

BRCS4612SCQ

Rev.A Aug.-2024



蓝箭电子
BLUE ROCKET ELECTRONICS

DATA SHEET

SOP-8

MOS

Complementary Enhancement MOSFET in a SOP-8 Plastic Package.

N-channel

$V_{DS}(V)=60V$

$I_D=9.7A$

$R_{DS(ON)}<16m\ \Omega$ ($V_{GS}=10V$)

$R_{DS(ON)}<22m\ \Omega$ ($V_{GS}=4.5V$)

AEC-Q101

HF Product.

P-channel

$V_{DS}(V)=-60V$

$I_D=-3.4A$

$R_{DS(ON)}<100m\ \Omega$ ($V_{GS}=-10V$)

$R_{DS(ON)}<130m\ \Omega$ ($V_{GS}=-4.5V$)

Qualified to AEC-Q101 Standards for High Reliability,

Table 1 / Absolute Maximum Ratings(Ta=25℃ ;)

Parameter	Symbol		Rating		Unit
			N-channel	P-channel	
Drain-Source Voltage	V _{DSS}		60	-60	V
Gate-Source Voltage	V _{GSS}		±20		V
Continuous Drain Current	I _D (T _A =25℃)		9.7	-3.4	A
Pulsed Drain Current	I _{DM}		±40		A
Power Dissipation	P _D (T _A =25℃)		2.7	1.9	W
Maximum Junction-to-Ambient	R _{JA}	t [~] 10s	46.3	65.8	/W
		Steady-State	72	100	/W
Junction and Storage Temperature Range	T _J ,T _{STG}		-55 to +150		

