SRS08 Ł S ڜ ٦

P-Channel Enhancement Mode Field Effect Transistor in a SOP-8 Plastic Package.

V_{DS} (V) = -40V

I_D = -10 A (V_{GS} = 20V)

$R_{DS(ON)}$ < 15mΩ (V_{GS} = -10V)

ٶ AEC0T434 ڡ ڀ ڵ Qualified to AEC-Q101 Standards for High Reliability, HF Product.

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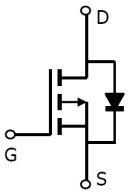
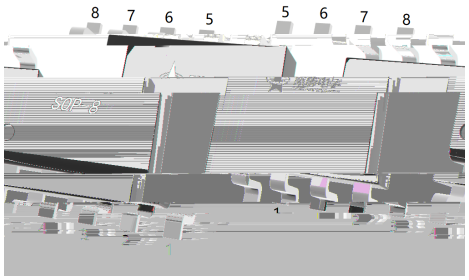
Power Management in Notebook computer, Portable Equipment and Battery powered systems, Meet the stringent requirements of automotive applications.





PIN1 S PIN 2 S PIN 3 S PIN 4 G

PIN 5 D PIN 6 D PIN 7 D PIN 8 D

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See Marking Instructions.

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	-40	V
Gate-Source Voltage	V_{GSS}	±20	V
Continuous Drain Current	I_D (T_a=25°C)	-10	A
Continuous Drain Current	I_D (T_a=70°C)	-8	A
Power Dissipation for Single Operation	P_D (T_a=25)	1.7	W
Power Dissipation for Single Operation	P_D (T_a=70)	1.1	W
Maximum Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	
Thermal Resistance-Junction to Ambient	$R_{\theta JA}$ ε t 10s ζ	40	/W
Thermal Resistance-Junction to Ambient	$R_{\theta JA}$	75	/W
Maximum Junction-to-Lead	$R_{\theta JL}$	24	/W

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	I_D=-250μA V_{GS}=0V	-40			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-40V V_{GS}=0V			-1.0	μA
		V_{DS}=-40V V_{GS}=0V T_J=55°C			-5.0	
Gate-Body leakage current	I_{GSS}	V_{DS}=0V V_{GS}=±20V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=-250μA	-1.2	-1.6	-2.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=-10V I_D=-10A		13.1	15	mΩ
		V_{GS}=-4.5V I_D=-7A		18	21	
Forward Transconductance	g_{FS}	V_{DS}=-5V I_D=-10A		9.5		S
Diode Forward Voltage	V_{SD}	I_S=-1A V_{GS}=0V		-0.8	-1.0	V
Total Gate Charge	Q_g(10V)	V_{GS}=-10V V_{DS}=-20V I_D=-10A		42	55	nC
Total Gate Charge	Q_g(4.5V)			18.6		
Gate-Source Charge	Q_{gs}			7		
Gate-Drain Charge	Q_{gd}			8.6		
Gate Resistance	R_g	V_{GS}=0V V_{DS}=0V f=1MHz		8.5		Ω
Input Capacitance	C_{iss}	V_{GS}=0V V_{DS}=-25V f=1MHz		3300		pF
Output Capacitance	C_{oss}			135		
Reverse Transfer Capacitance	C_{rss}			177		
Turn-on Delay Time	$t_{d(ON)}$	V_{GS}=-10V V_{DS}=-20V R_L=2Ω R_{GEN}=3Ω		9.4		ns
Turn-on Rise Time	t_r			20		
Turn-off Delay Time	$t_{d(OFF)}$			55		
Turn-off Fall Time	t_f			30		

