TO-251 P MOS P-CHANNEL MOSFET in a TO-251 Plastic Package.

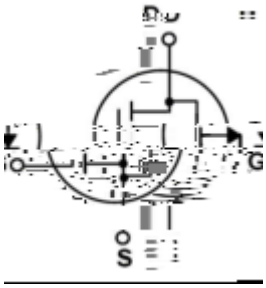
$R_{DS(on)}$ C_{rss}

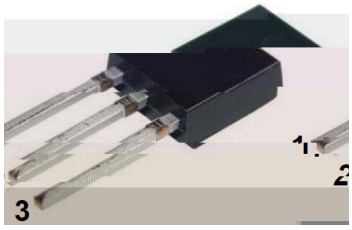
Low $R_{DS(on)}$,low gate charge, low C_{rss}, fast switching.

DC/DC

Suited for low voltage applications such as automotive, DC/DC Converters, and high efficiency switching for power management in portable and battery operated products.

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PIN1

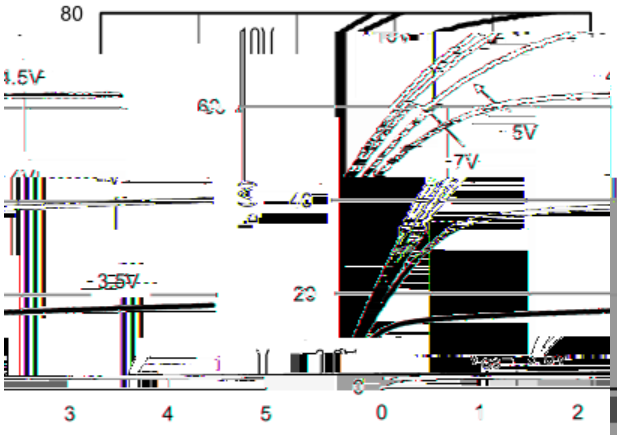
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Capacitance	C_{iss}	V_{DS}=-25V V_{GS}=0V f=1.0MHz		5110		pF
Output Capacitance	C_{oss}			198		
Reverse Transfer Capacitance	C_{rss}			131		
Gate resistance	R_g	V_{GS}=0V V_{DS}=0V f=1MHz		3.87		
Total Gate Charge	Q_g(10V)	V_{GS}=-10V V_{DS}=-50V I_D=-20A		16.5	25	nC
Total Gate Charge	Q_g(4.5V)			7	12	
Gate Source Charge	Q_{gs}			4.5		
Gate Drain Charge	Q_{gd}			2.5		
Turn-On Delay Time	$t_{d(on)}$	V_{GS}=-10V V_{DS}=-50V R_L=2.5 R_{GEN}=23		7		ns
Turn-On Rise Time	t_r			8		
Turn-Off Delay Time	$t_{d(off)}$			20		
Turn-Off Fall Time	t_f			3		
Body Diode Reverse Recovery Time	t_{rr}	I_F=-20A dI/dt=500A/ms		30		ns
Body Diode Reverse Recovery Charge	Q_{rr}	I_F=-20A dI/dt=500A/ms		145		nC
Maximum Junction-to-Ambient [A]	R_{JA}	t 10s		16	20	/W
Maximum Junction-to-Ambient [AD]		teady-State		41	50	/W
Maximum Junction-to-Case	R_{JC}	teady-State		2.2	2.8	/W

A. The value of R_{JA} is measured with the device mounted on 1in^2 FR-4 board with 2oz. Copper, in a still air environment with T_A =25°C. The Power dissipation PDSM is based on R qJA and the maximum allowed junction temperature of 150°C. The value in any given application depends on the user's specific board design, and the maximum temperature of 150°C may be used if the PCB allows it.

B. The power dissipation PD is based on $T_{J(MAX)}$=150°C, using junction-to-case thermal resistance, and is more useful in setting the upper dissipation limit for cases where additional heatsinking is used.

