

Rev.C Jul.-2026

TO-220F SiC N MOS

SiC N-CHANNEL MOSFET in a TO-220F Plastic Package.

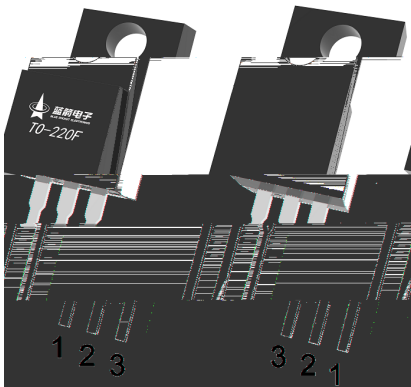
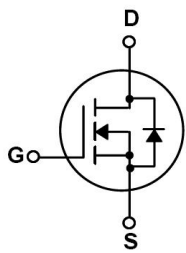
$V_{DS}=650V$ $I_D=15.4A$

$R_{DS(on)}@15V \leq 280m\Omega$ (Type.215m Ω)

$R_{DS(on)}@18V \leq 260m\Omega$ (Type.176m Ω)

LED PD PC

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



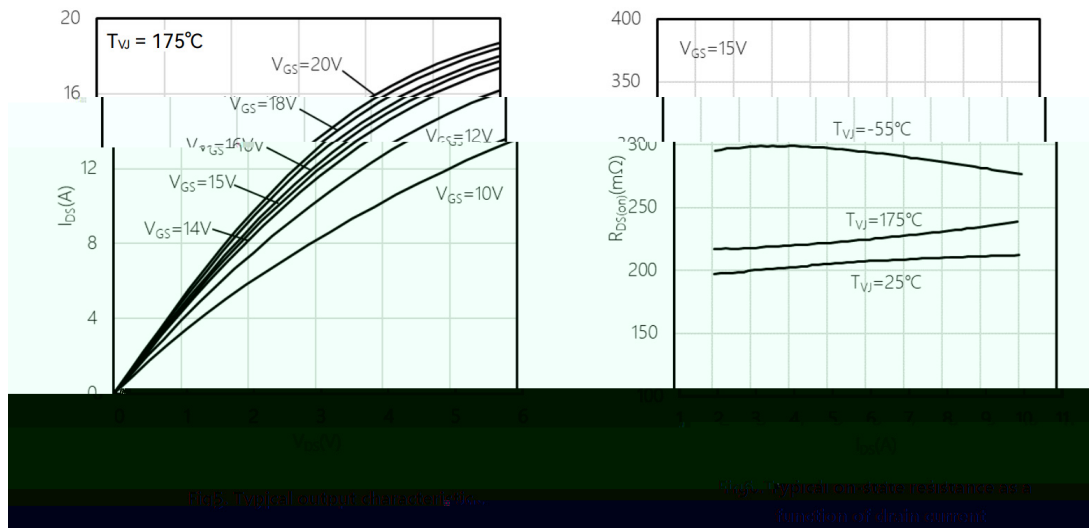
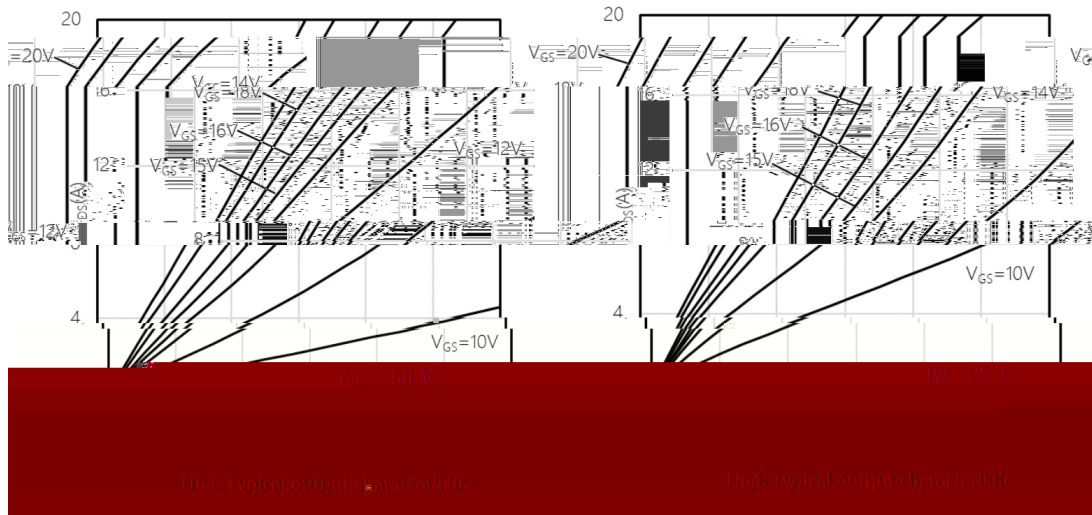
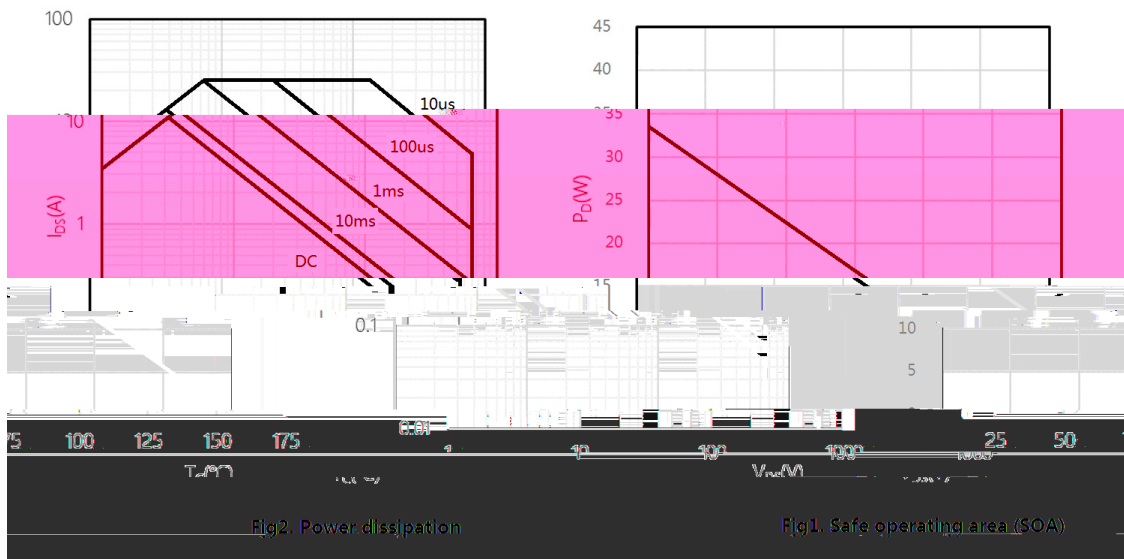
PIN1 G

