

/ Descriptions

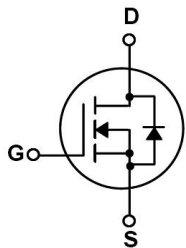
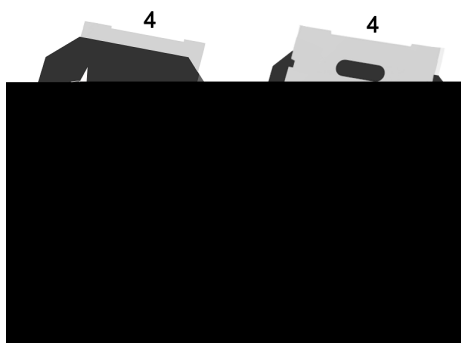
TO-252 SiC N MOS

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

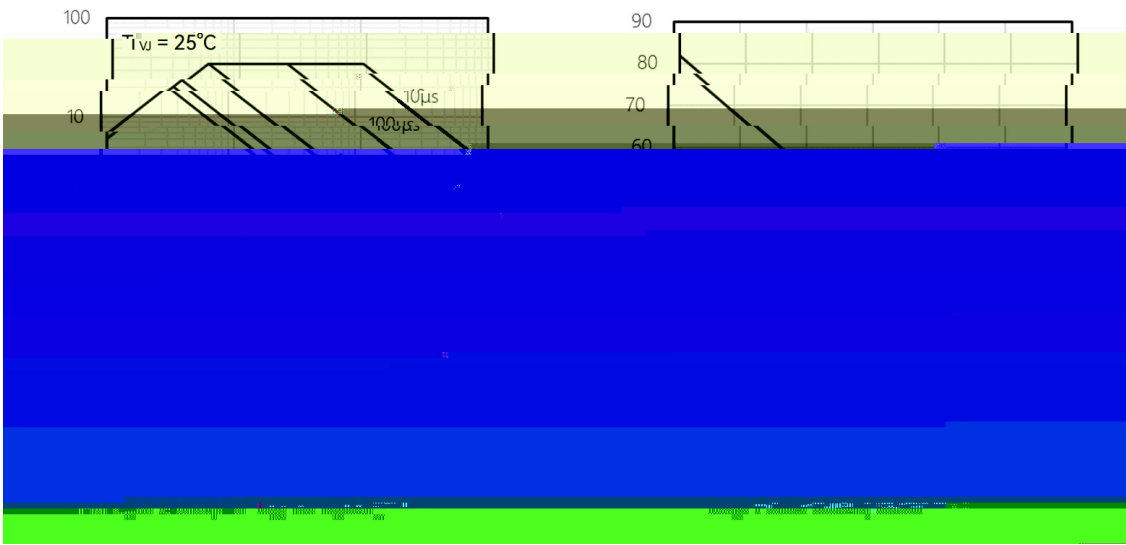
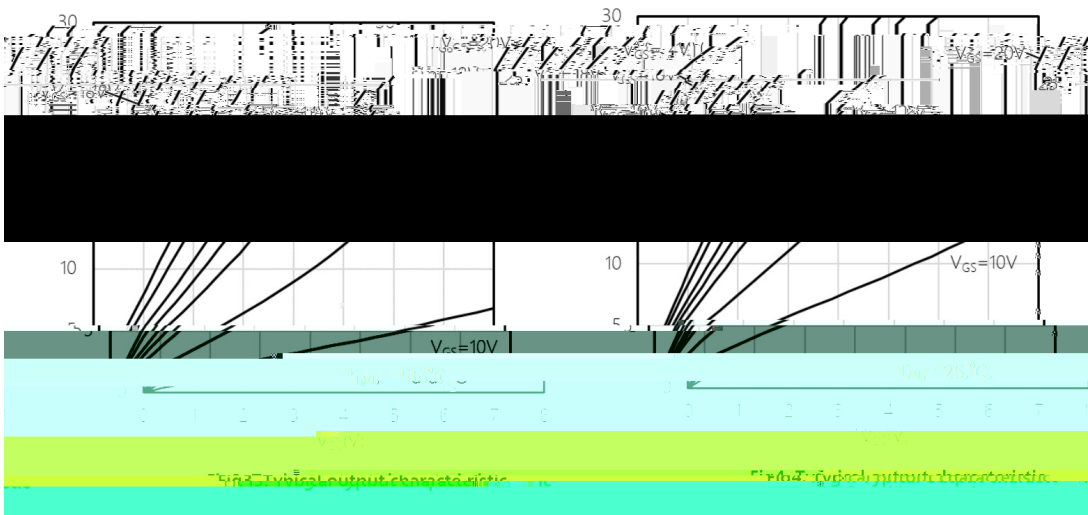
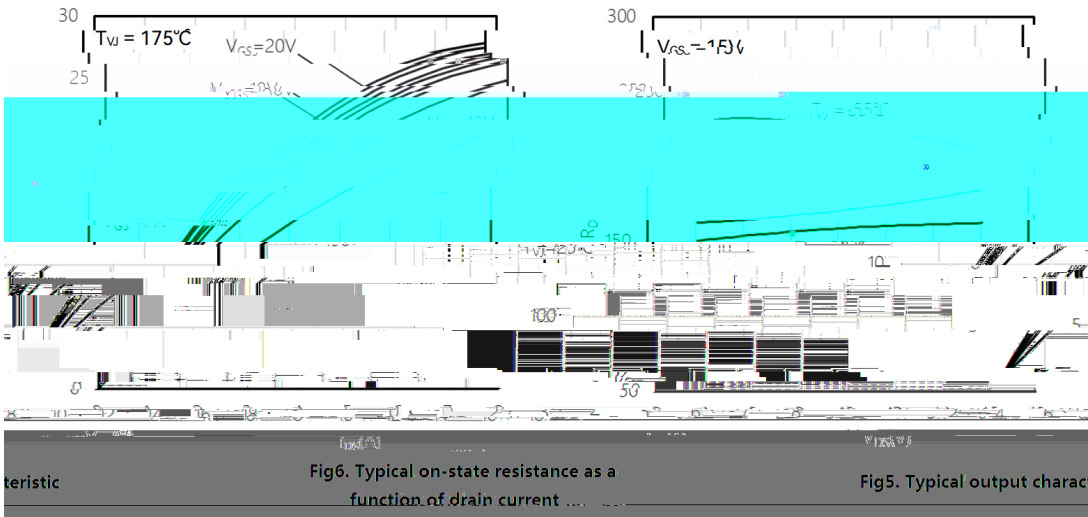


