/ Descriptions

SOP-8 N MOS

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

/ Features

V_{DS}(V)=30V I_D=6.9A

$R_{DS(ON)}$ <32mΩ(V_{GS}=10V)

$R_{DS(ON)}$ <36mΩ(V_{GS}=4.5V)

$R_{DS(ON)}$ <52mΩ(V_{GS}=2.5V)

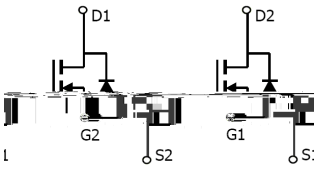
AEC-Q101

Qualified to AEC-Q101 Standards for High Reliability, HF Product.

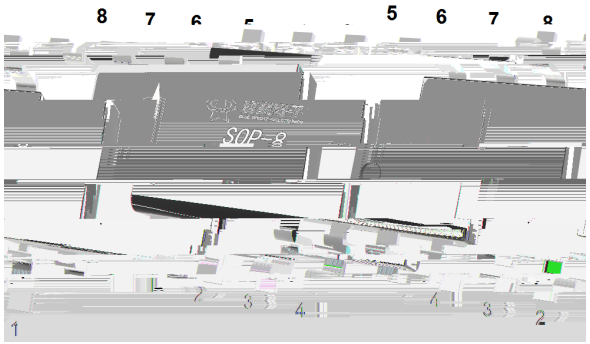
/ Applications

Power Management in Notebook computer, Portable Equipment and Battery powered systems and this device is suitable for use as a load switch or in PWM applications, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit



/ Pinning



PIN1 S2 PIN 2 G2 PIN 3 S1 PIN 4 G1

PIN 5 D1 PIN 6 D1 PIN 7 D2 PIN 8 D2

/ Marking

See Marking Instructions.

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	±12	V
Continuous Drain Current[A]	I_D (T_a=25°C)	6.9	A
	I_D (T_a=70°C)	5.8	A
Pulsed Drain Current[B]	I_{DM}	40	A
Power Dissipation for Single Operation[A]	P_D (T_a=25)	2.0	W
	P_D (T_a=70)	1.44	W
Junction and Storage Temperature Range	T_j,T_{stg}	-55 +150	
Thermal Resistance-Junction to Ambient[A]	$R_{\theta JA}$ t 10s	62.5	/W
	$R_{\theta JA}$	110	/W
Maximum Junction-to-Lead[C]	$R_{\theta JL}$	40	/W

Note:

A:The value of $R_{\theta JA}$ 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 value in any a given application depends on the user's specific board design. The current rating is based on the t ≤ 1 [illegible] eralead.1.53(m) TD()]Tnt0 0 7.0 3 Tc10005