PIN 2 D

PIN 3 S

See Marking Instructions.

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=0/15V$ $L=600\mu H$ $V_{DD}=400V$ $I_D=8A$ $R_g=4.3\Omega$		20.4		ns
Turn-On Rise Time	t_r			11.9		
Turn-Off Delay Time	$t_{d(off)}$			17.2		
Turn-Off Fall Time	t_f			11.7		
Turn-On Switching Loss	E_{on}			79.2		μJ
Turn-Off Switching Loss	E_{off}			13.3		
Total Switching Energy	E_{tot}			92.5		
Gate resistance	R_g	$V_{AC}=25mV$ $f=1MHz$		23		Ω
Input Capacitance	C_{iss}	$V_{DS}=400V$ $V_{GS}=0V$ $f=1MHz$		289		pF
Output Capacitance	C_{oss}			23		
Reverse Transfer Capacitance	C_{rss}			2.1		
Total Gate Charge	Q_g	$V_{GS}=0/15V,$ $V_{DS}=400V,$ $I_D=10A$		12.5		nC
Gate Source Charge	Q_{gs}			4.5		
Gate Drain Charge	Q_{gd}			1.5		



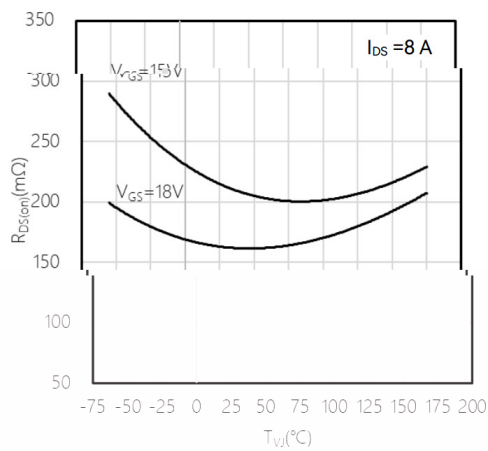


Fig. 7. Typical on-state resistance as a function of temperature

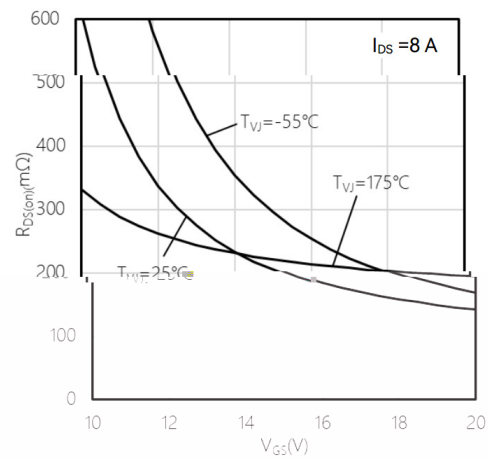


Fig. 8. Typical on-state resistance as a function of V_{GS}

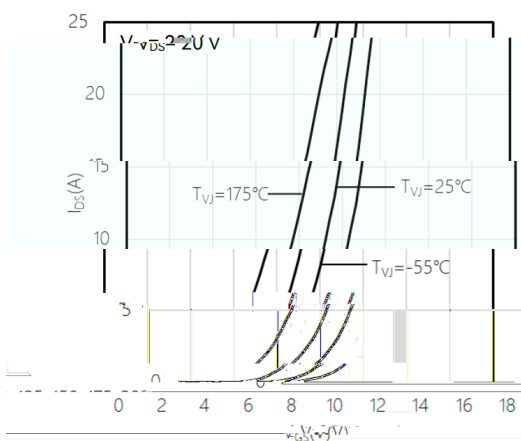


Fig. 9. Typical transfer characteristic

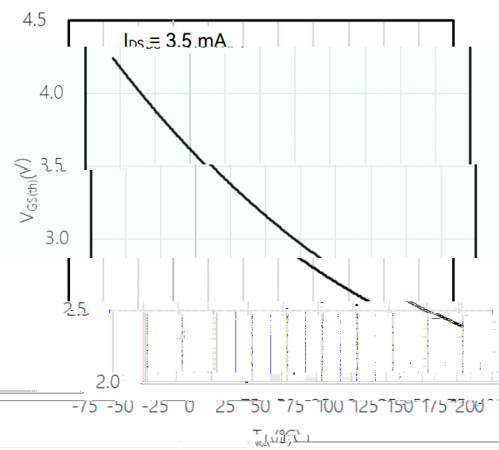


Fig. 10. Typical gate-source threshold voltage as a function of junction temperature