1. N-CHANNEL Electrical Characteristic Curve

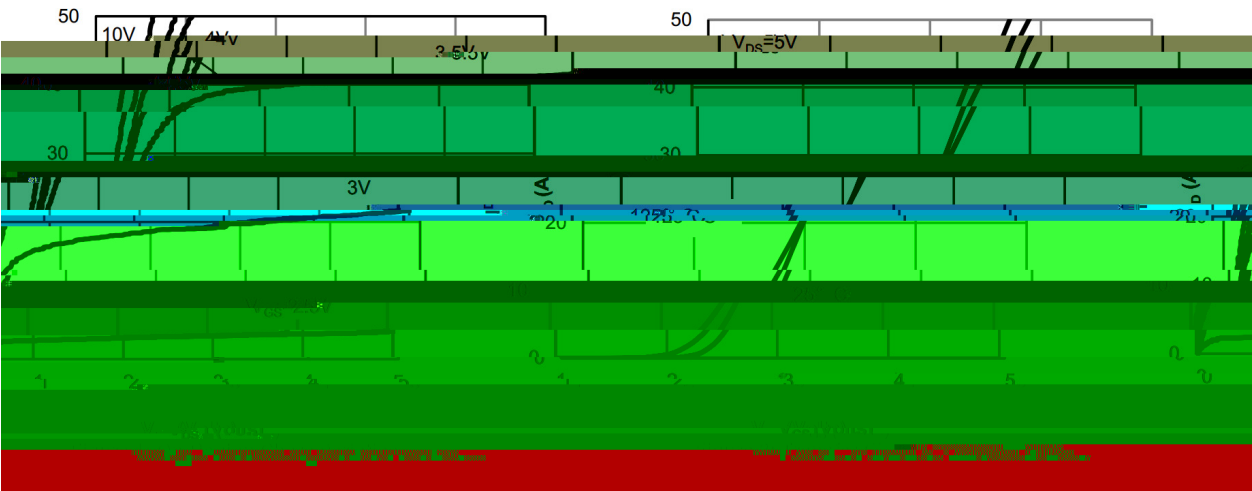
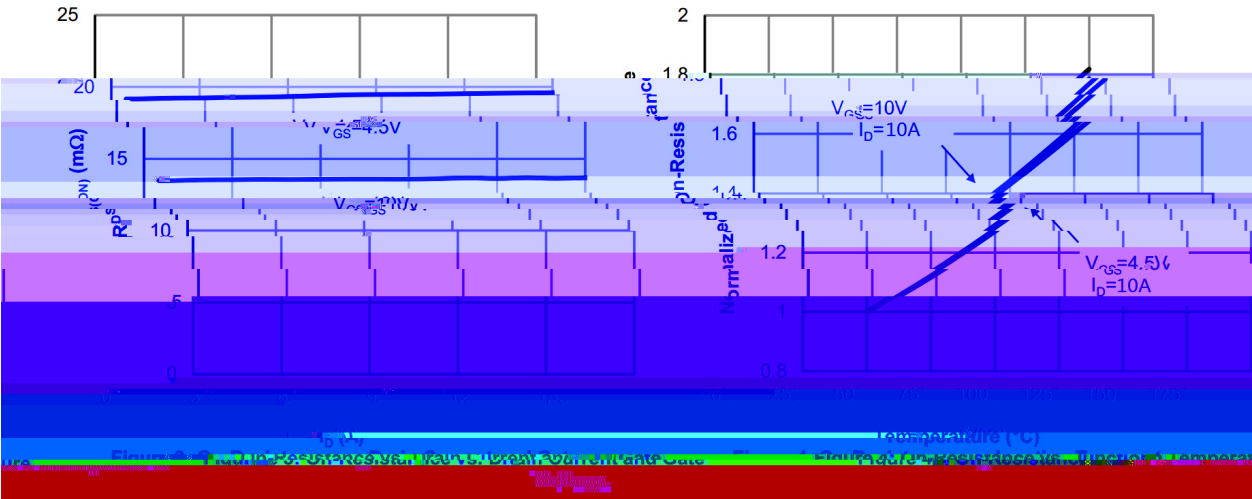
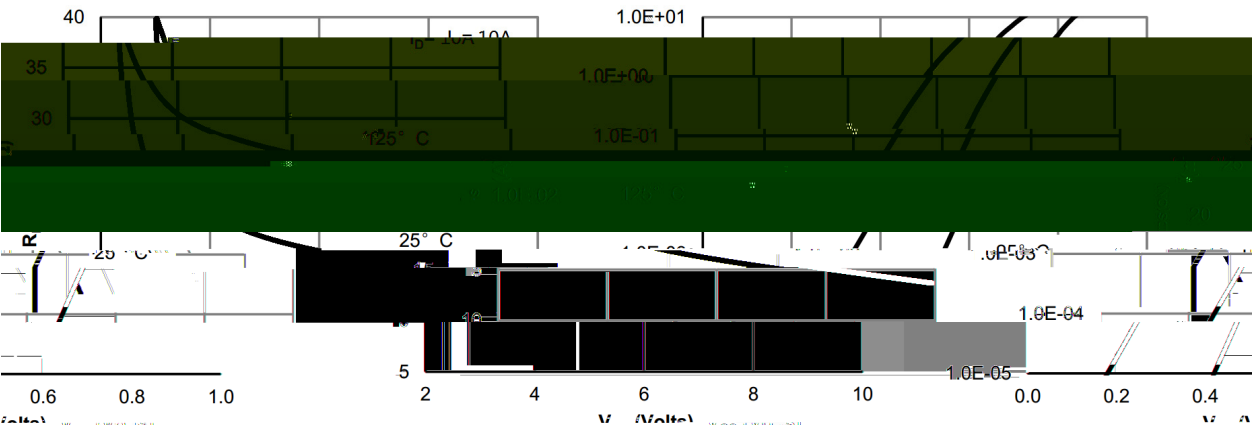