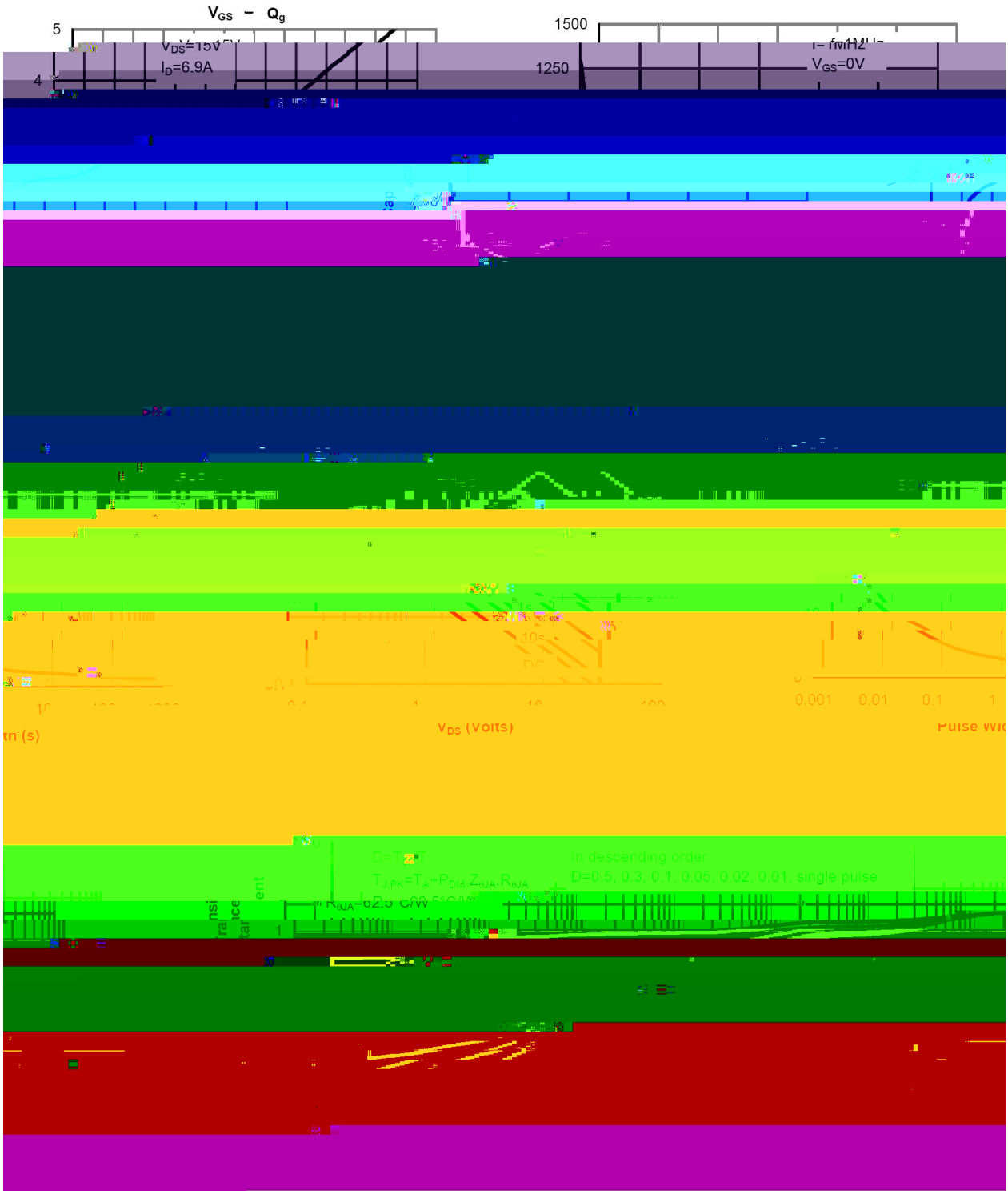
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	I_D=250μA V_{GS}=0V	30			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=24V V_{GS}=0V			1.0	μA
		V_{DS}=24V V_{GS}=0V T_J=55°C			5.0	
Gate-Body leakage current	I_{GSS}	V_{DS}=0V V_{GS}=±12V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=250μA	0.7	1.1	1.4	V
On state drain current	$I_{D(ON)}$	V_{GS}=4.5V V_{DS}=5.0V	6.9			A
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=10V I_D=6.9A		24	32	mΩ
		V_{GS}=10V I_D=6.9A T_J=125°C		32.3	38	
		V_{GS}=4.5V I_D=6.0A		27	36	
		V_{GS}=2.5V I_D=5.0A		40	52	

Forward Transconductancerren2 .48 17.64 547.04 .480012 .48 17D(V)Tj7.0172 0 0 7.02 96 490.4003 Tm0 Tc0 Tw5

