

## / Descriptions

SOP-8            N        MOS

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

## / Features

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

$R_{DS(ON)} < 32m$  ( $V_{GS}=10V$ )

$R_{DS(ON)} < 36m$  ( $V_{GS}=4.5V$ )

$R_{DS(ON)} < 52m$  ( $V_{GS}=2.5V$ )

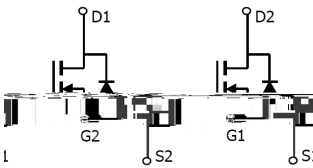
AEC-Q101

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

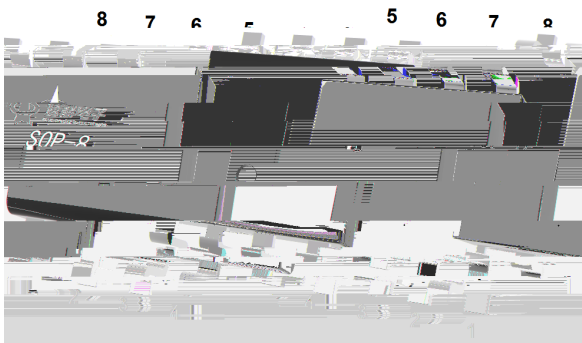
## / Applications

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



PIN 1	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	$V_{GS}$	$\pm 12$	V
Continuous Drain Current <sup>A</sup>	$I_D (T_a=25^\circ\text{C})$	6.9	A
	$I_D (T_a=70^\circ\text{C})$	5.8	A
Pulsed Drain Current <sup>B</sup>	$I_{DM}$	40	A
Power Dissipation for Single Operation <sup>A</sup>	$P_D (T_a=25^\circ\text{C})$	2.0	W
	$P_D (T_a=70^\circ\text{C})$	1.44	W
Junction and Storage Temperature Range	$T_j, T_{stg}$	-55 +150	
Thermal Resistance-Junction to Ambient <sup>A</sup>	$R_{JA} \text{ } t \text{ } 10\text{s}$	62.5	/W
	$R_{JA}$	110	/W
Maximum Junction-to-Lead <sup>C</sup>	$R_{JL}$	40	/W

Note:

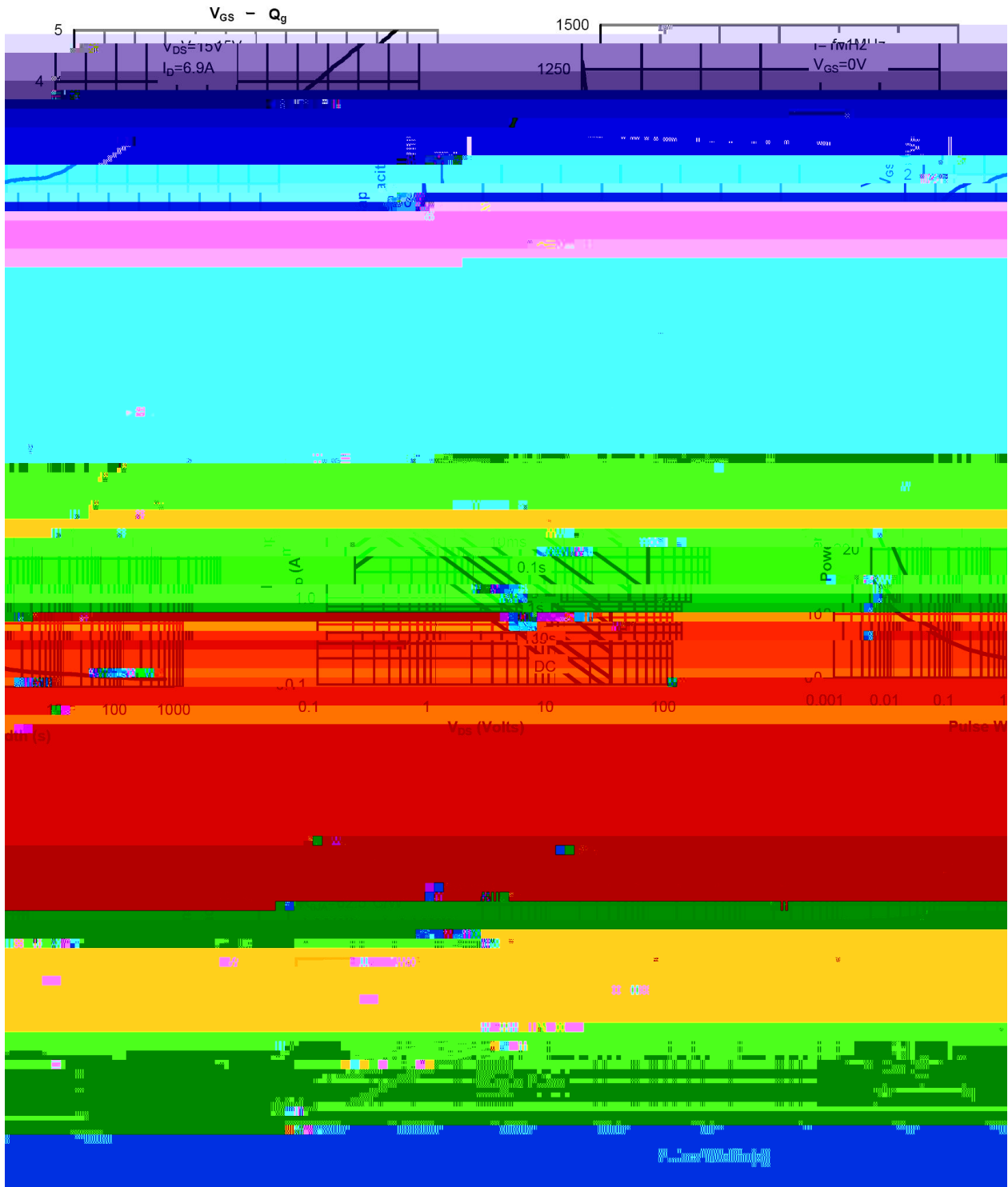
A: The value of  $R_{JA}$  is measured with the device mounted on 1in<sup>2</sup> FR-4 board with 2oz. Copper, in a still air environment with  $T_A=25^\circ\text{C}$ . The value in any a given application depends on the user's specific board design. The current rating is based on the t

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$BV_{DSS}$	$I_D=250\mu A$ $V_{GS}=0V$	30			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=24V$ $V_{GS}=0V$			1.0	$\mu A$
		$V_{DS}=24V$ $V_{GS}=0V$ $T_J=55^\circ C$			5.0	
Gate-Body leakage current	$I_{GSS}$	$V_{DS}=0V$ $V_{GS}=\pm 12V$			$\pm 100$	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	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	m
		$V_{GS}=10V$ $I_D=6.9A$ $T_J=125^\circ C$		32.3	38	
		$V_{GS}=4.5V$ $I_D=6.0A$		27	36	
		$V_{GS}=2.5V$ $I_D=5.0A$		40	52	