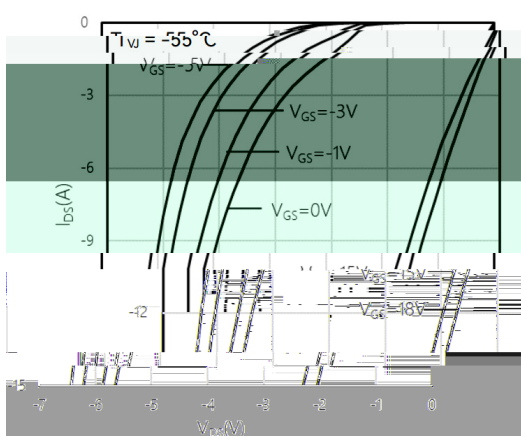


Fig. 11. Typical reverse drain current as function of reverse drain voltage

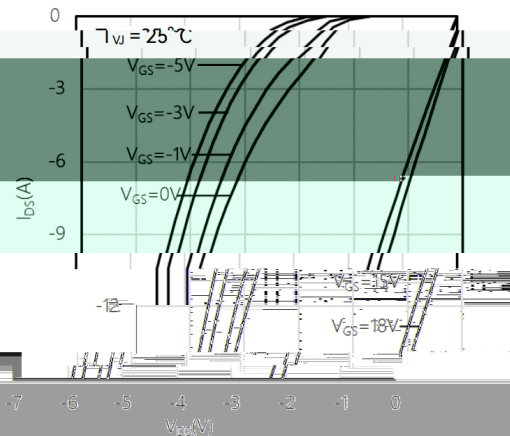
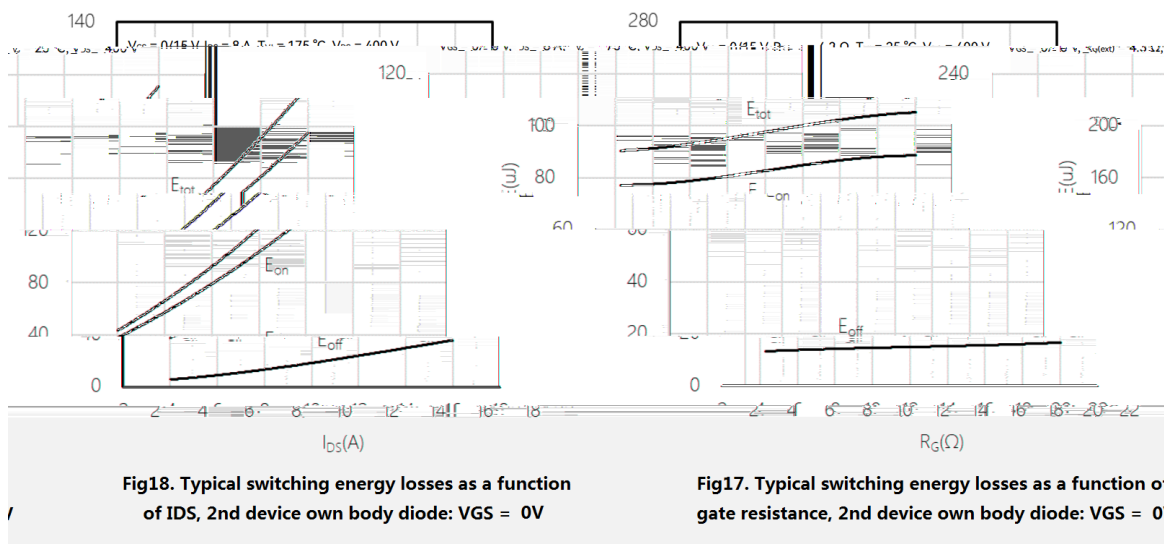
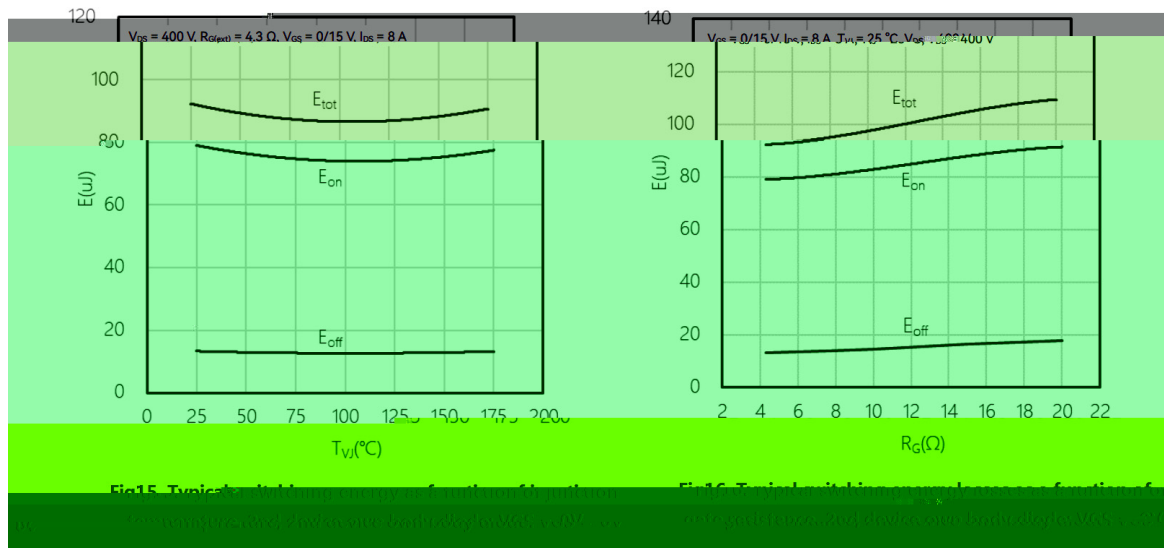
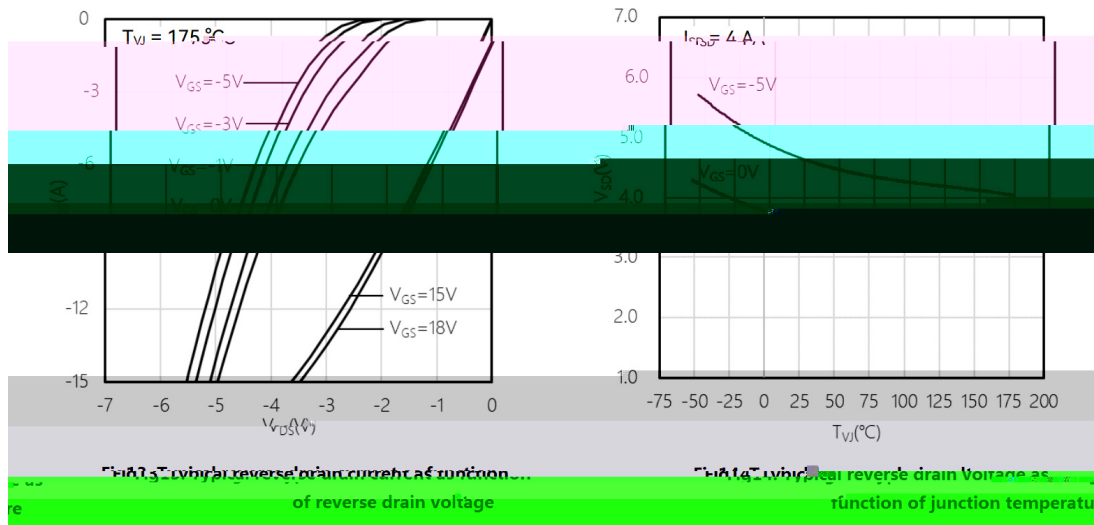