Figure 4: Drain Current vs. Drain-Source Voltage

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

Figure 6: Body Diode Characteristics

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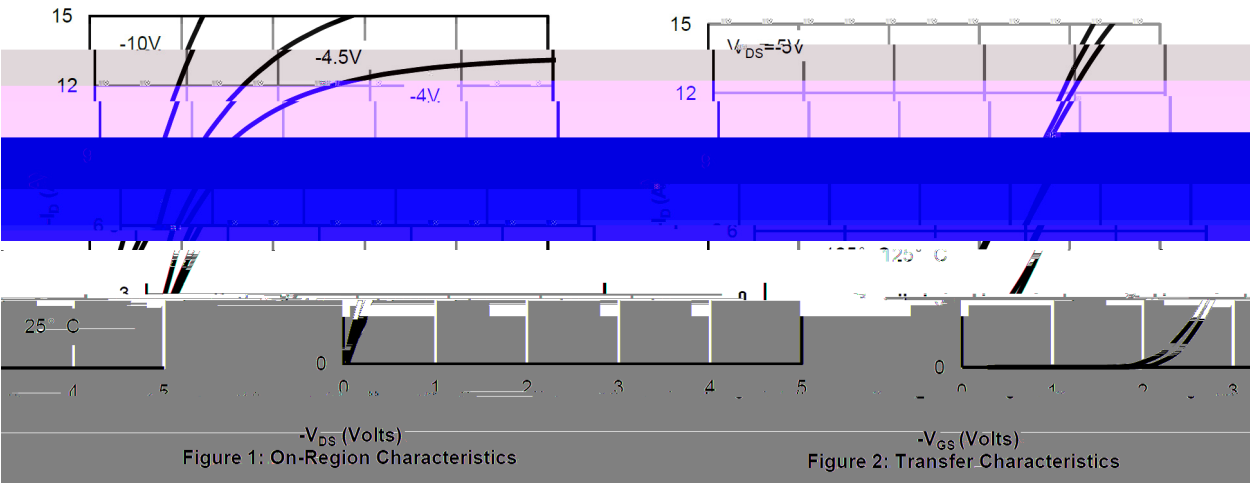
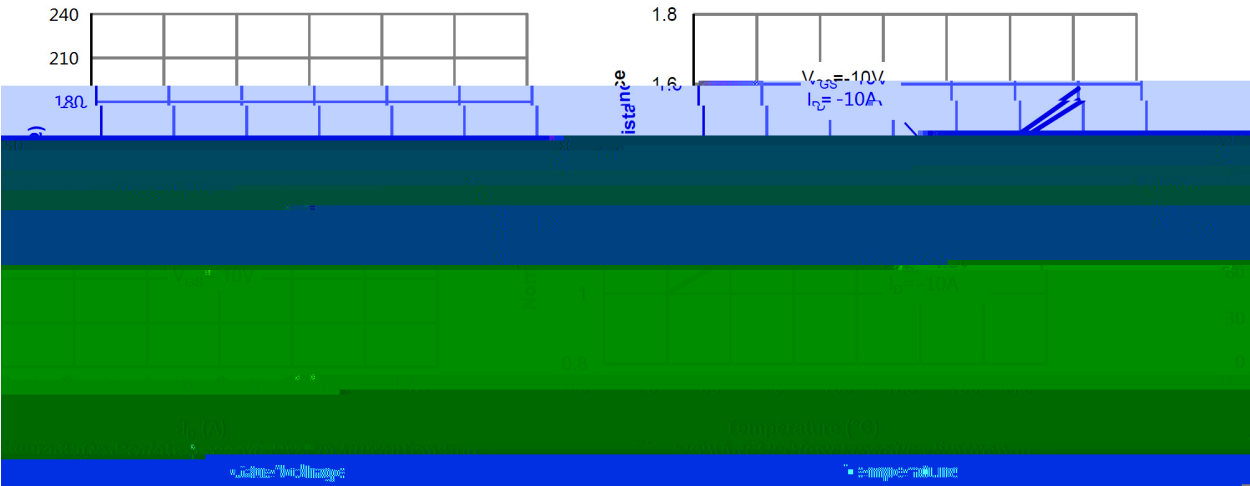
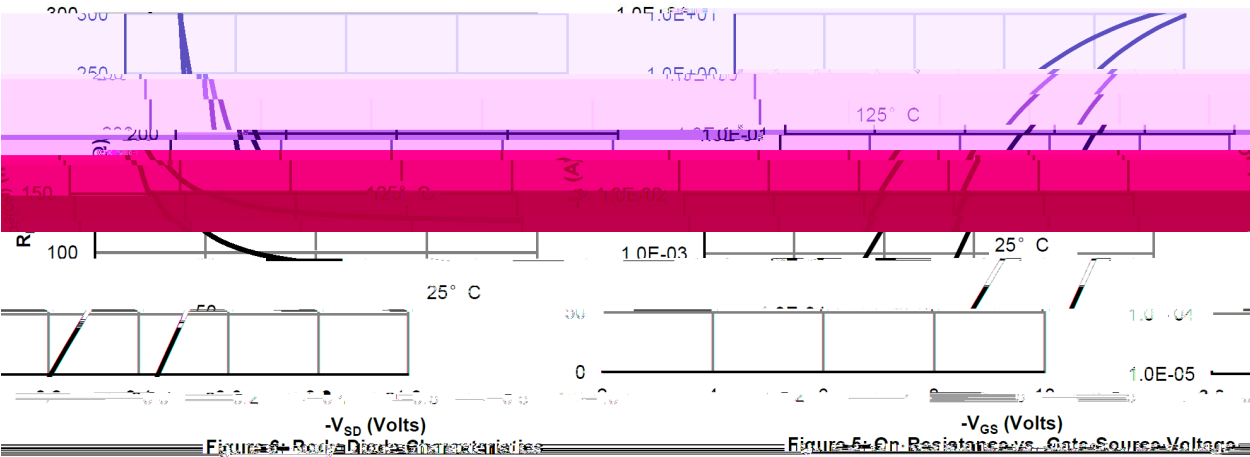


