

/ Descriptions

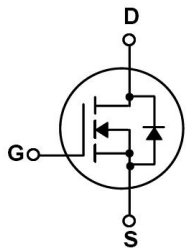
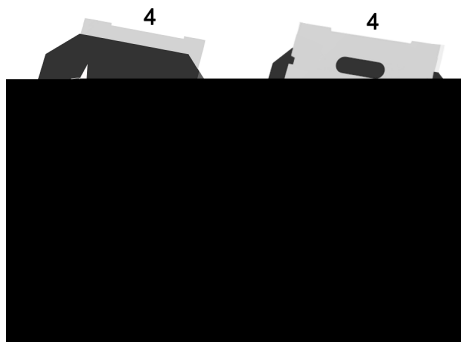
TO-252 SiC N MOS

SiC N-CHANNEL MOSFET in a TO-252 Plastic Package.

/ Features $V_{DS}=800V$ $I_D=20A$ $R_{DS(on)}@15V \leq 208m\Omega$ (Type.160m Ω) $R_{DS(on)}@18V \leq 180m\Omega$ (Type.124m Ω)**/ Applications**

LED PD PC

LED driver, PD charger, PC adapter, Air-conditioning, E-bike charger.

/ Equivalent Circuit**/ Pinning**

PIN1 G

PIN 2 D

PIN 3 S

PIN 4 D

/ Marking

See Marking Instructions.