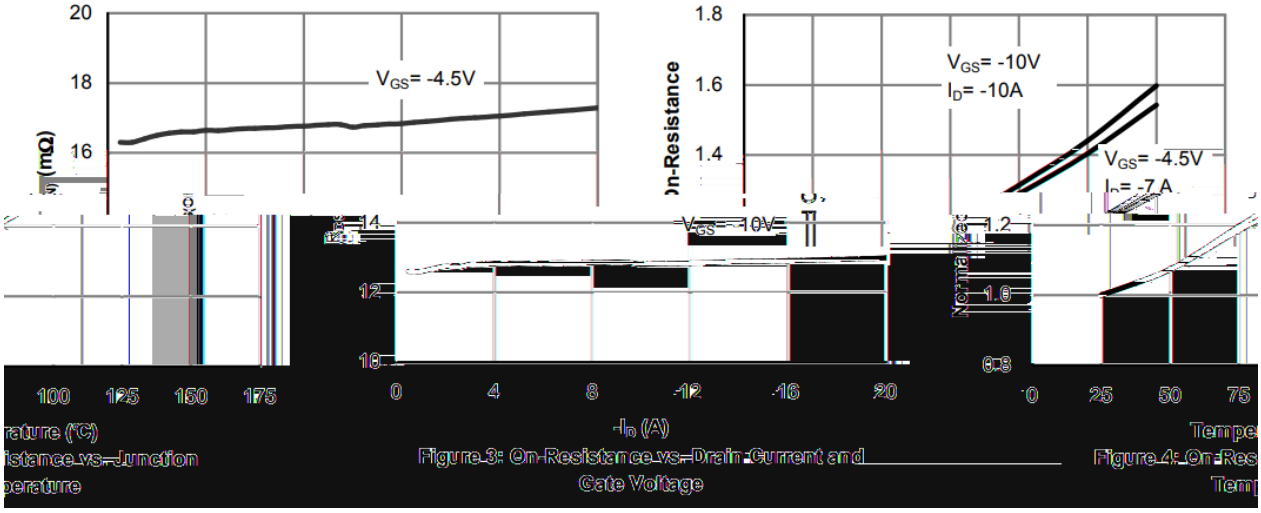

Figure 3: On-Resistance vs. Drain Current and Gate Voltage

Figure 4: On-Res

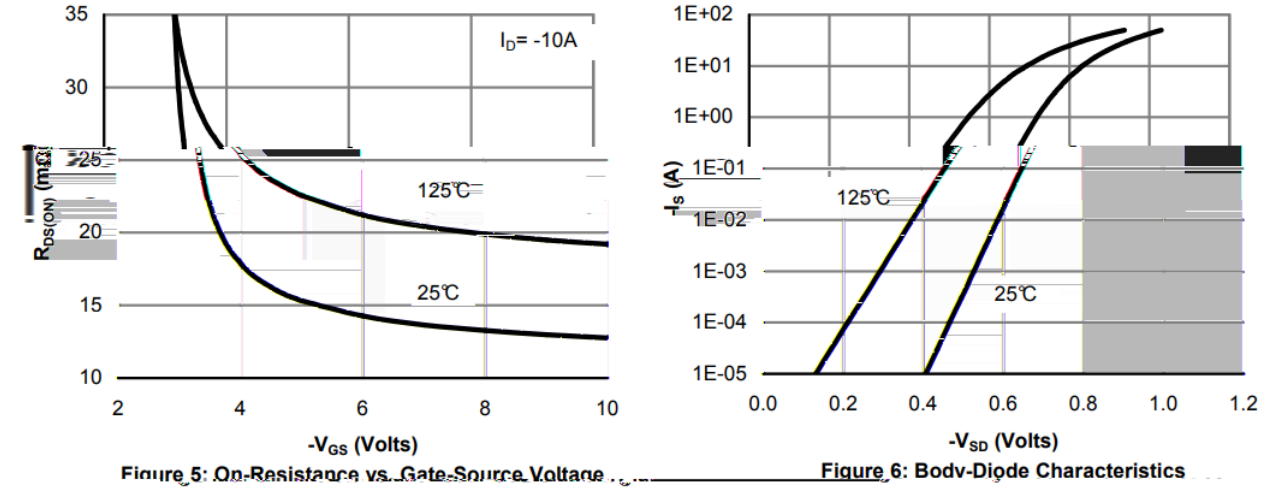

Figure 5: On-Resistance vs. Gate-Source Voltage