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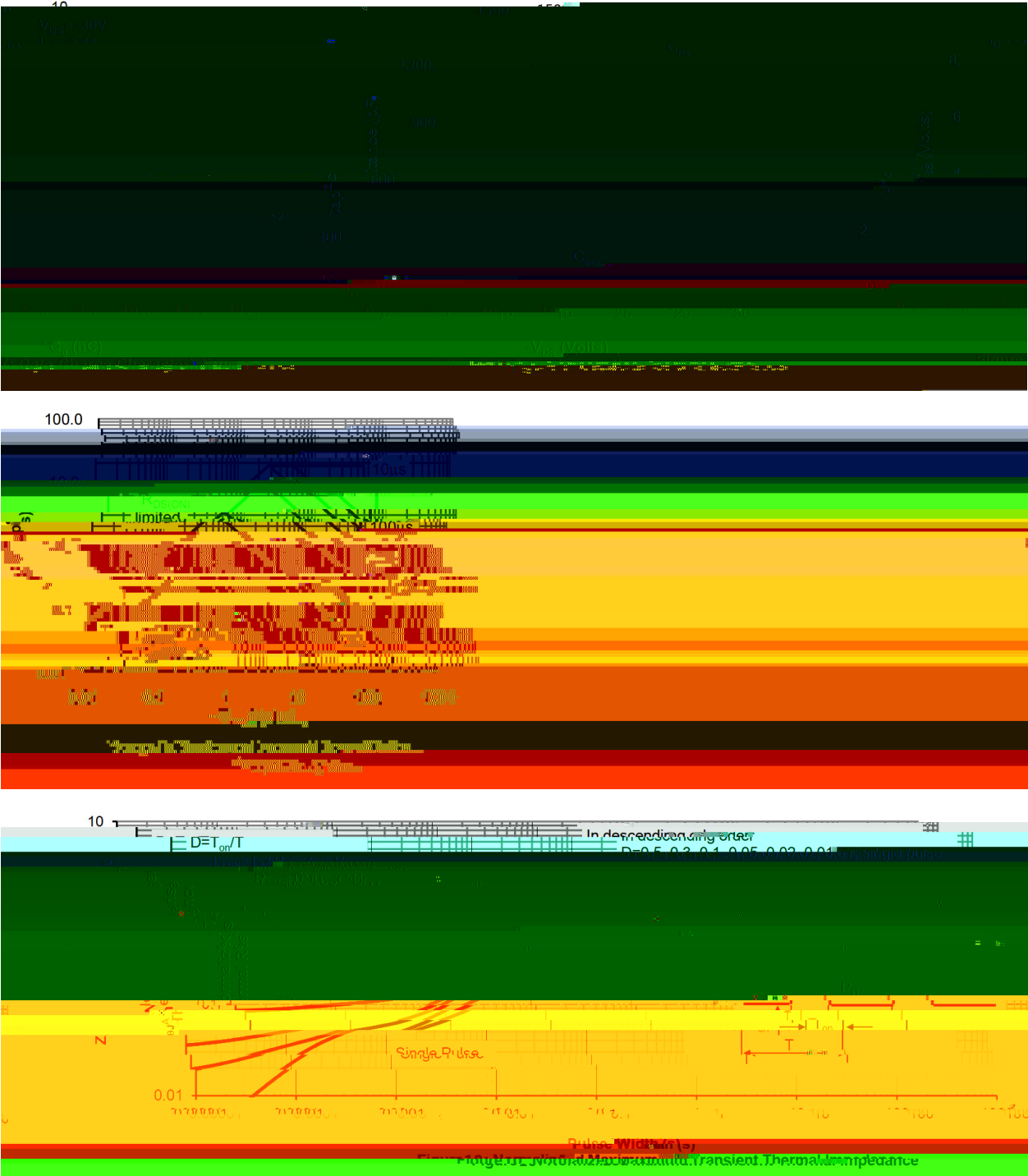
DATA SHEET