蓝箭电子
BLUE ROCKET ELECTRONICS

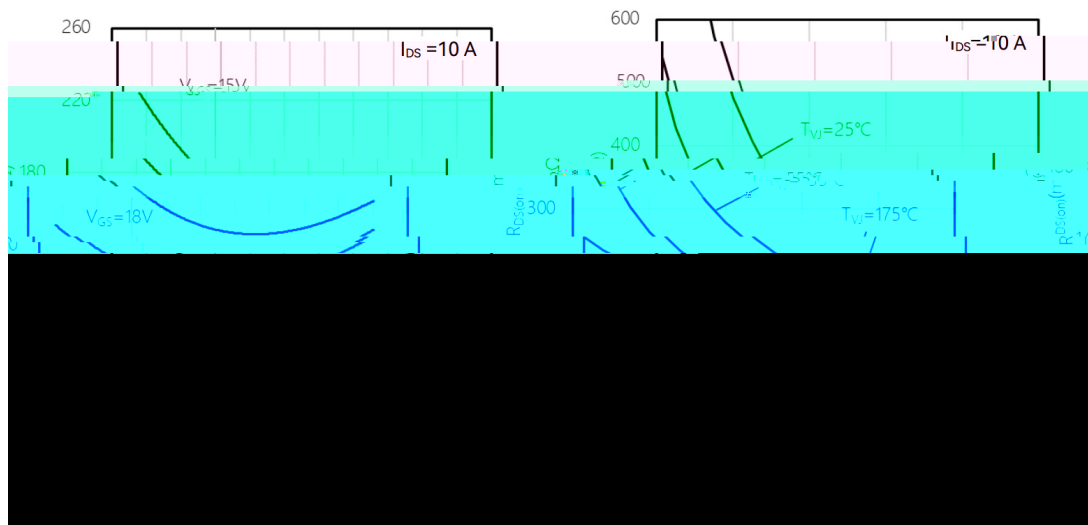
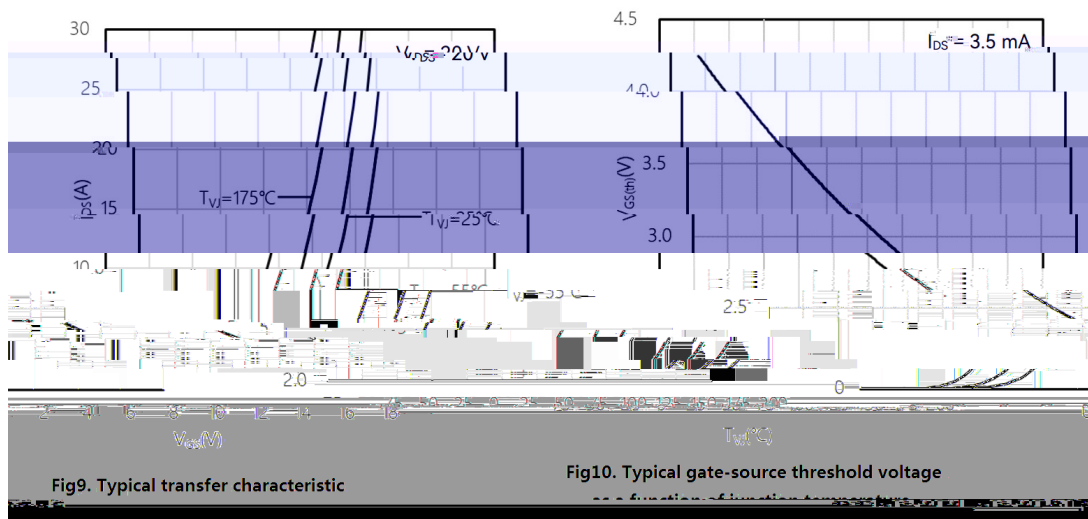
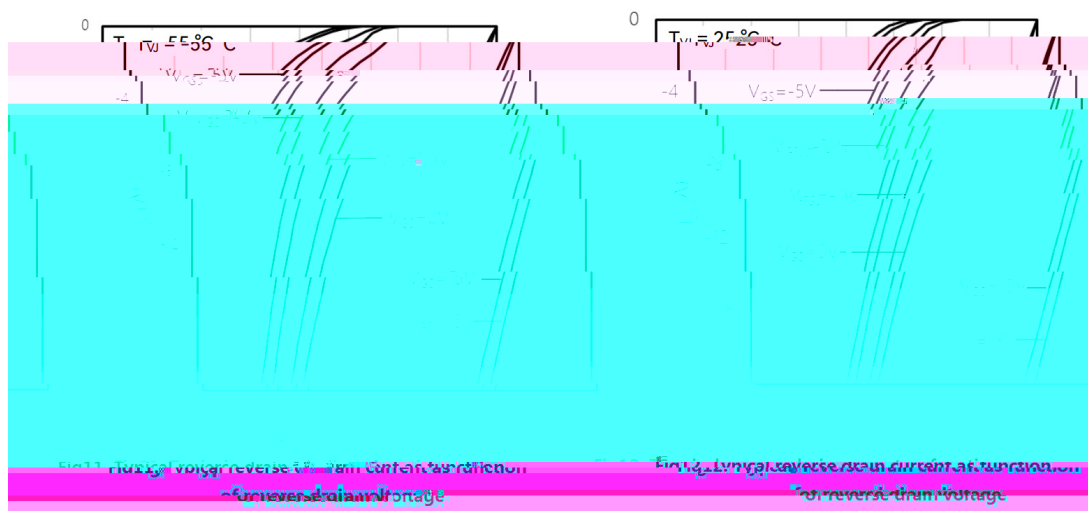
DATA SHEET