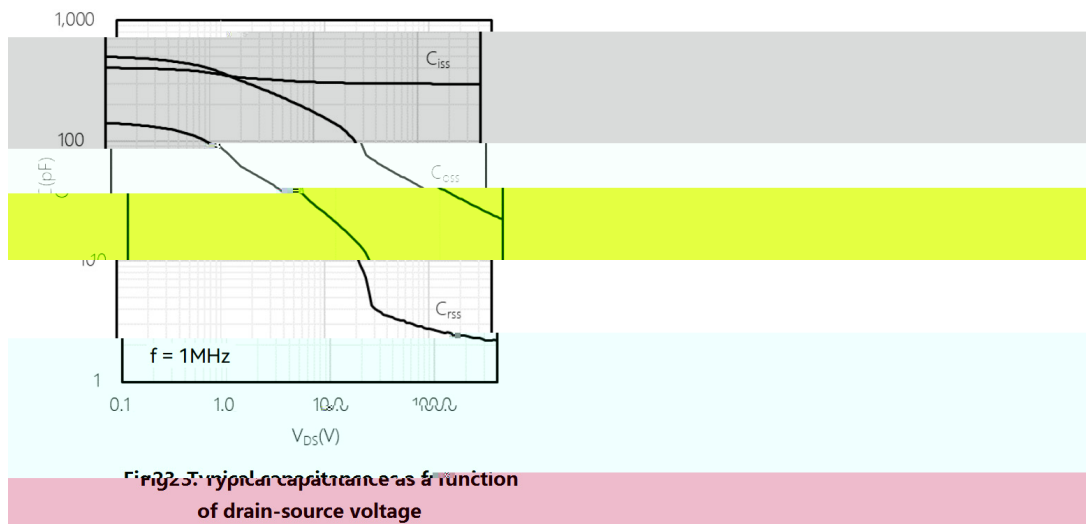
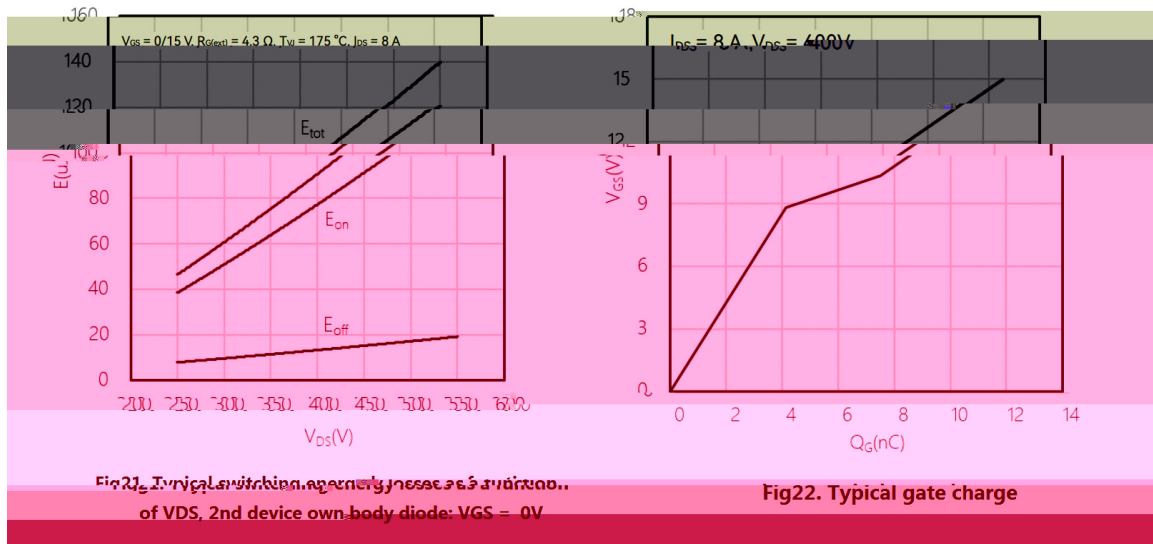
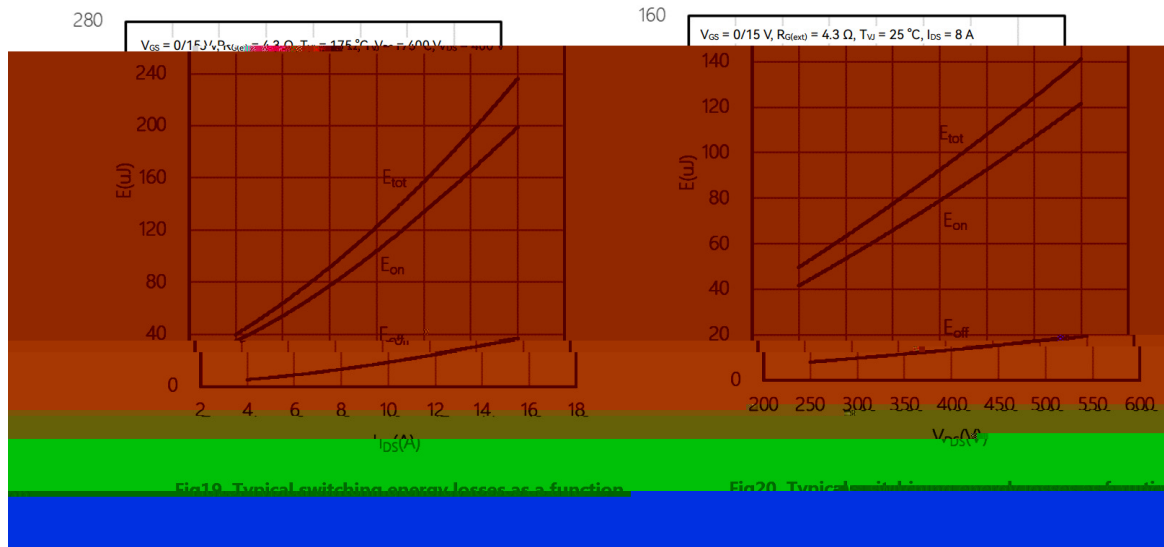