BRSC80R180ZDP

Rev.B Jul.-2026

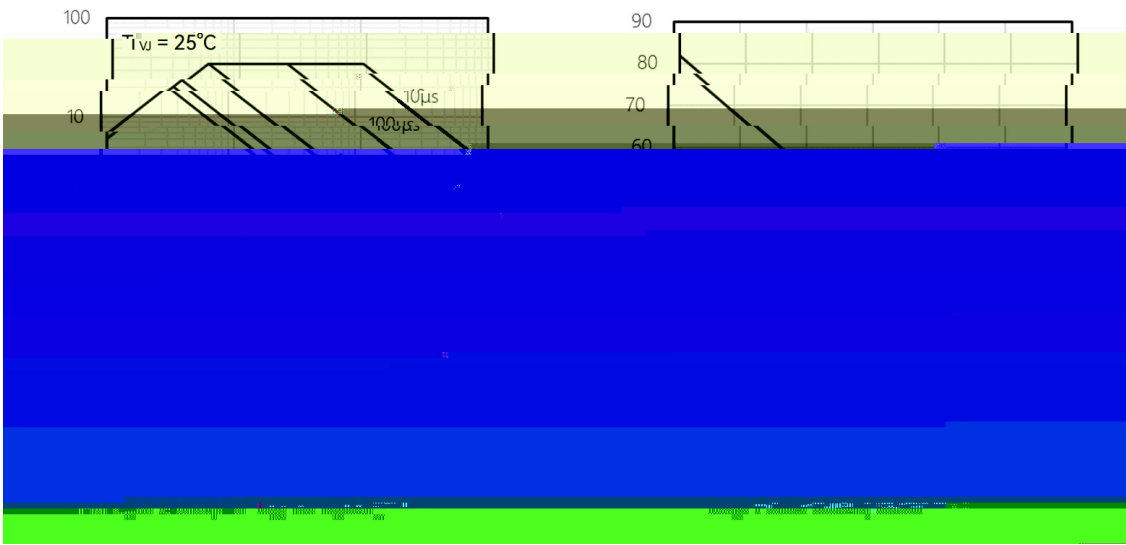
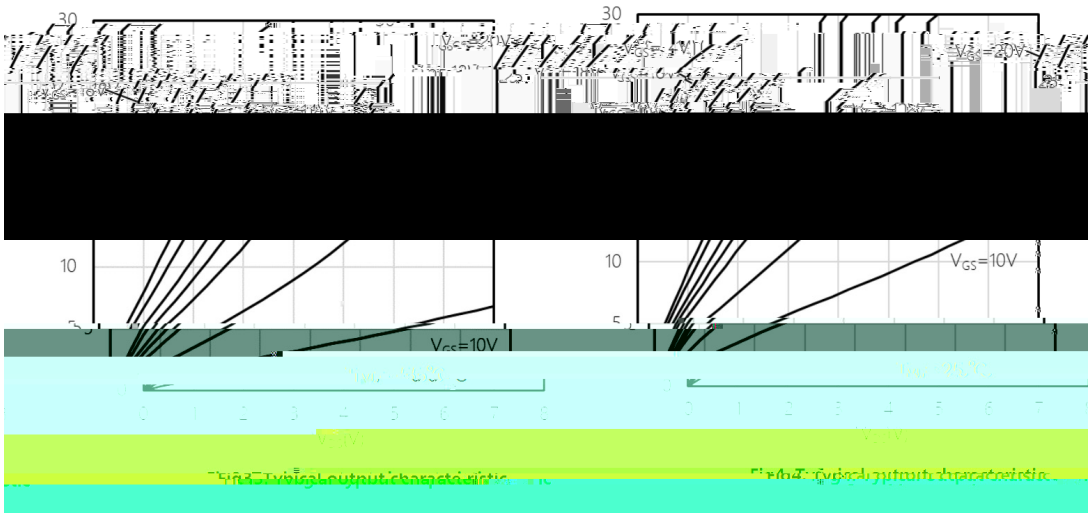
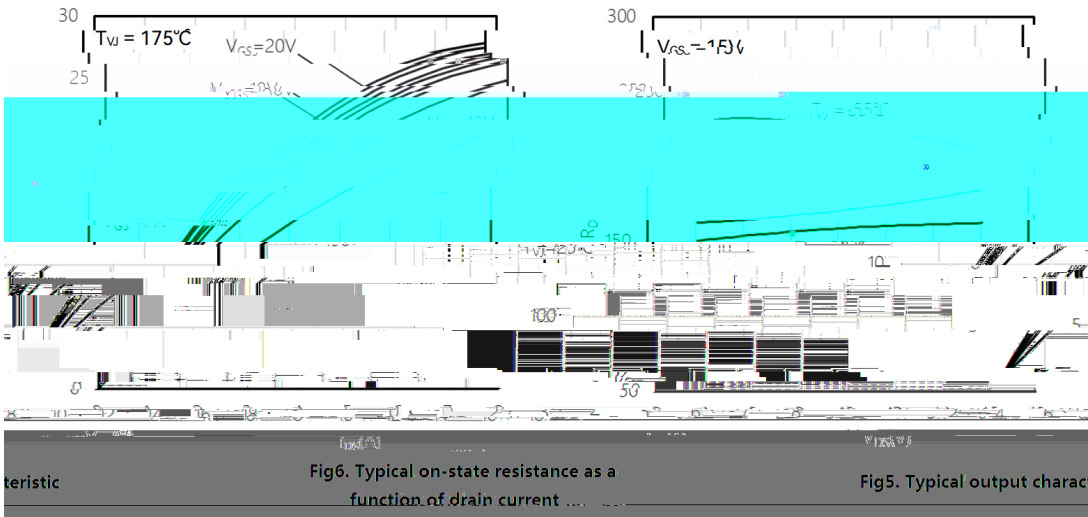