C. Repetitive rating, pulse width

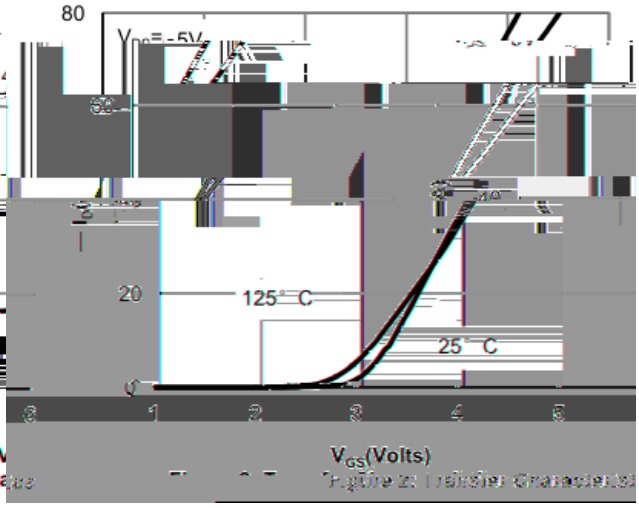
/ Electrical Characteristic Curve



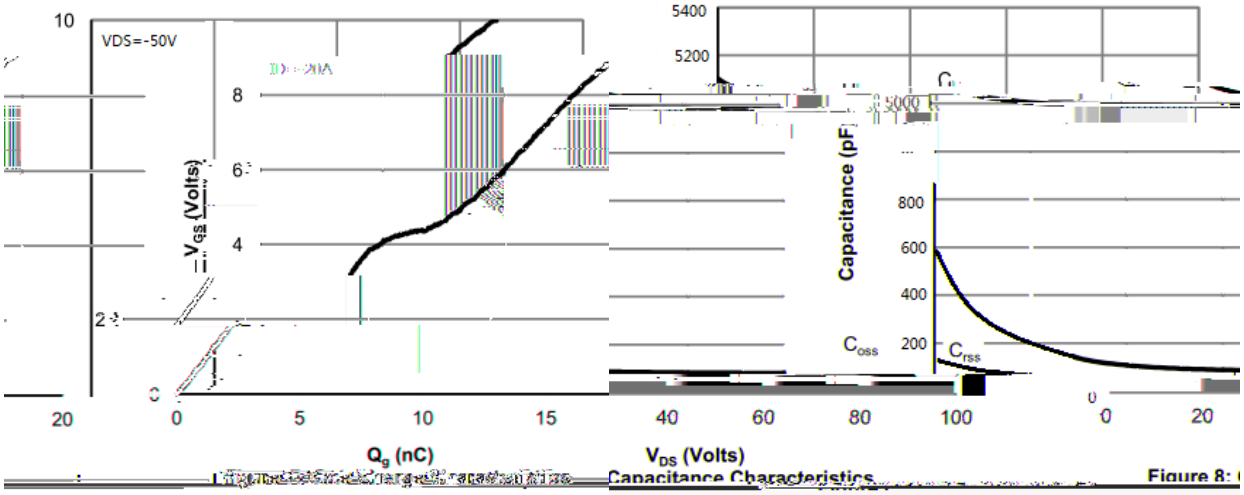
olts)
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V_{DS} (V

