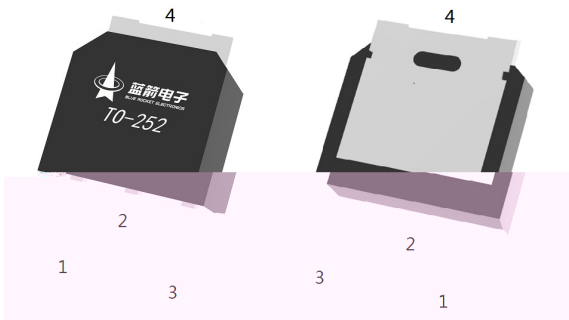
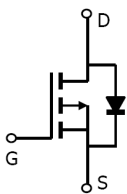


Rev.B Aug.-2023

TO-252 MOS
 P-CHANNEL MOSFET in a TO-252 Plastic Package.

Low On-Resistance, fast switching, HF Product.

Power Management of Industrial DC/DC Converter.



PIN1 G PIN 2 D PIN 3 S PIN 4 D

See Marking Instructions.

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	-30	V
Drain Current - Continuous		$I_D(T_c=25^\circ\text{C})$	-72	A
Drain Current – Pulsed		I_{DM}	-146	A
Gate-Source Voltage		V_{GS}	± 20	V
Power Dissipation		$P_D(T_c=25^\circ\text{C})$	65	W
Single Pulse Avalanche Energy(L=0.5mH)		E_{AS}	360	mJ
Avalanche Current(L=0.5mH)		I_{AS}	30	A
Junction and Storage Temperature Range		T_j, T_{stg}	-55 to 150	
Thermal resistance, junction - ambient	$t \leq 10s$	$R_{\theta JA}$	20	/ W
	Steady-State		50	
Thermal resistance, junction - case	Steady-State	$R_{\theta JC}$	1.9	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$I_D=-250\mu A \quad V_{GS}=0V$	-30	-33		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-30V \quad V_{GS}=0V$			-1	μA
Gate-Body leakage current	I_{GSS}	$V_{DS}=0V, \quad V_{GS}=\pm 20V$			± 100	nA

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=-10V$ $R_L=0.75\Omega$ $V_{DS}=-15V$ $R_{GEN}=3\Omega$				