蓝箭电子
BLUE ROCKET ELECTRONICS

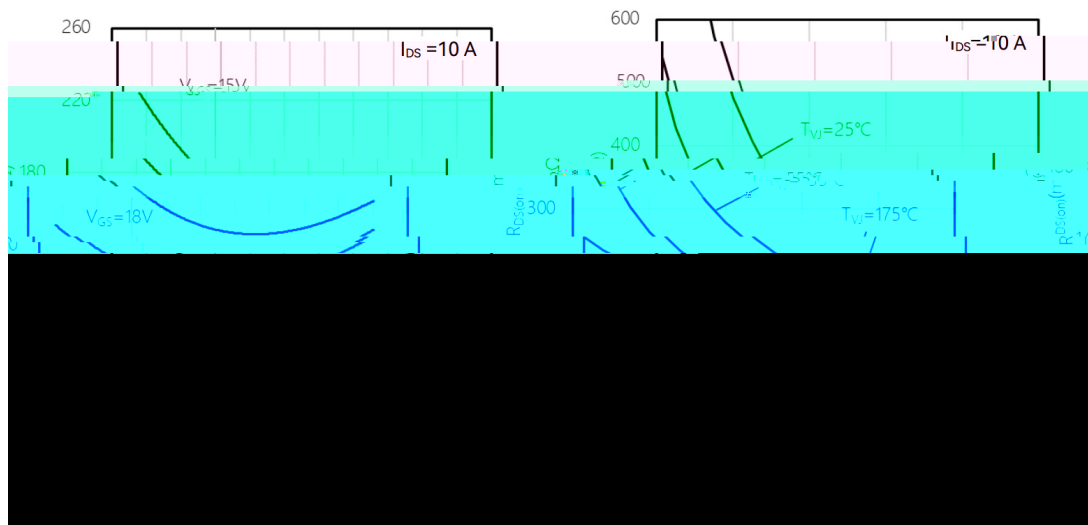
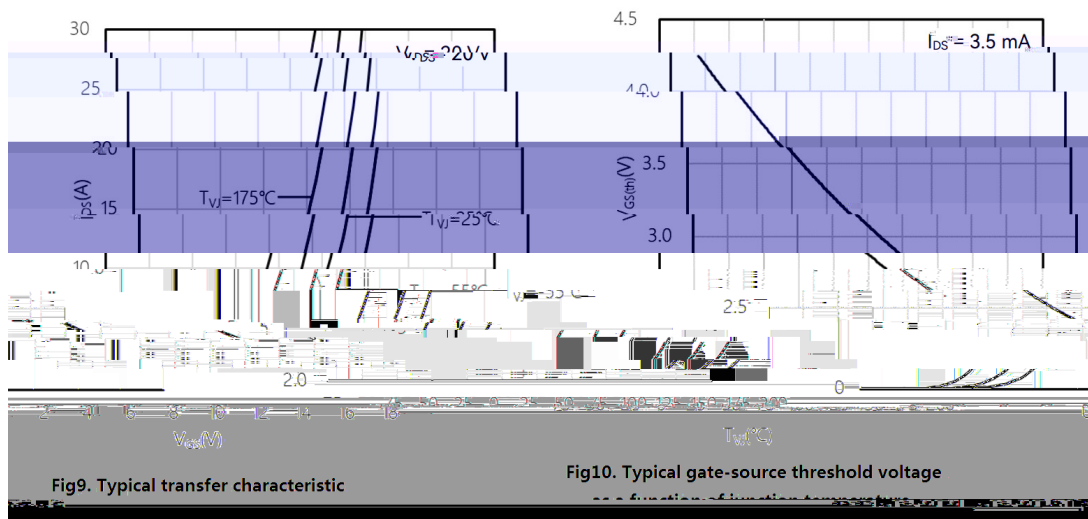
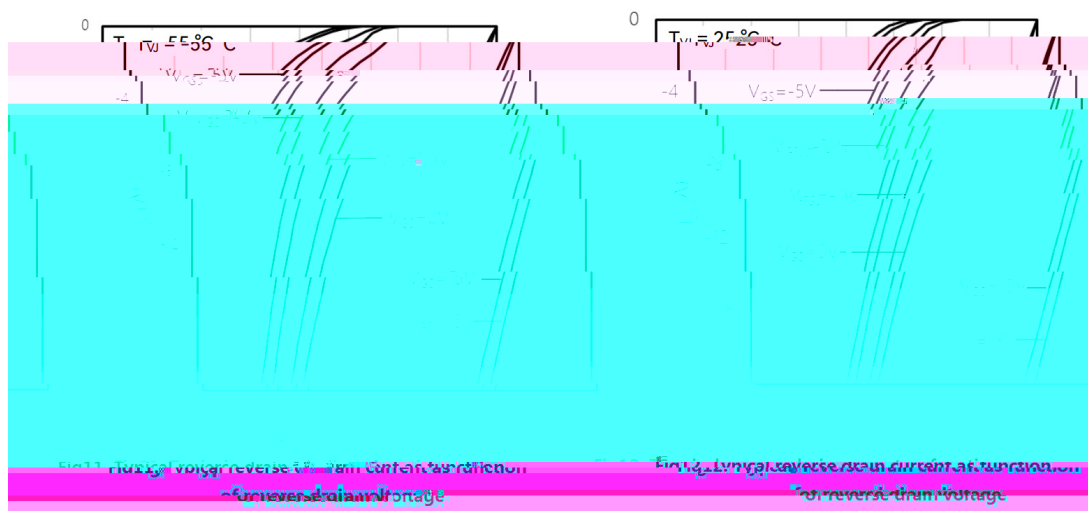
DATA SHEET