Fig. 12. Typical reverse drain current as function of reverse drain voltage





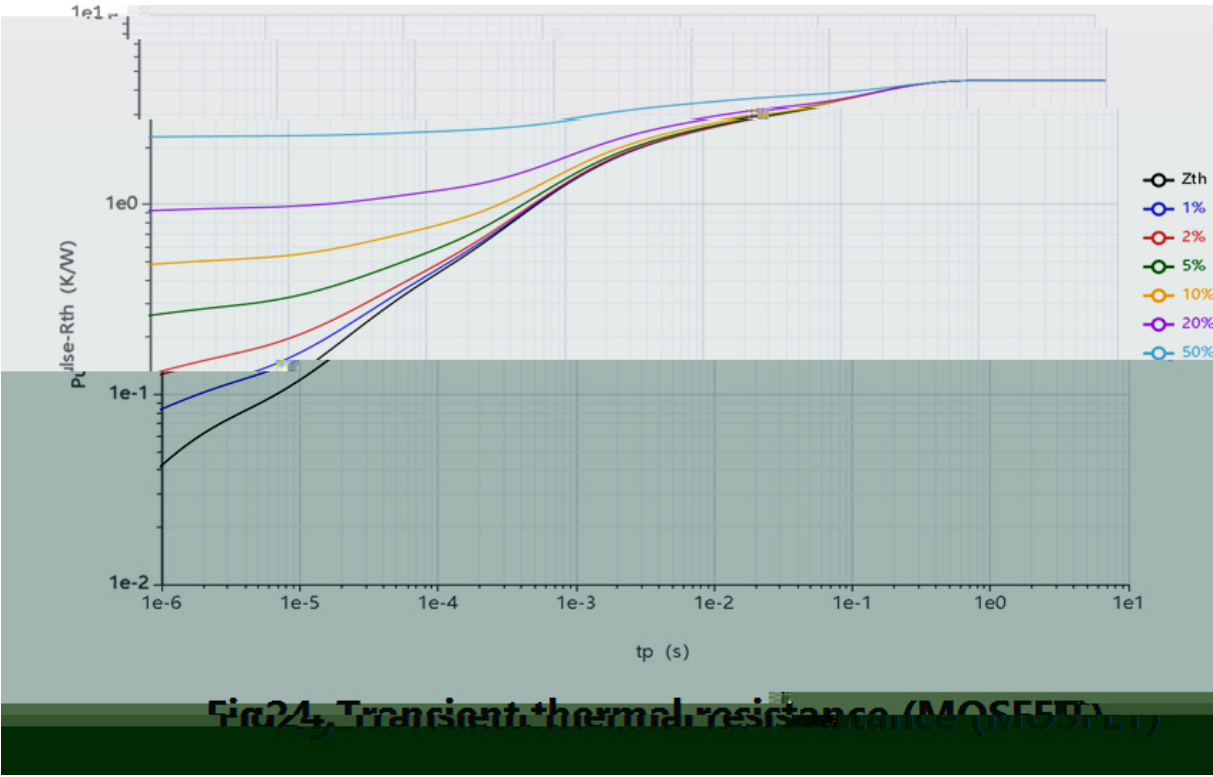