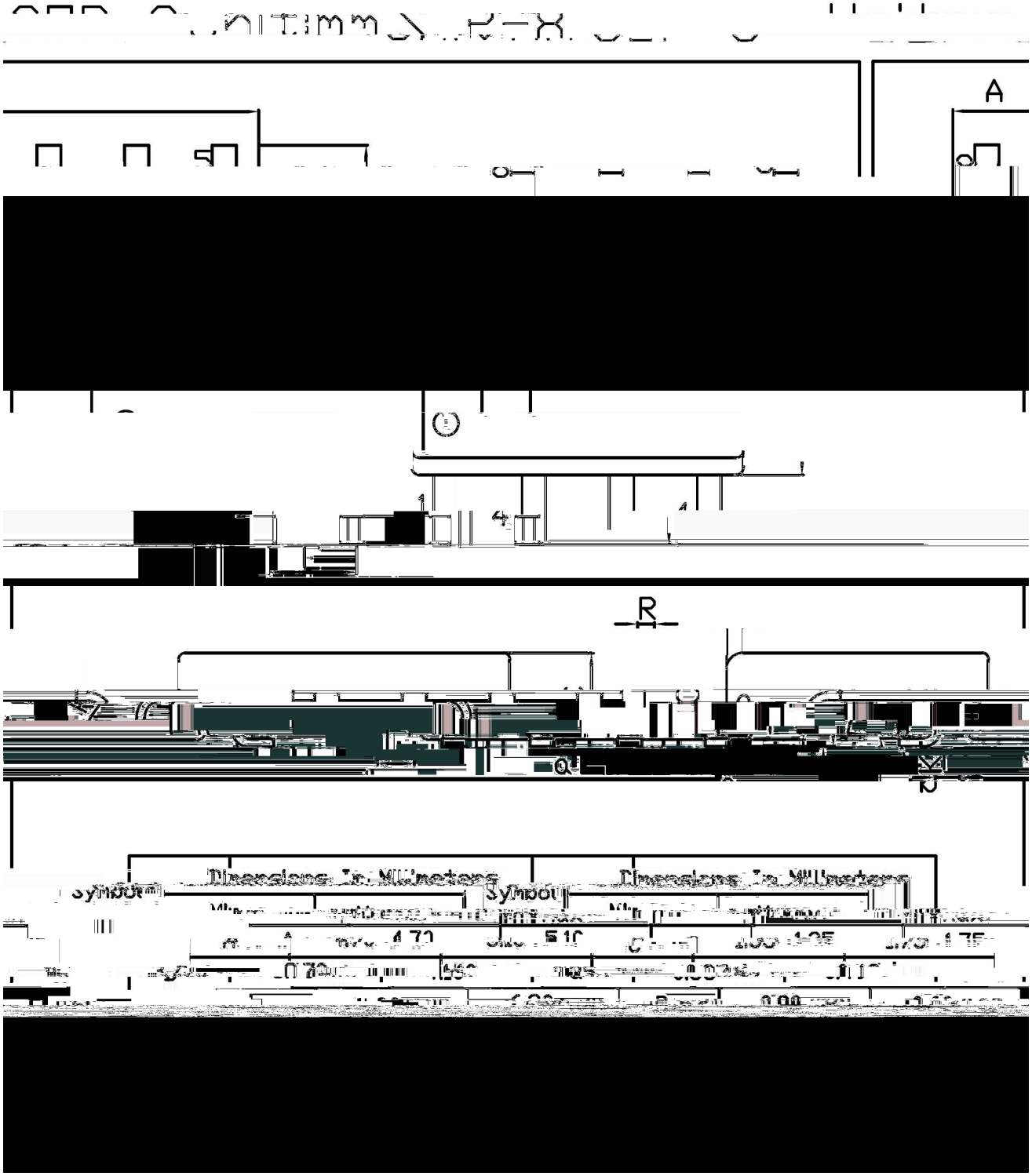
BRCS4800SCQ

Rev.A Jun.-2023

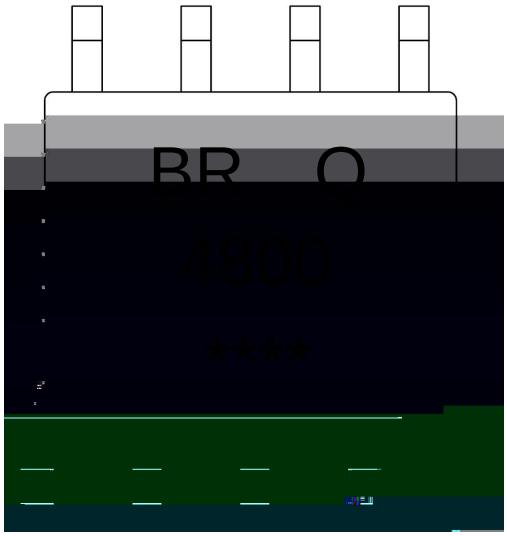
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



BR

Q

4800

****

Note:

BR:	Company Code
Q:	Automobile halogen-free product Code
4800:	Product Type
****:	Lot No. Code, code change with Lot No

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

Note:

1	150 200	60 120sec;	1.Preheating:150~200	, Time:60~120sec.
2	255±5	5±0.5sec;	2.Peak Temp.:255±5	, Duration:5±