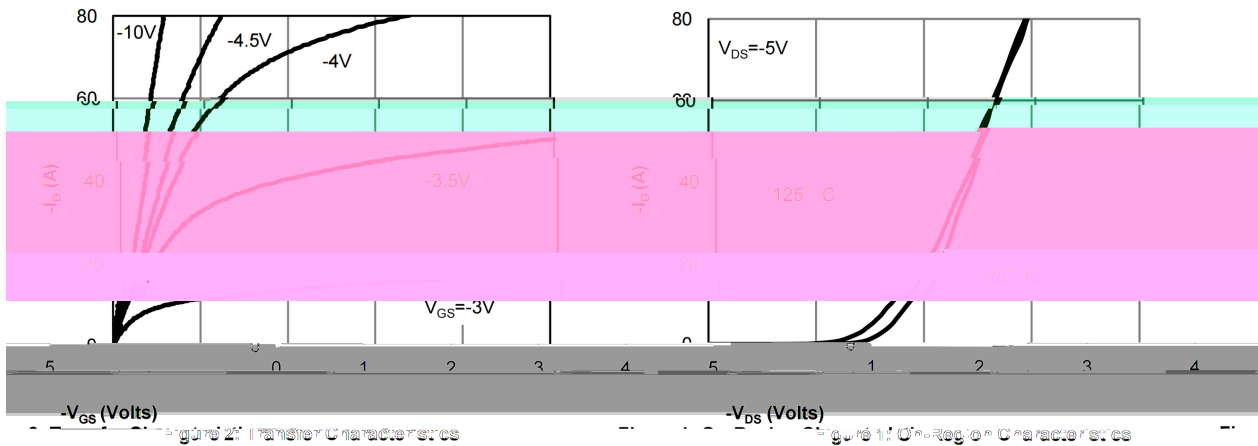


Figure 2: Transfer Characteristics

Figure 3: Output Characteristics

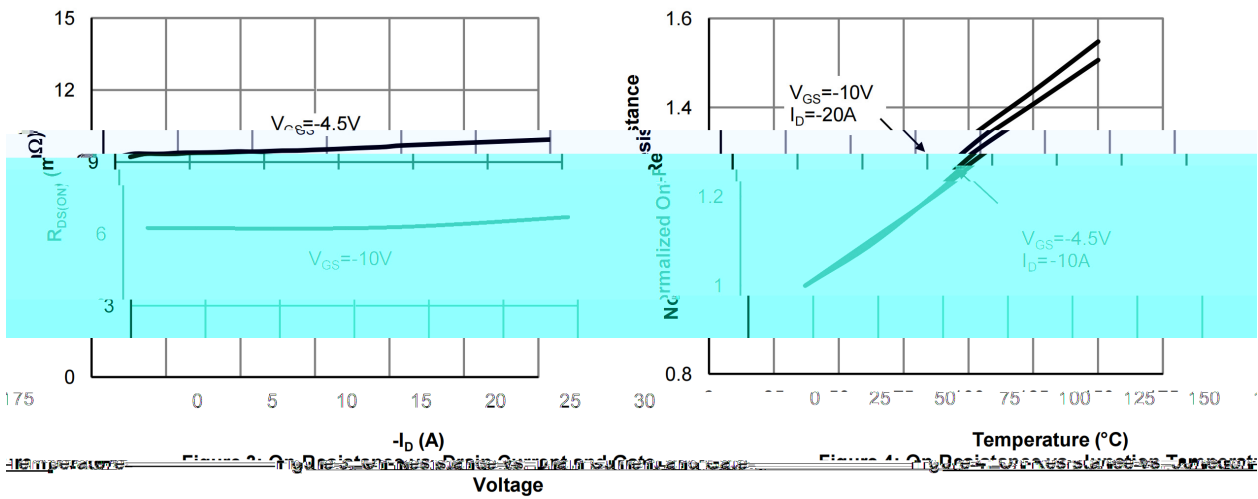


