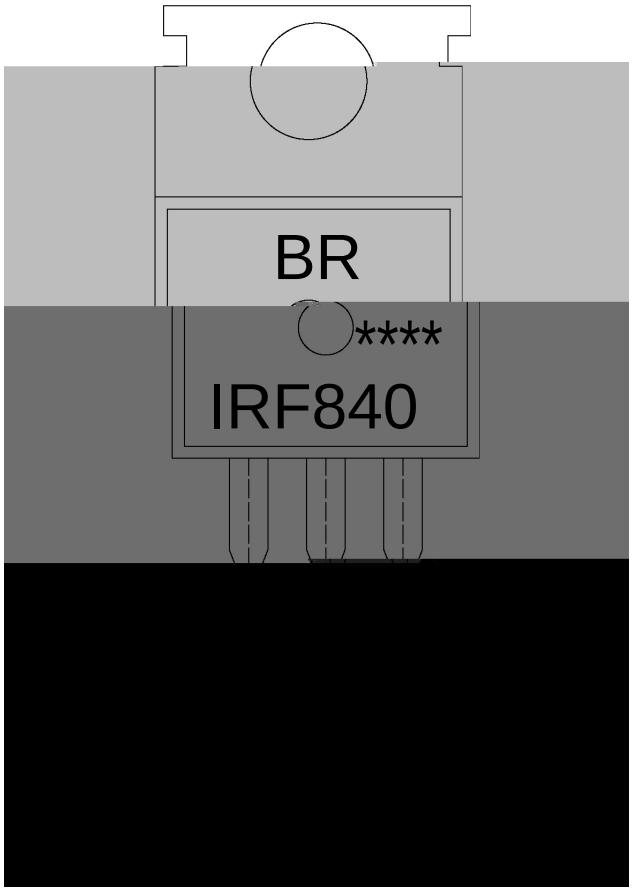
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



BR

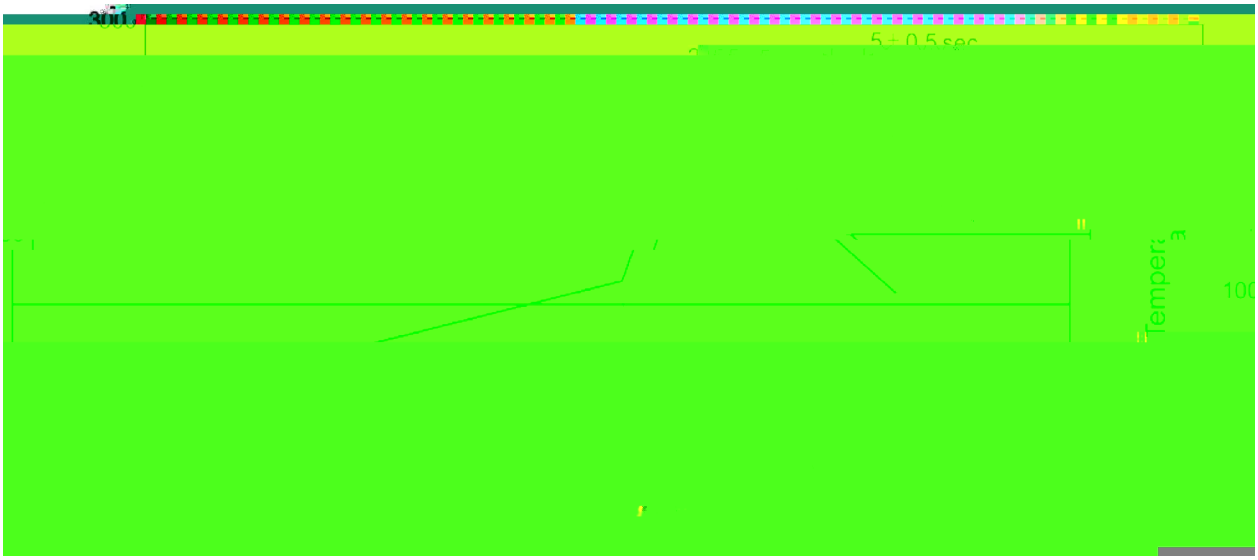
IRF840

****

Note:

BR:	Company Code
IRF840:	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±0.5sec;	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 mm³)
	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 mm³)
	Units/Tube /	Tubes/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Tube	Inner Box	Outer Box
TO-220/F	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180

/ Notices