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		

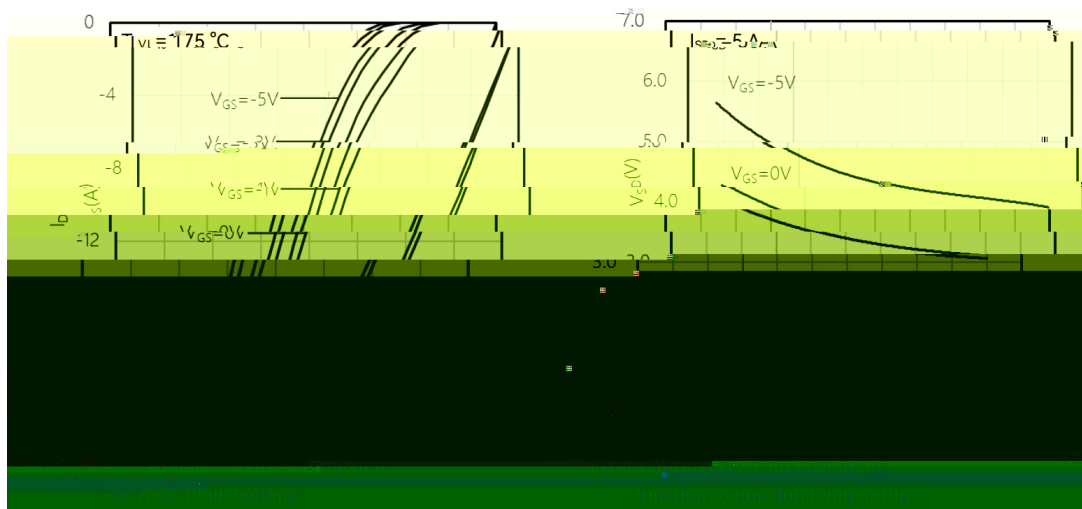
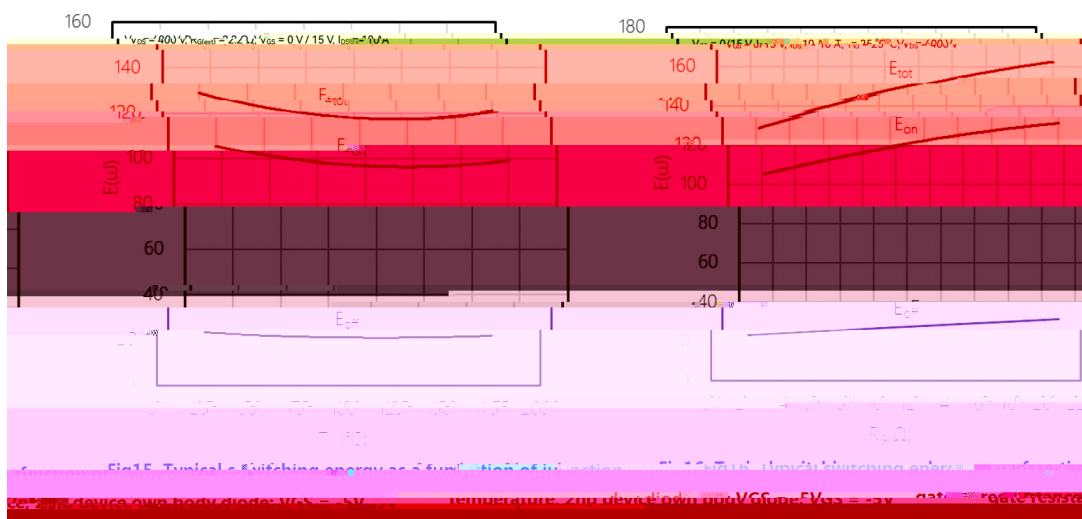
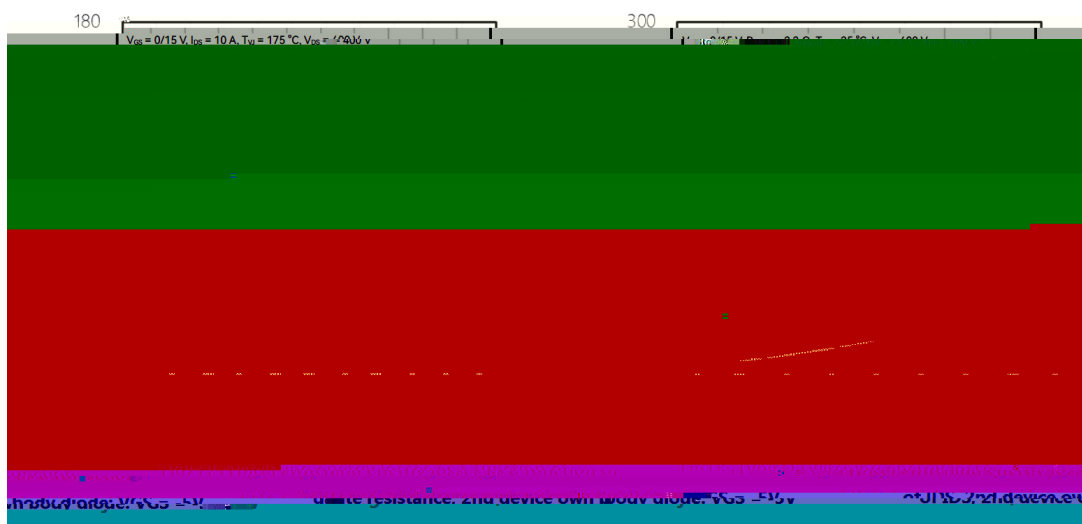
/ Electrical Characteristic Curve