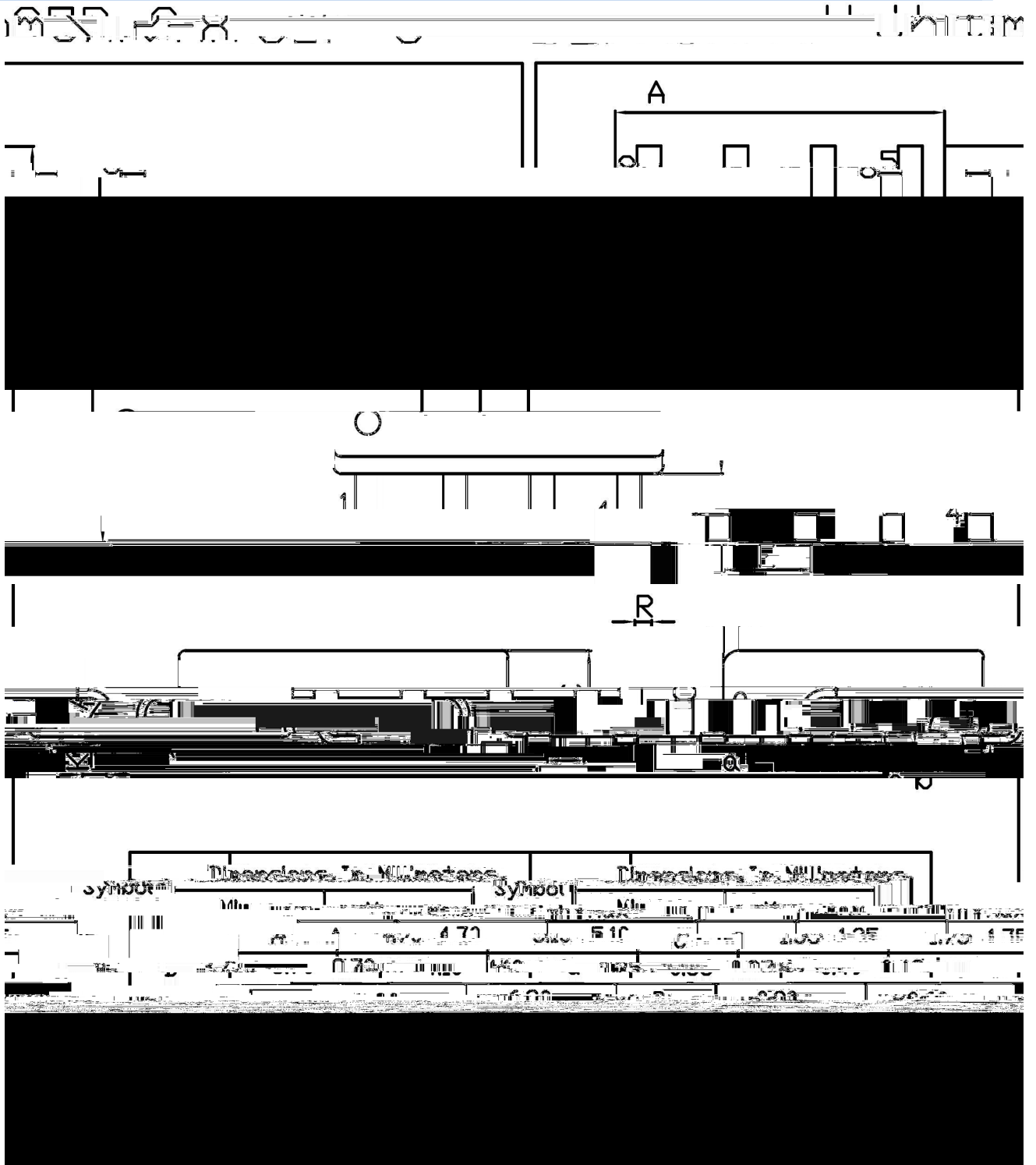
# **BRCS4800SCQ**

Rev.A Jun.-2023

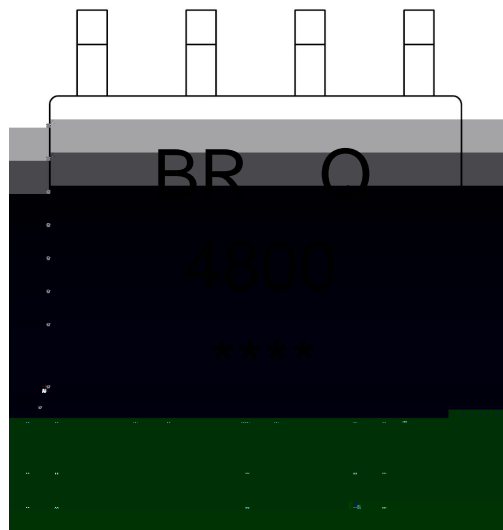
/ Electrical Characteristic Curve



**/ Package Dimensions**



**/ Marking Instructions**



BR

Q

4800

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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±