Fig 1: On-Region Cha

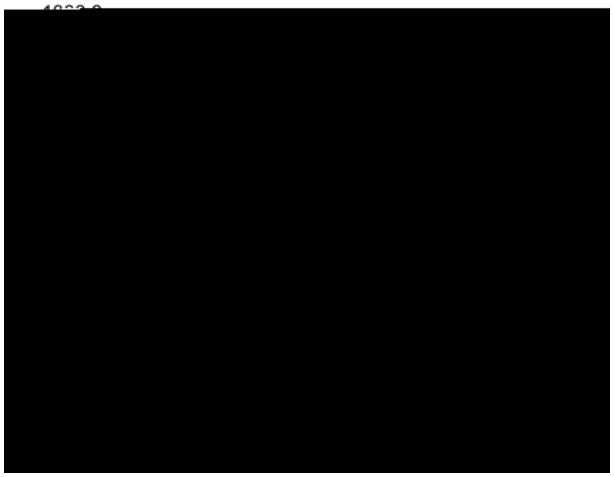


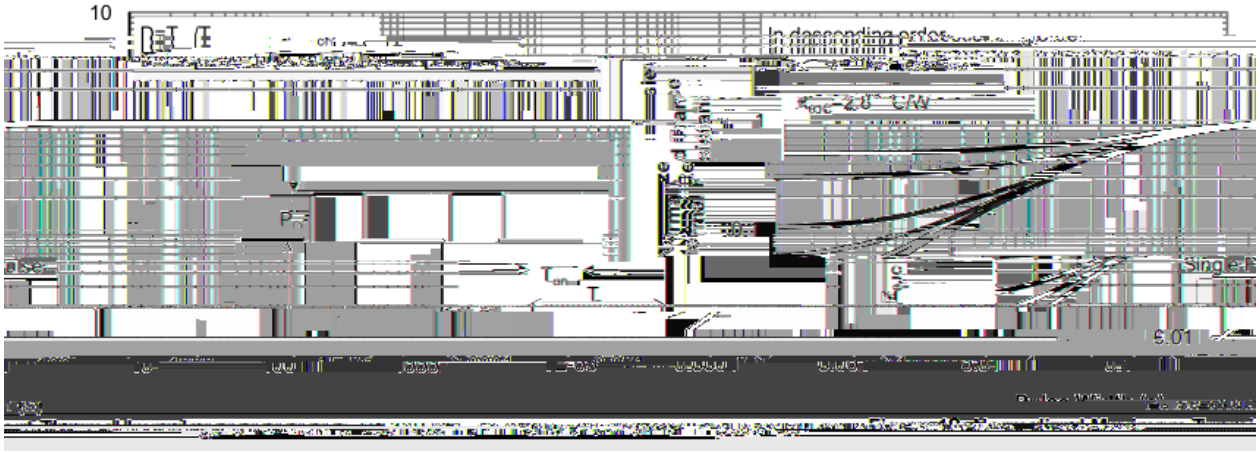
/ Electrical Characteristic Curve



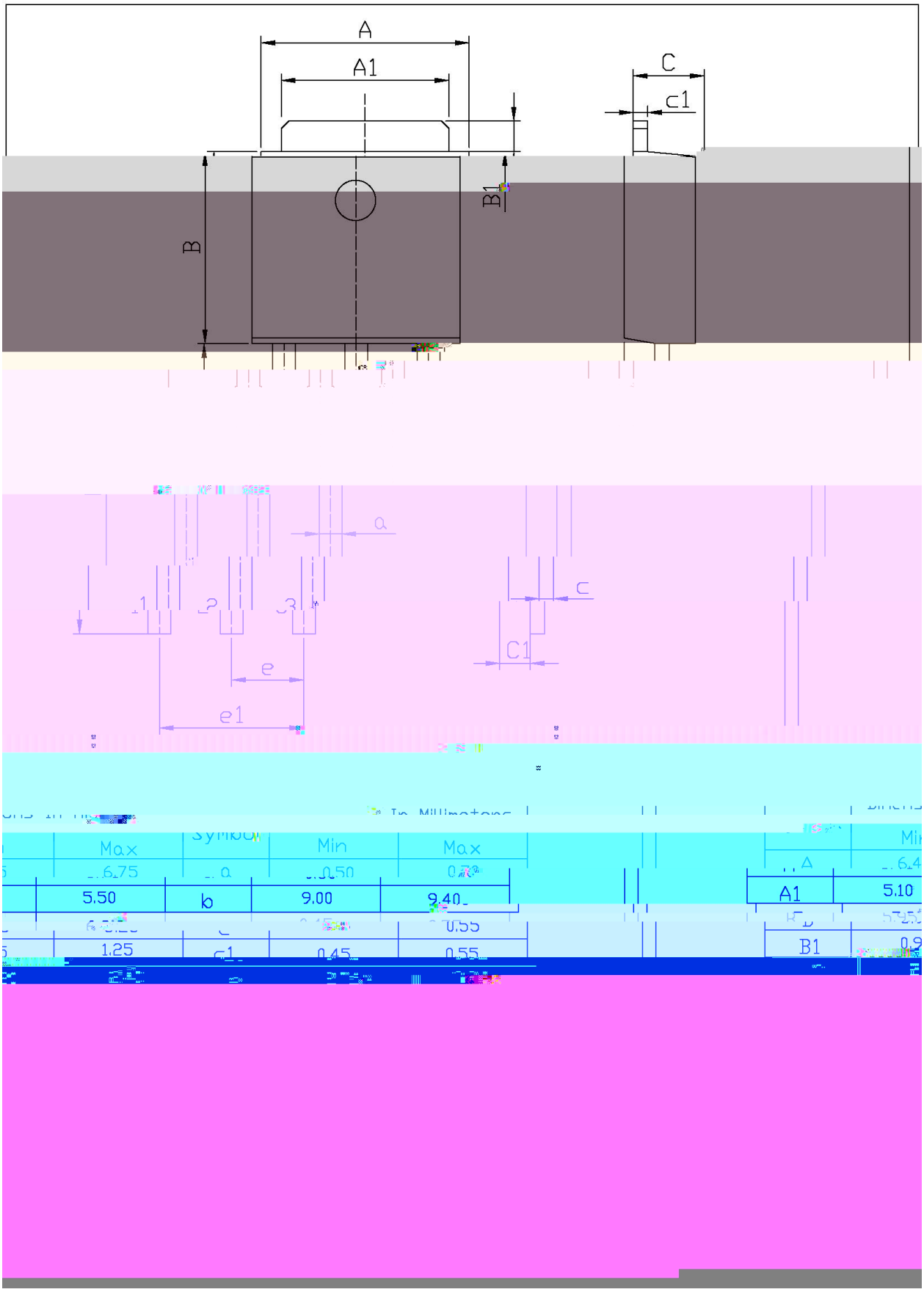
Capacitance Characteristics

Figure 8:

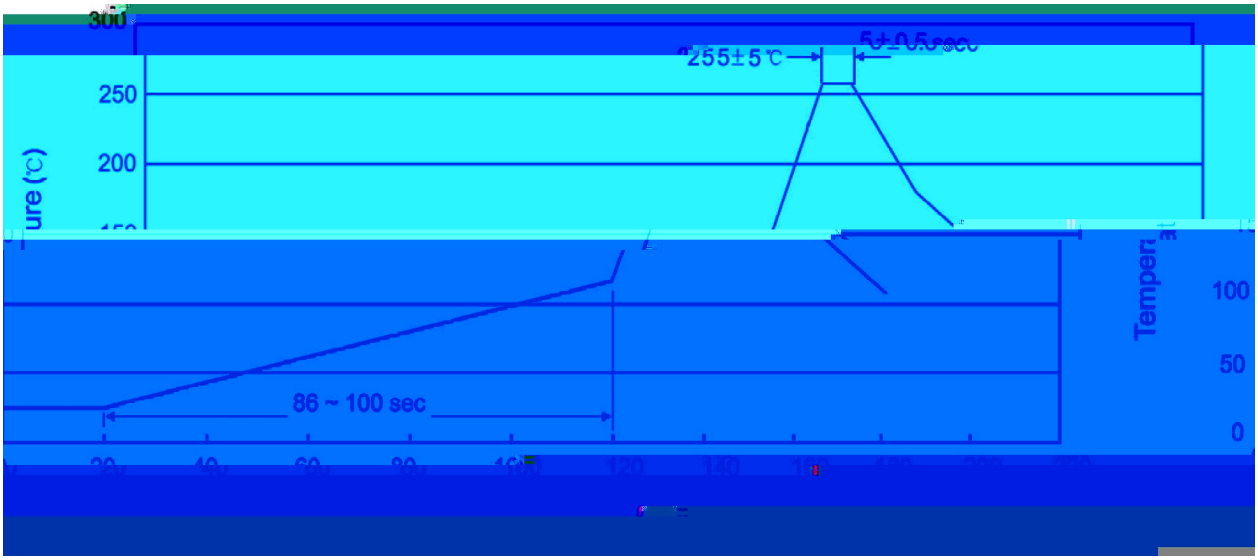




/ Package Dimensions



( ) / Temperature Profile for IR Reflow 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.

/ REEL

Package Type	Units					Dimension		(unit mm^3)

/ TUBE

Package Type	Units					Dimension		(unit mm^3)

/ Notices