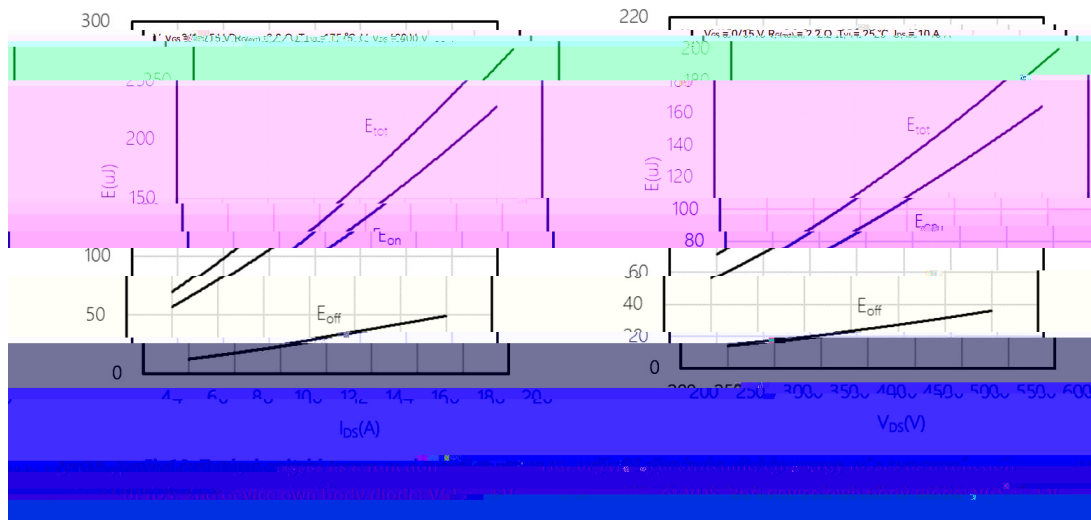
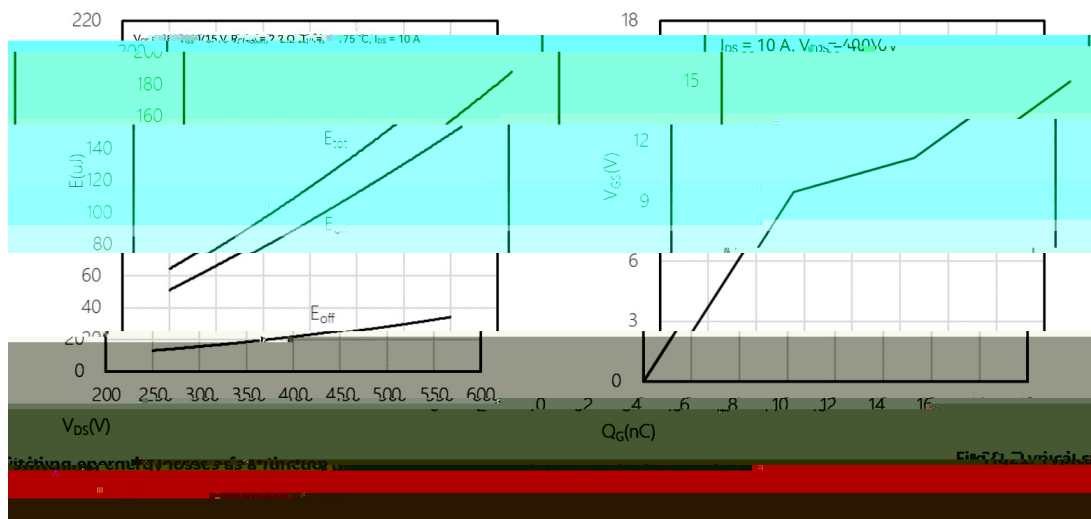
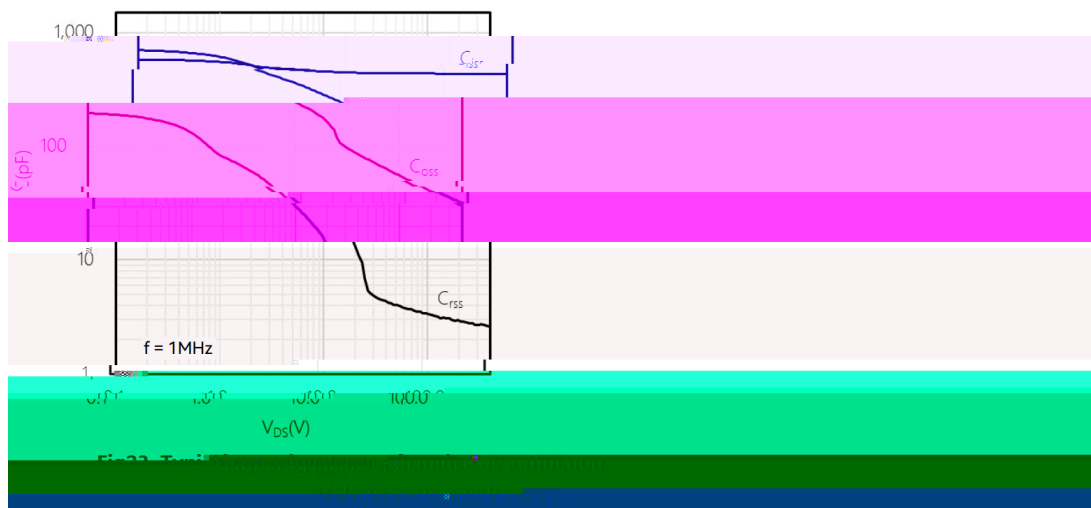