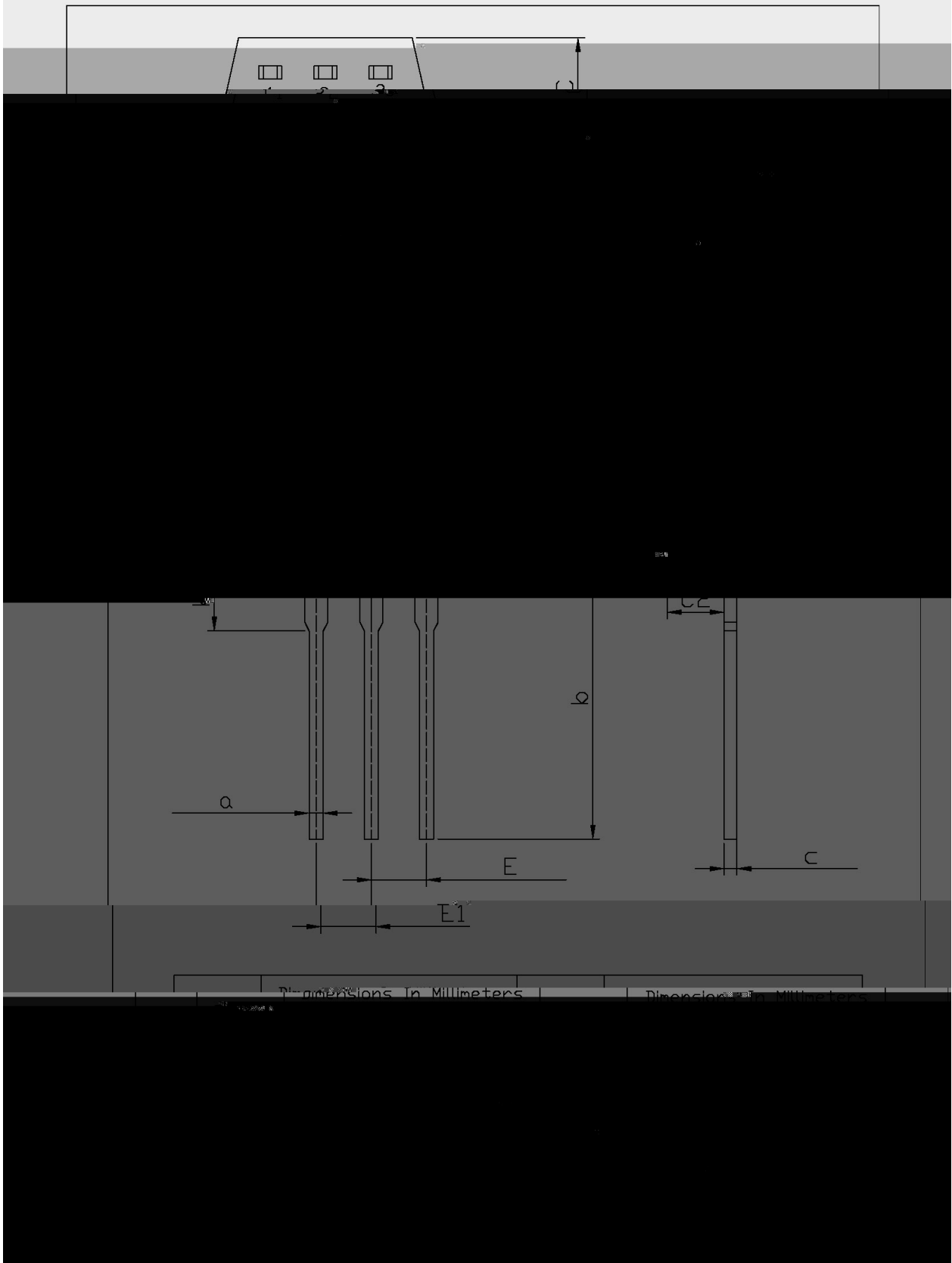
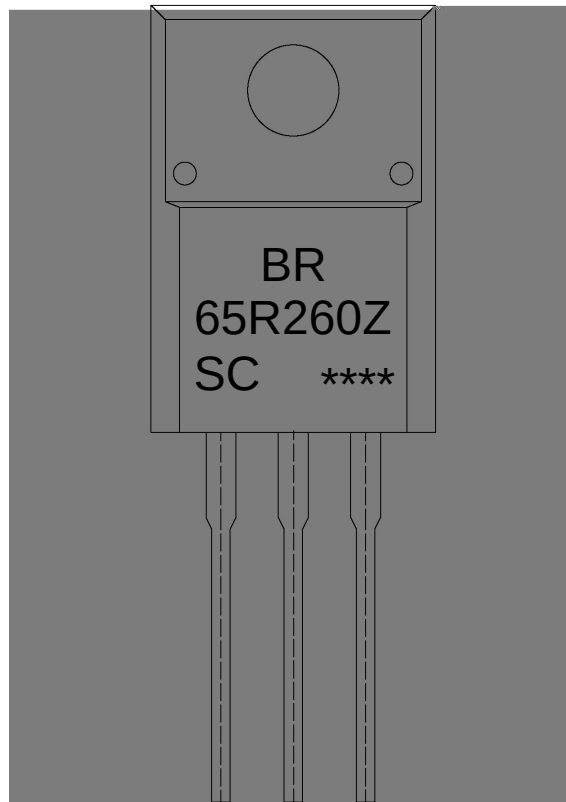