Figure 4: On-Resistance vs. Drain Current

Figure 5: On-Resistance vs. Temperature

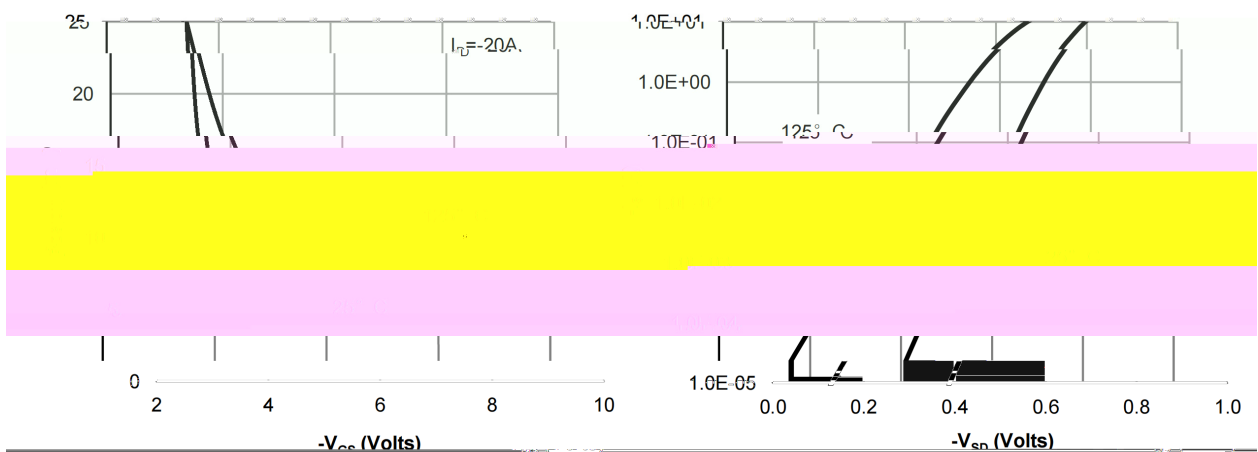