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=0/15V$ $L=600\mu H$ $V_{DD}=400V$ $I_D=10A$ $R_g=2.2\ \Omega$		21.2		ns
Turn-On Rise Time	t_r			14.4		
Turn-Off Delay Time	$t_{d(off)}$			27.0		
Turn-Off Fall Time	t_f			14.2		
Turn-On Switching Loss	E_{on}			106		μJ
Turn-Off Switching Loss	E_{off}			24		
Total Switching Energy	E_{tot}			130		
Gate resistance	R_g	$V_{AC}=25mV$ $f=1MHz$		28.5		Ω
Input Capacitance	C_{iss}	$V_{DS}=400V$ $V_{GS}=0V$ $f=1MHz$		438		pF
Output Capacitance	C_{oss}			30		
Reverse Transfer Capacitance	C_{rss}			2.7		

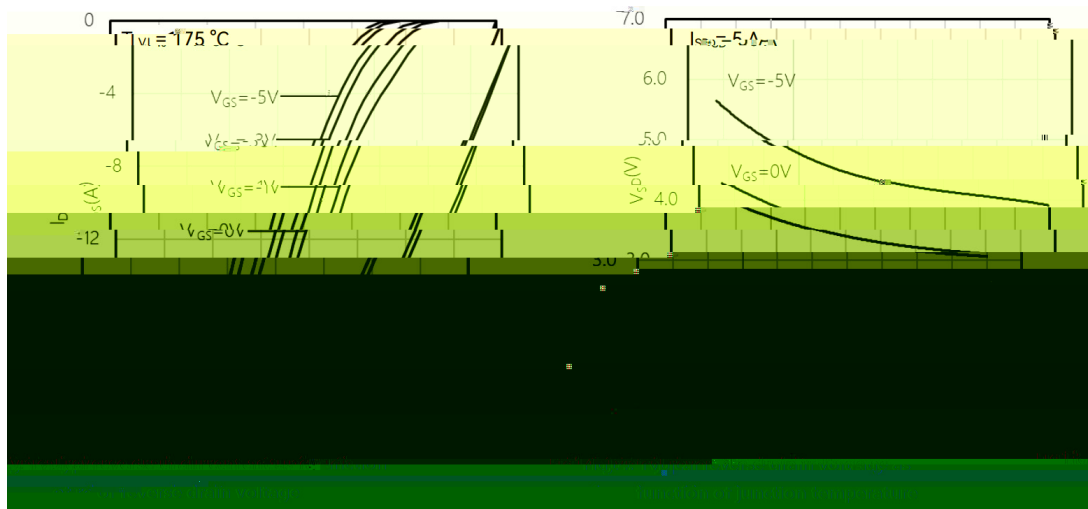
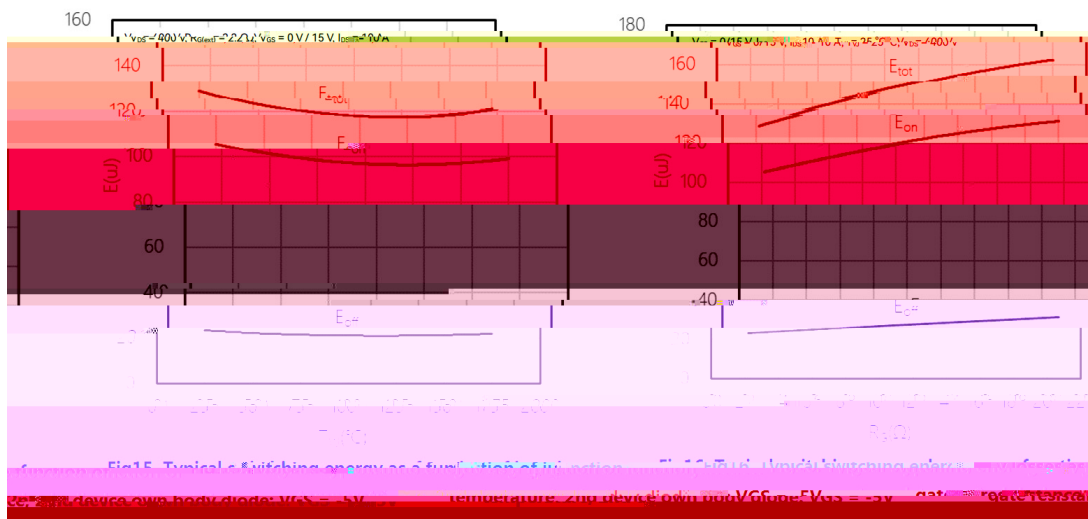
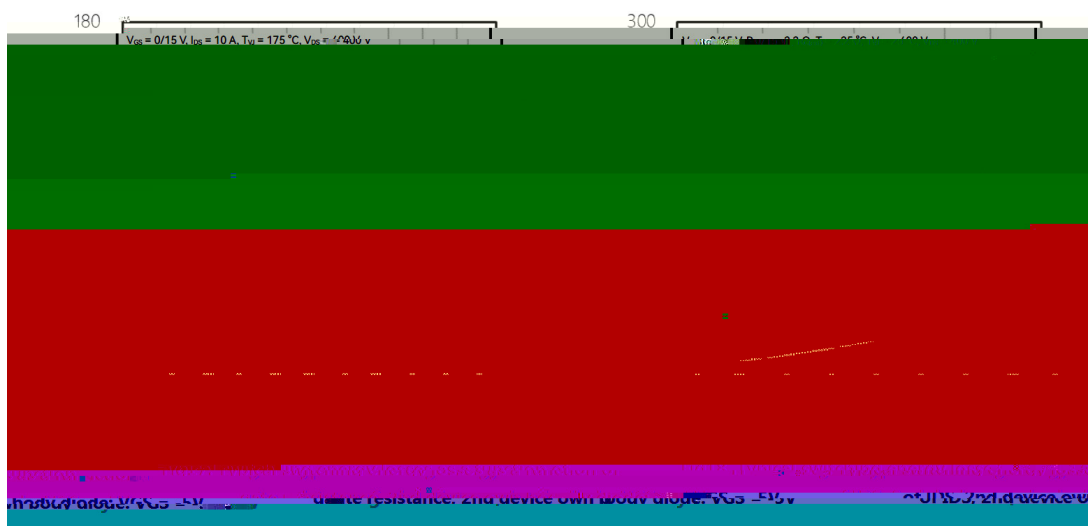
/ Electrical Characteristic Curve