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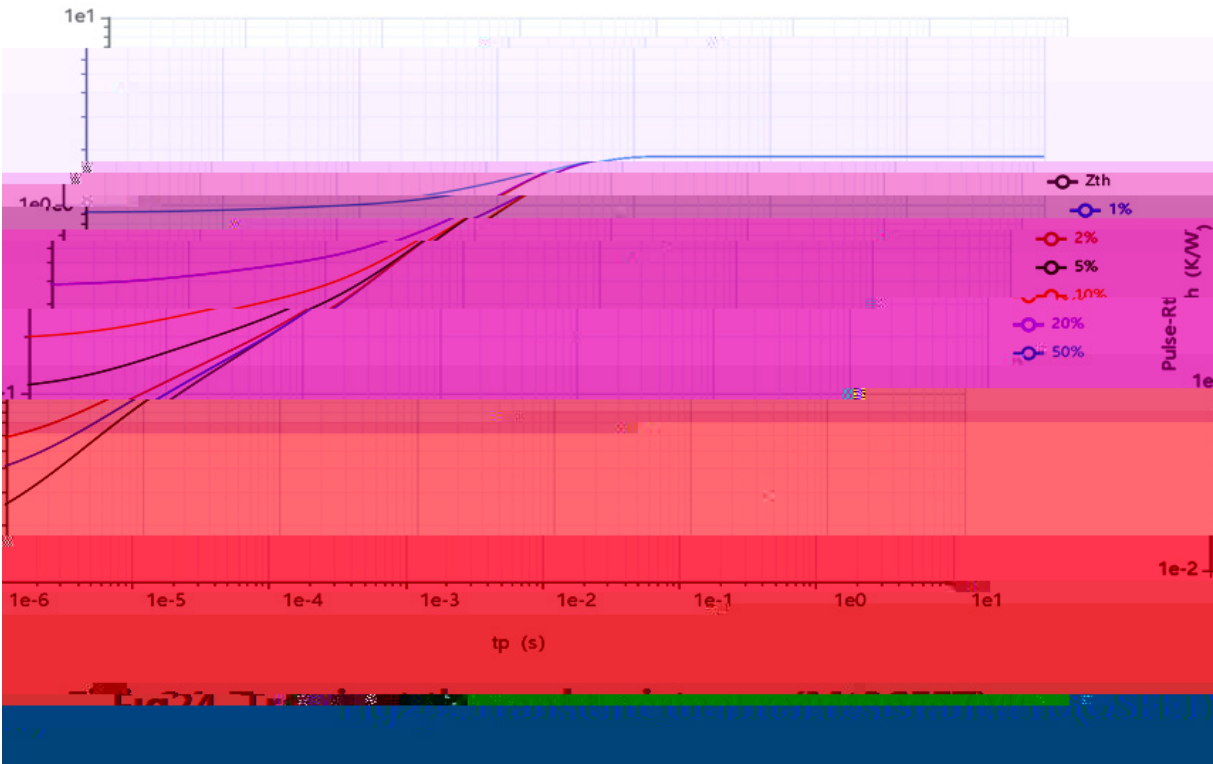
Electrical Characteristic Curve