Figure 6: Body-Diode Characteristics

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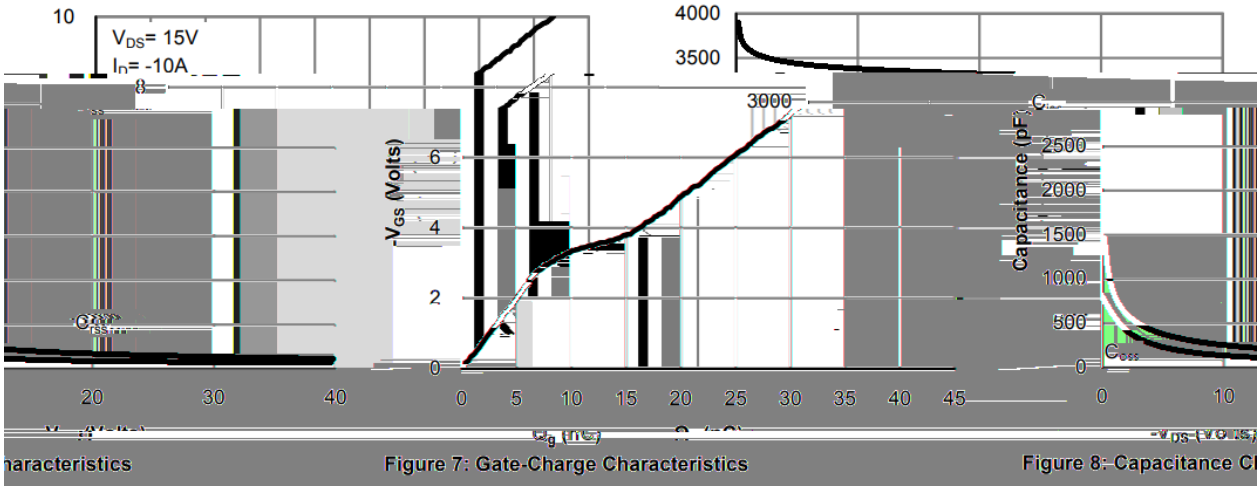
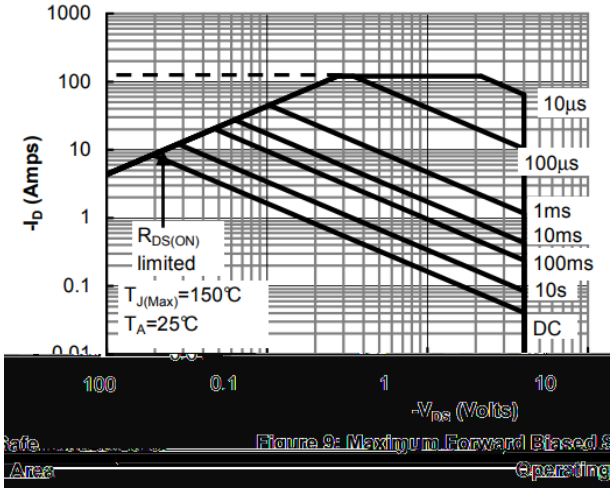