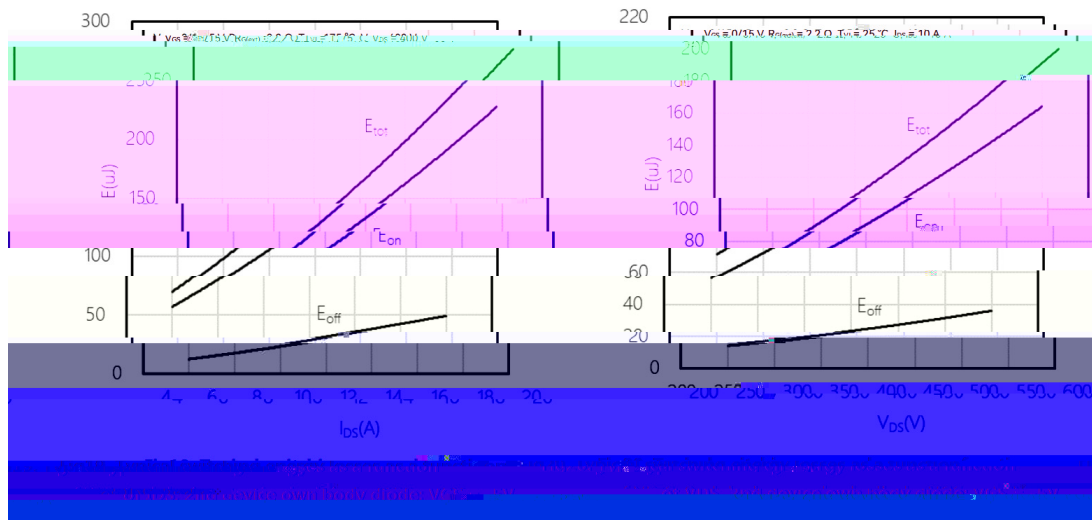
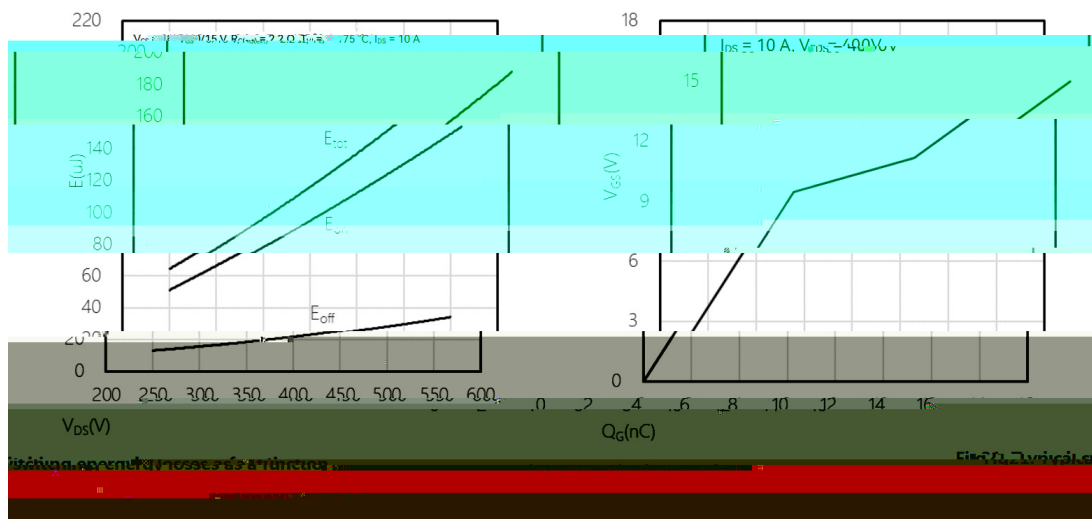
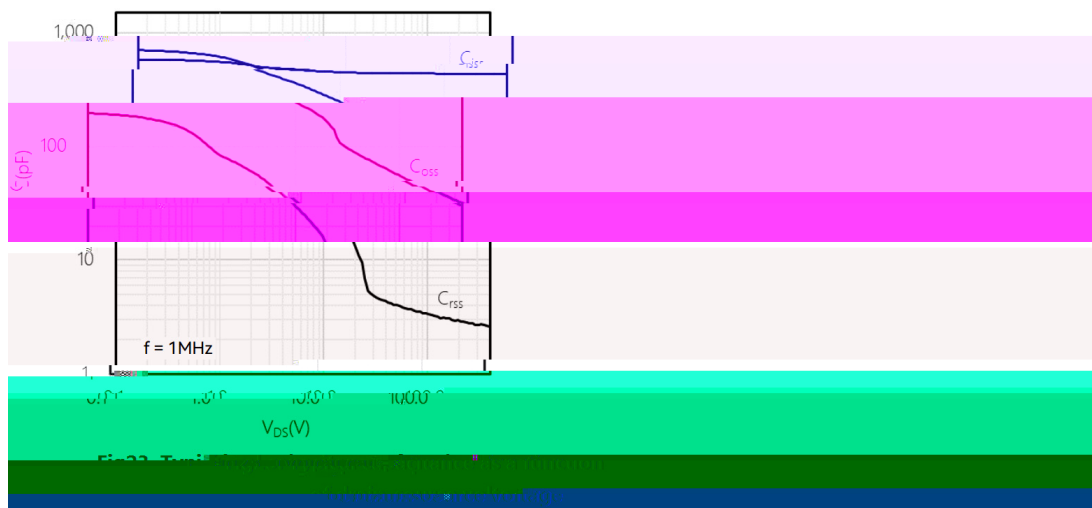