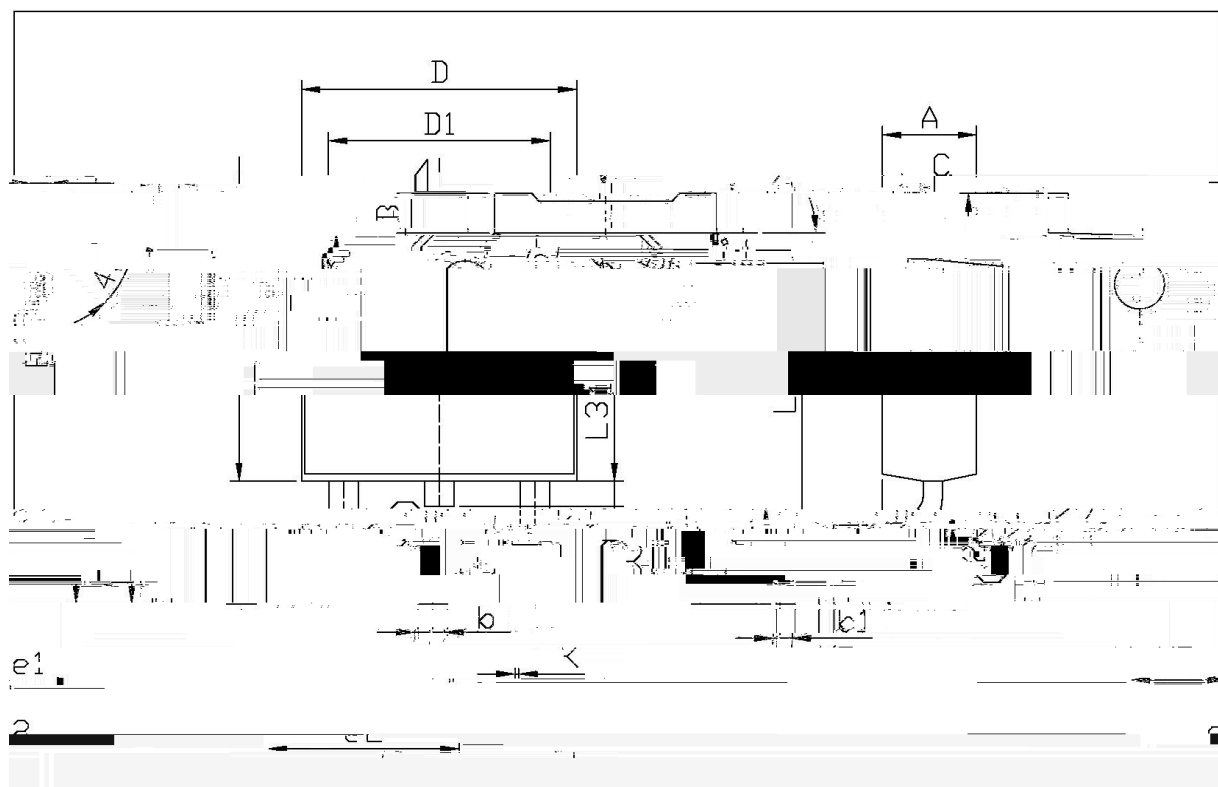
/ Electrical Characteristic Curve



/ Electrical Characteristic Curve



/ Package Dimensions



单位: mm

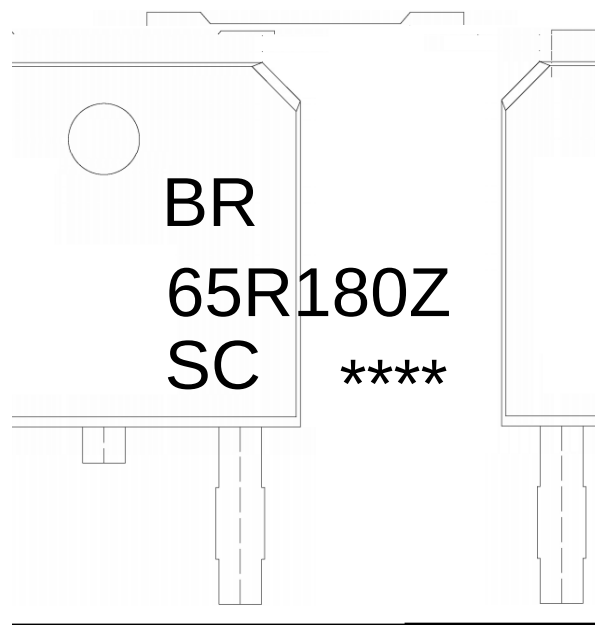
Figure 1 is a cross-sectional diagram of a road pavement structure. The diagram shows various layers including the subgrade, base, and surface, with dimensions and material types indicated. The top of the diagram is labeled "Dimensions in Millimeters" and "Symbol". The bottom is labeled "Min" and "Max". The diagram includes a scale bar at the bottom right.

Layer	Material	Thickness (mm)	Symbol
Subgrade	Gravel	100	1
Base	Gravel	100	2
Surface	Gravel	100	3
Subgrade	Gravel	100	4
Base	Gravel	100	5
Surface	Gravel	100	6
Subgrade	Gravel	100	7
Base	Gravel	100	8
Surface	Gravel	100	9
Subgrade	Gravel	100	10
Base	Gravel	100	11
Surface	Gravel	100	12
Subgrade	Gravel	100	13
Base	Gravel	100	14
Surface	Gravel	100	15
Subgrade	Gravel	100	16
Base	Gravel	100	17
Surface	Gravel	100	18
Subgrade	Gravel	100	19
Base	Gravel	100	20
Surface	Gravel	100	21
Subgrade	Gravel	100	22
Base	Gravel	100	23
Surface	Gravel	100	24
Subgrade	Gravel	100	25
Base	Gravel	100	26
Surface	Gravel	100	27
Subgrade	Gravel	100	28
Base	Gravel	100	29
Surface	Gravel	100	30
Subgrade	Gravel	100	31
Base	Gravel	100	32
Surface	Gravel	100	33
Subgrade	Gravel	100	34
Base	Gravel	100	35
Surface	Gravel	100	36
Subgrade	Gravel	100	37
Base	Gravel	100	38