haracteristics Figure 7: Gate-Charge Characteristics Figure 8: Capacitance Cl



afe Area Figure 9: Maximum Forward Biased S Operating

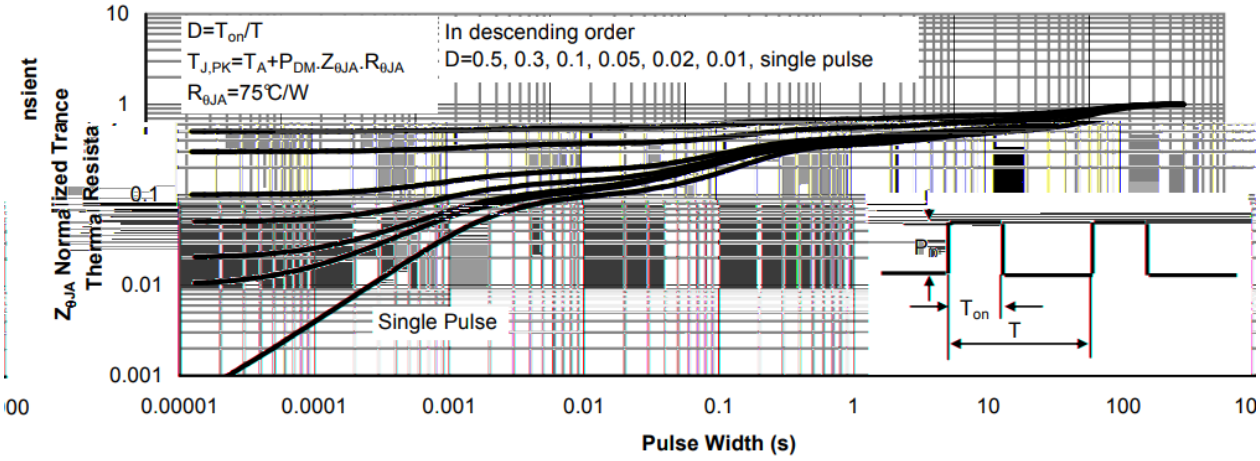
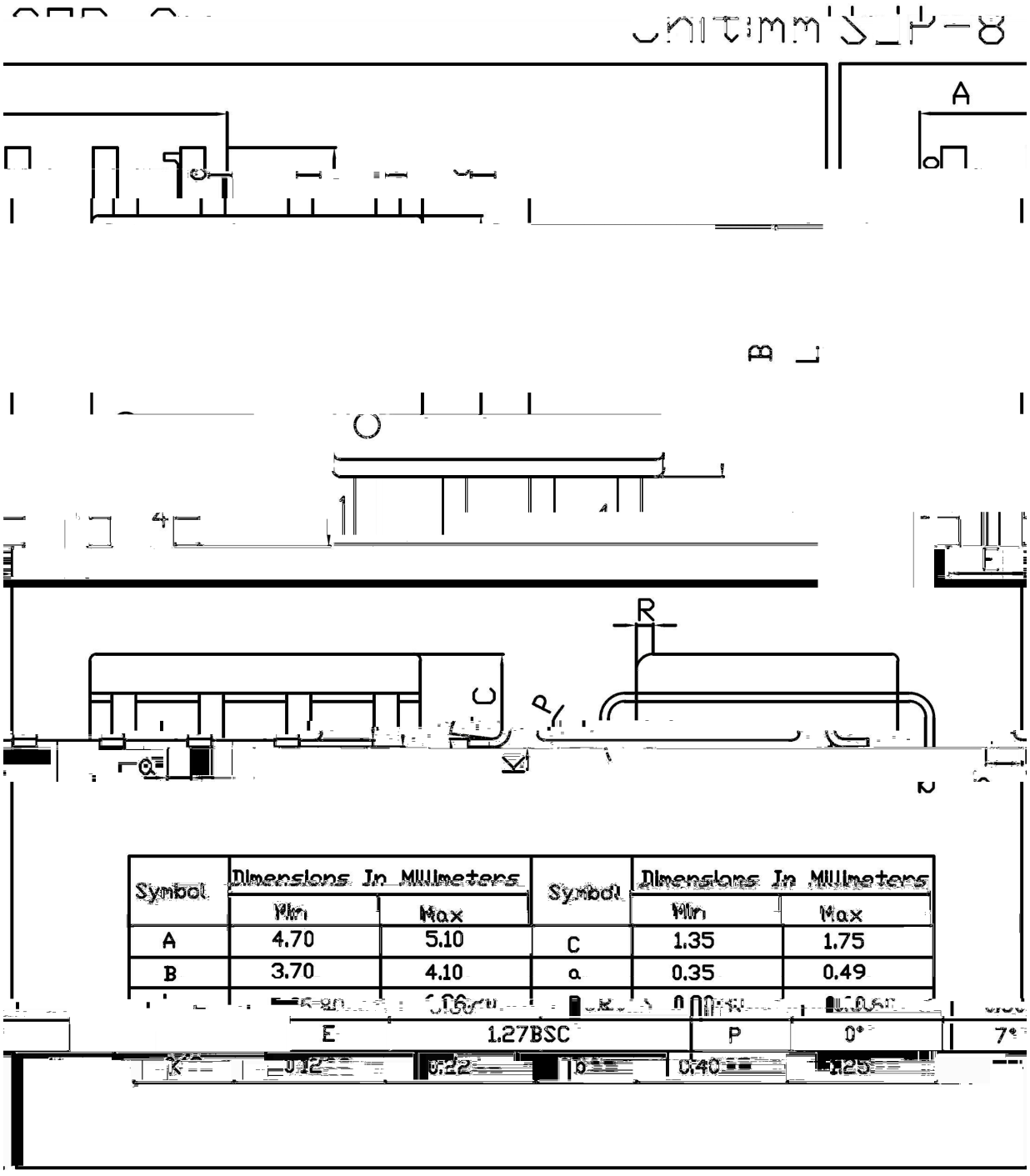
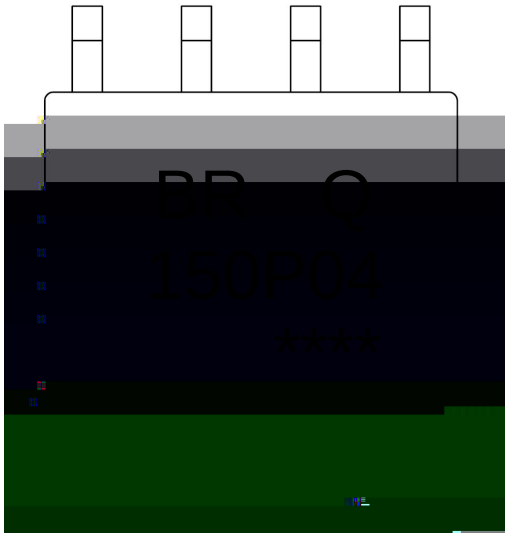