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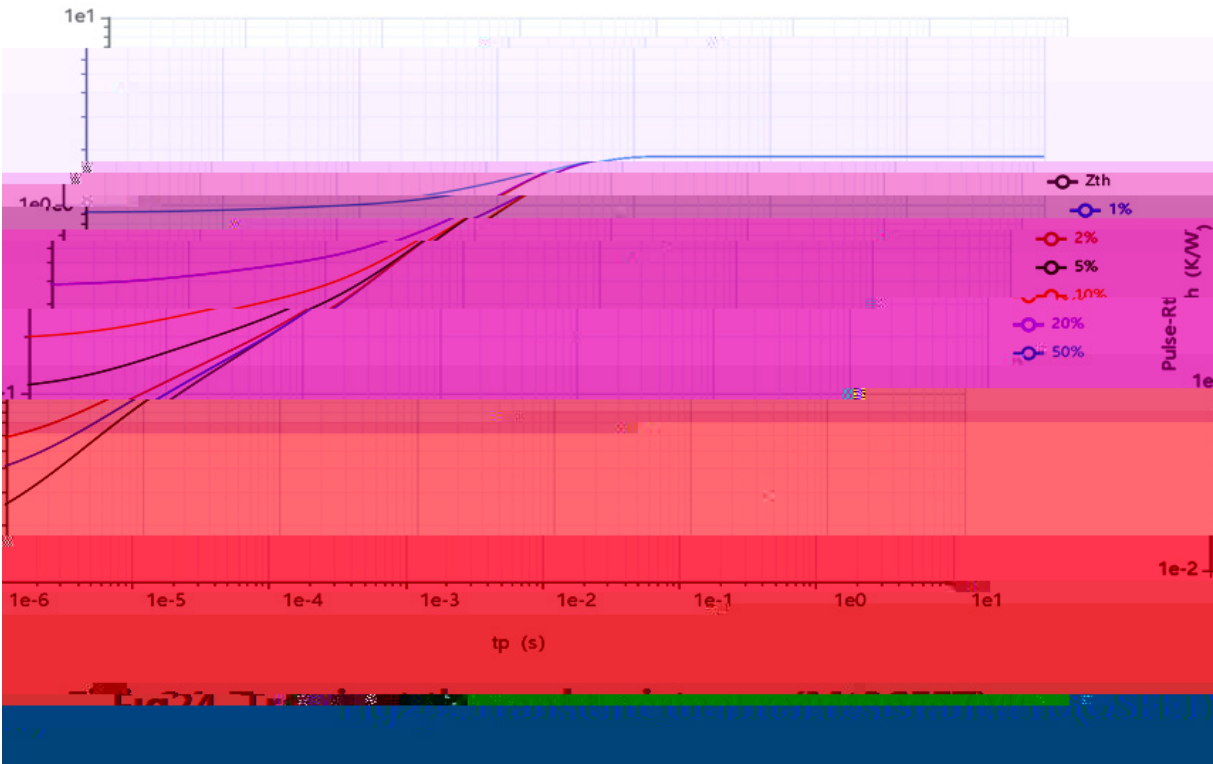
Electrical Characteristic Curve