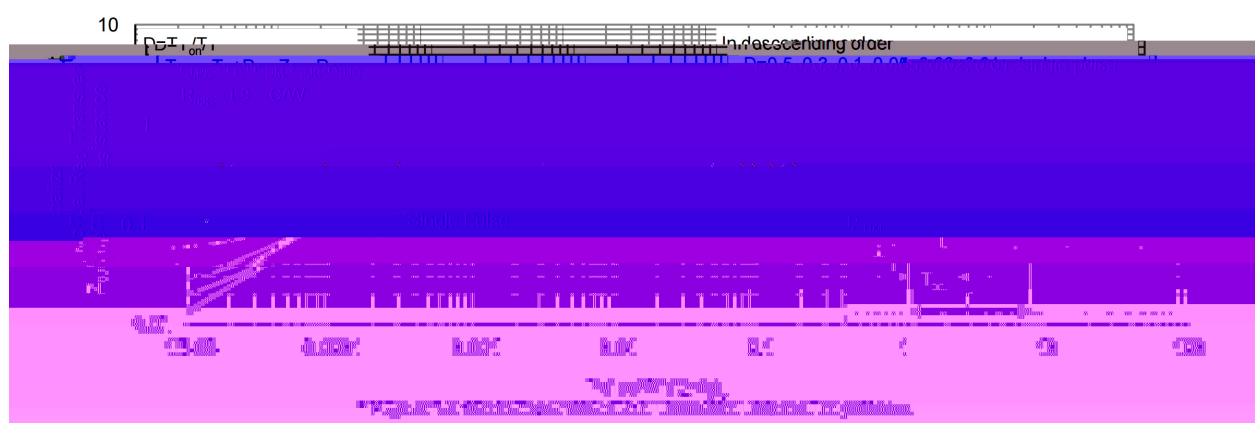
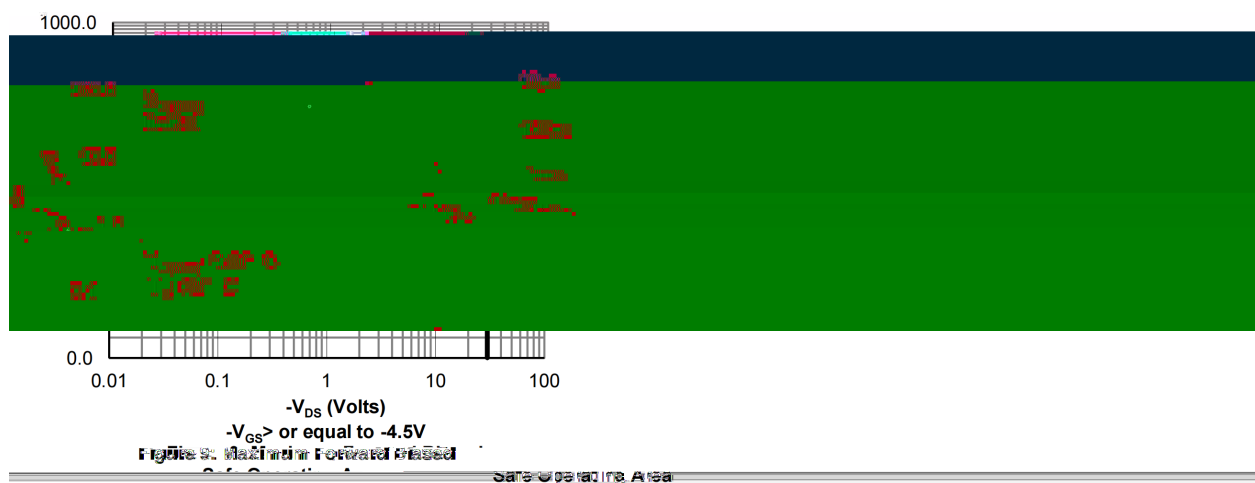
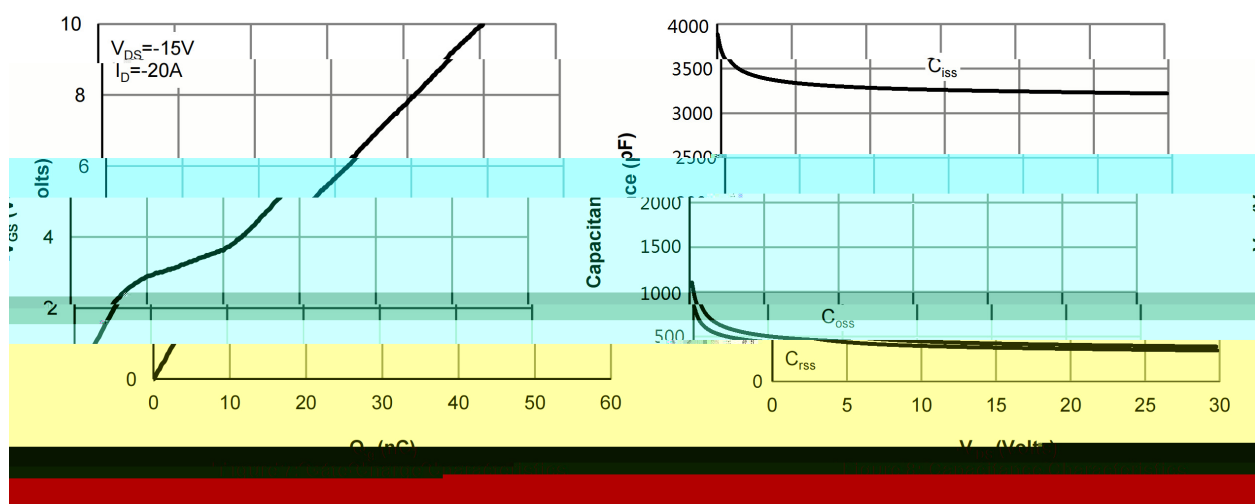
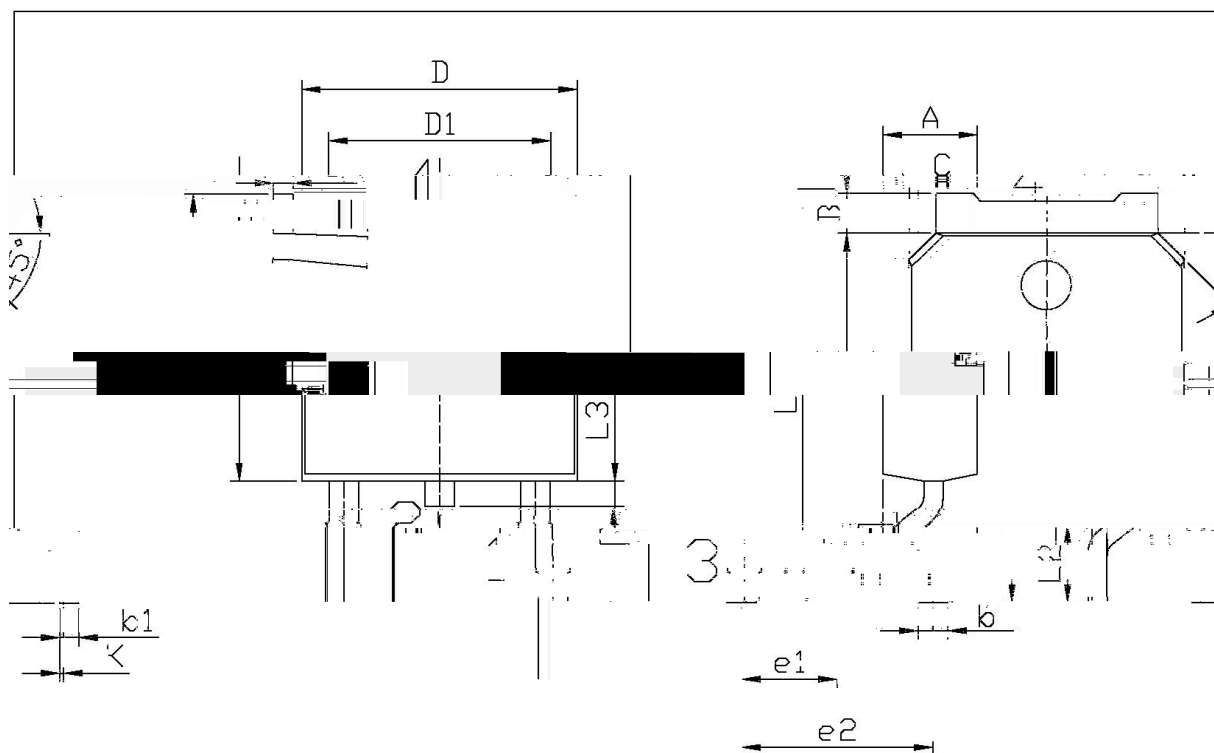