Figure 10 : Normalized Maximum Transient Thermal Impedance



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	4.70	5.10	C	1.35	1.75
B	3.70	4.10	α	0.35	0.49



BR

Q

150P04

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Note:

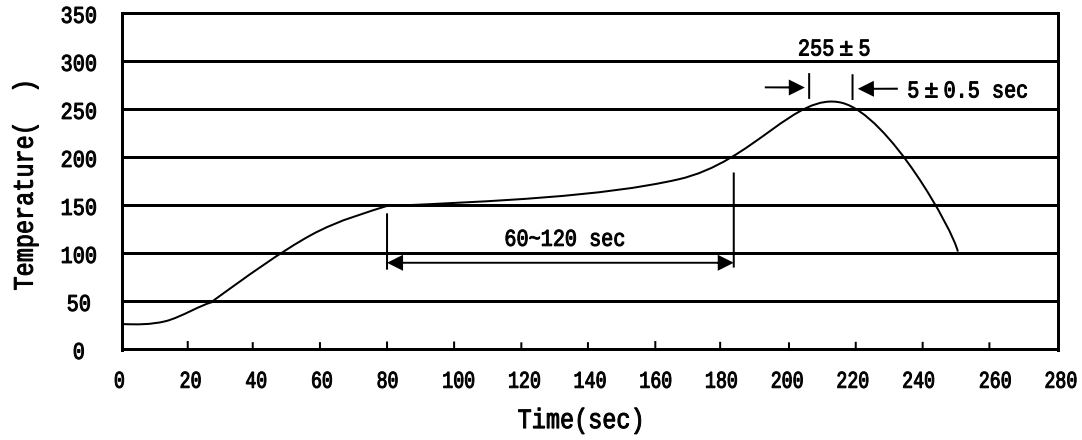
BR: Company Code

Q: Automobile halogen-free product Code

150P04: Product Type Code

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

Temperature Profile for IR Reflow Soldering(Pb-Free)



ب Note:

1 أ 150 200 ژ 60 120sec; 1.Preheating:150~200 , Time:60~120sec.

2 255±5 ژ ٨ 5±0.5sec; 2.Peak Temp.:255±5 , Duration:5±0.5sec.

3 ٦ ھ 2 10 /sec. 3. Cooling Speed: 2~10 /sec.

260±5 ژ 10±1 sec. Temp.:260±5 Time:10±1 sec

` Ł / REEL

Package Type	Units					Dimension		(unit mm³)
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
SOP/ESOP-8	4,000	2	8,000	6	48,000	13 ×12	360×360×50	380×335×366