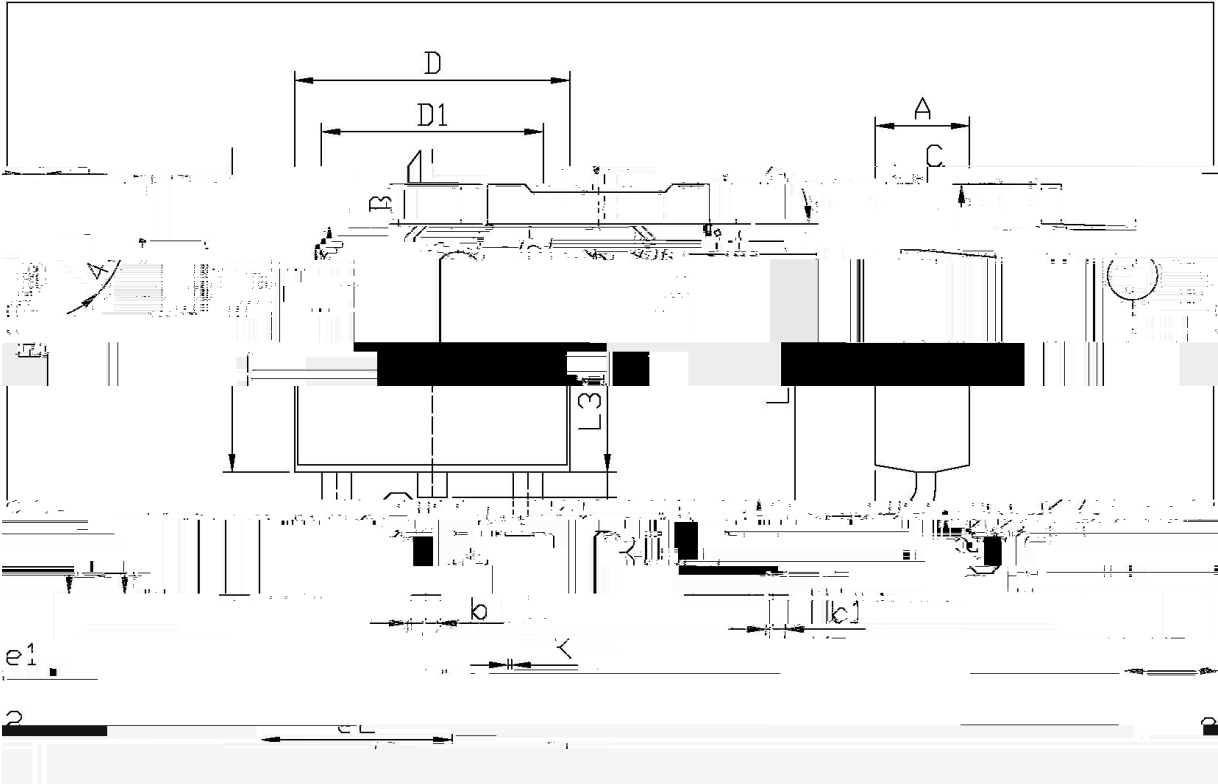
/ Electrical Characteristic Curve



/ Electrical Characteristic Curve



/ Package Dimensions

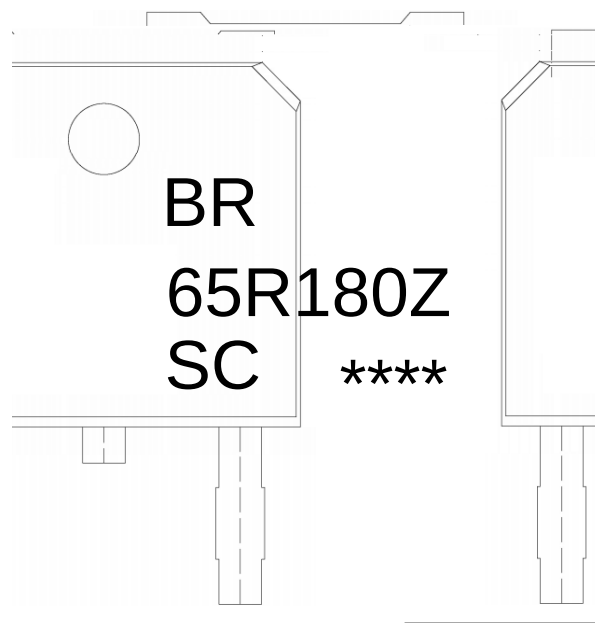


单位: mm

Dimensions		In Millimeters		Dimensions		In Millimeters	
Min	Max	Min	Max	Min	Max	Min	Max
B	0.18	0.10	0.10	e1	2.24	2.34	
L3	2.70	0.00	0.00	b	4.42	4.70	
b	0.45	0.55	0.55	b1	0.85	1.35	
D	6.45	6.55	6.55	D1	1.50	1.60	1.70
D'	6.45	6.75	6.75	K	0.60	0.70	0.80
D1	0.10	0.10	0.10				

T0=25.2

/ Marking Instructions



BR

65R180Z

SC

Note:

BR: Company Code

65R180Z: Product Type Code

SC: SiC

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

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

- Note:
- 1

150 180

60 90sec;

2

245±5

5±0.5sec;

3

2 10 /sec.
- 1.Preheating:150~180 , Time:60~90sec.

2.Peak Temp.:245±5 , Duration:5±0.5sec.

3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

605±5 (/ -5.7(Packagling)2528.(SPEC.())TJ/TT7 1 Tf03.4485 32.3713 TD.0004 Tc-35.65309:6025130
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