Figure 6: Body-Diode Characteristics

Figure 7: On-Resistance vs. Gate-Source Voltage

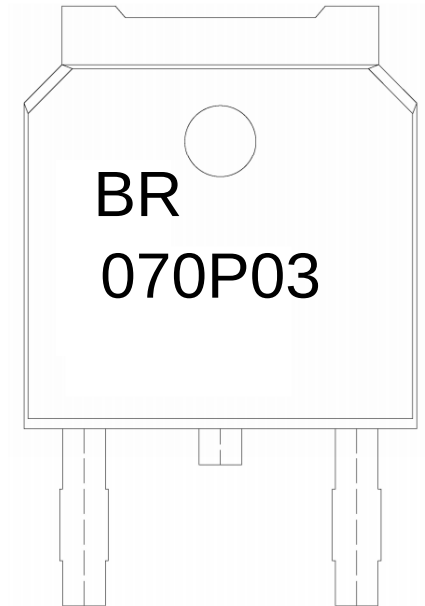




单位: mm

Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
5.95	6.25	6.50	2.90	2.40	2.40
0.25	0.25	0.25	B	0.95	0.95
0.00	0.00	0.00	b	0.70	0.70
b1	0.45	0.55	9.85	10.35	10.35
0.75	0.45	0.25	1.70	3.00	3.00
0.50	0.60	0.90	D1	6.45	6.45
K	0.00	0.10	D1	5.10	5.10

TQ-252



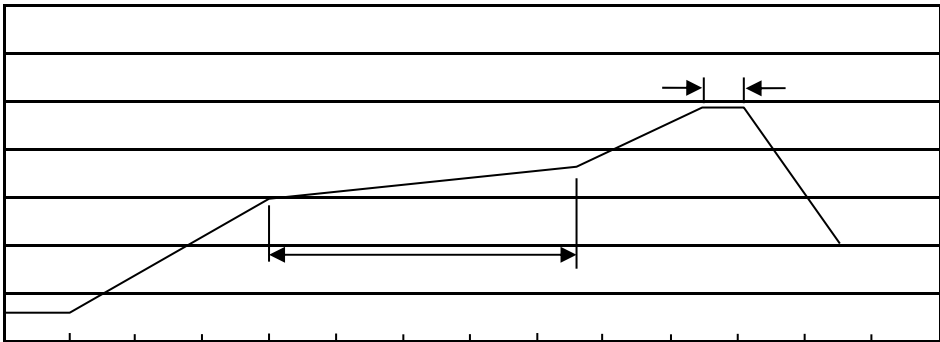
Note:

BR: Company Code

070P03: Product Type

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

Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- 1

150 180

60 90sec;

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

245 5

5 0.5sec;

2.Peak Temp.:245 5 , Duration:5 0.5sec.
- 3

2 10 /sec.

3. Cooling Speed: 2~10 /sec.

260 5

10 1 sec.

Temp.:260±5

Time:10±1 sec

/ REEL

Package Type	Units					Dimension (unit mm ³)		
TO-252	2,500	2	5,000	6	30,000	13 ×16	360×360×50	380×335×366

/ TUBE

Package Type	Units					Dimension (unit mm ³)		
TO-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180