Fig24, Transient thermal resistance (MOSFET)

T0-220F

单位: mm





BR

65R260Z

SC

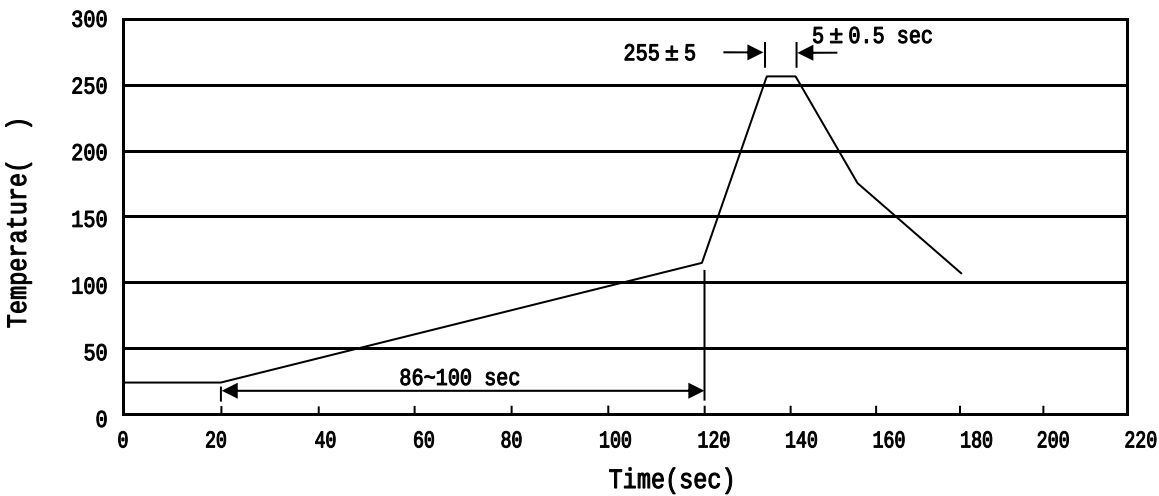
Note:

BR: Company Code

65R260Z: Product Type Code

SC: SiC

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



Note:

- 1

25 150

60 90sec;

1.Preheating:25~150 , Time:60~90sec.
- 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.

270±5

10±1 sec.

Temp.:270±5

Time:10±1 sec

/ BULK

Package Type	Units					Dimension (unit mm ³)		
	Units/Bag /	Bags/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Bag	Inner Box	Outer Box
TO-220/F	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

/ TUBE

Package Type	Units					Dimension (unit mm ³)		
	Units/Tube /	Tubes/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Tube	Inner Box	Outer Box
TO-220/F	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180

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