Surface	Gravel	100	39
Subgrade	Gravel	100	40
Base	Gravel	100	41
Surface	Gravel	100	42
Subgrade	Gravel	100	43
Base	Gravel	100	44
Surface	Gravel	100	45
Subgrade	Gravel	100	46
Base	Gravel	100	47
Surface	Gravel	100	48
Subgrade	Gravel	100	49
Base	Gravel	100	50
Surface	Gravel	100	51
Subgrade	Gravel	100	52
Base	Gravel	100	53
Surface	Gravel	100	54
Subgrade	Gravel	100	55
Base	Gravel	100	56
Surface	Gravel	100	57
Subgrade	Gravel	100	58
Base	Gravel	100	59
Surface	Gravel	100	60
Subgrade	Gravel	100	61
Base	Gravel	100	62
Surface	Gravel	100	63
Subgrade	Gravel	100	64
Base	Gravel	100	65
Surface	Gravel	100	66
Subgrade	Gravel	100	67
Base	Gravel	100	68
Surface	Gravel	100	69
Subgrade	Gravel	100	70
Base	Gravel	100	71
Surface	Gravel	100	72
Subgrade	Gravel	100	73
Base	Gravel	100	74
Surface	Gravel	100	75
Subgrade	Gravel	100	76
Base	Gravel	100	77
Surface	Gravel	100	78
Subgrade	Gravel	100	79
Base	Gravel	100	80
Surface	Gravel	100	81
Subgrade	Gravel	100	82
Base	Gravel	100	83
Surface	Gravel	100	84
Subgrade	Gravel	100	85
Base	Gravel	100	86
Surface	Gravel	100	87
Subgrade	Gravel	100	88
Base	Gravel	100	89
Surface	Gravel	100	90
Subgrade	Gravel	100	91
Base	Gravel	100	92
Surface	Gravel	100	93
Subgrade	Gravel	100	94
Base	Gravel	100	95
Surface	Gravel	100	96
Subgrade	Gravel	100	97
Base	Gravel	100	98
Surface	Gravel	100	99

T0 = 252



/ 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-35.65309:6025130.1ç