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=-250 A$	-60	-71		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-60V$ $V_{GS}=0V$			-1.0	A
Gate-Body leakage current	I_{GSS}	$V_{GS}=\pm 20V$ $V_{DS}=0V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=-250 A$	-1.0	-1.7	-2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=-10V$ $I_D=-10A$		87	100	m
		$V_{GS}=-4.5V$ $I_D=-10A$		104	130	m
Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=-1.0A$			-1.0	V
Input Capacitance	C_{iss}	$V_{DS}=-25V$ $V_{GS}=0V$ $f=1.0MHz$		1170		pF

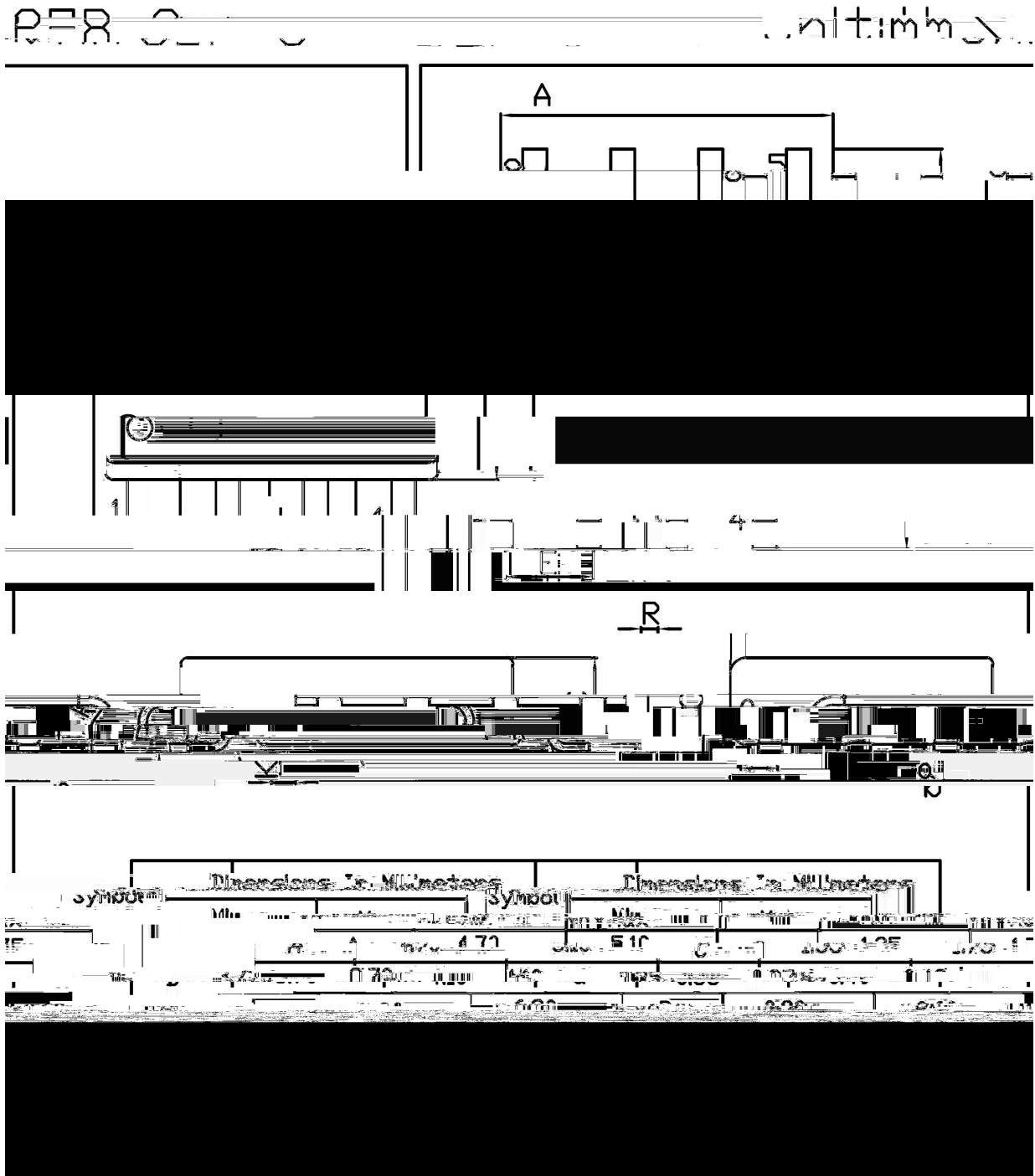
3. P-CHANNEL Electrical Characteristic Curve



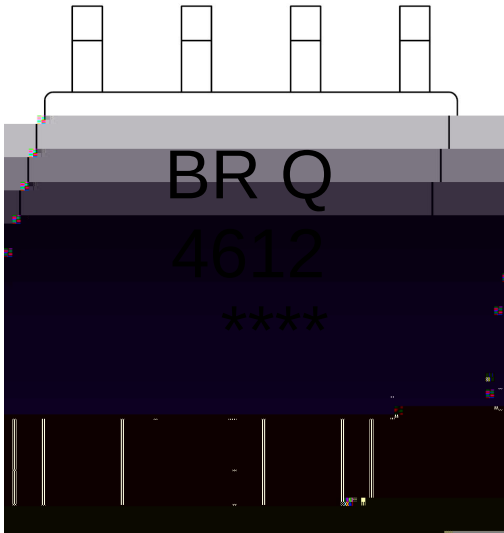
3 ?è Ô ? d • Ž ¢ / P-CHANNEL Electrical Characteristic Curve



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Note:

- BR:

Q:

4612:

****:
- Company Code

Automobile halogen-free product Code

Product Type Code

Lot No. Code, code change with Lot No

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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±0.5sec.
- 3

2 10

/sec.

3. Cooling Speed: 2~10 /sec.

ÂD /Cã p ¯ »] / Resistance to Soldering Heat Test Conditions

260±5

10±1 sec.

Temp.:260±5

Time:10±1 sec

G P á / Packaging SPEC.

/ REFL

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