BRCS035N03DP

Rev.B May-2026

DATA SHEET

/ Descriptions

TO-252 N MOS

N-Channel Enhancement Mode Field Effect Transistor in a TO-252 Plastic Package.

/ Features

V_{DS} (V) = 30V I_D =122 A (V_{GS} = ± 20V)

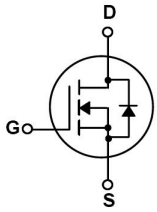
$R_{DS(ON)}$@10V ≤ 3.5mΩ(Typ.3.4mΩ)

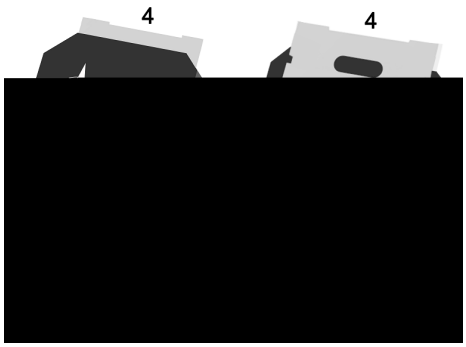
$R_{DS(ON)}$@4.5V ≤ 6.5mΩ(Typ.5.0mΩ)

HF Product.

/ Applications

Load Switch Applications,Battery Power Management.





PIN1 G PIN 2 4 D PIN 3 S

/ Marking

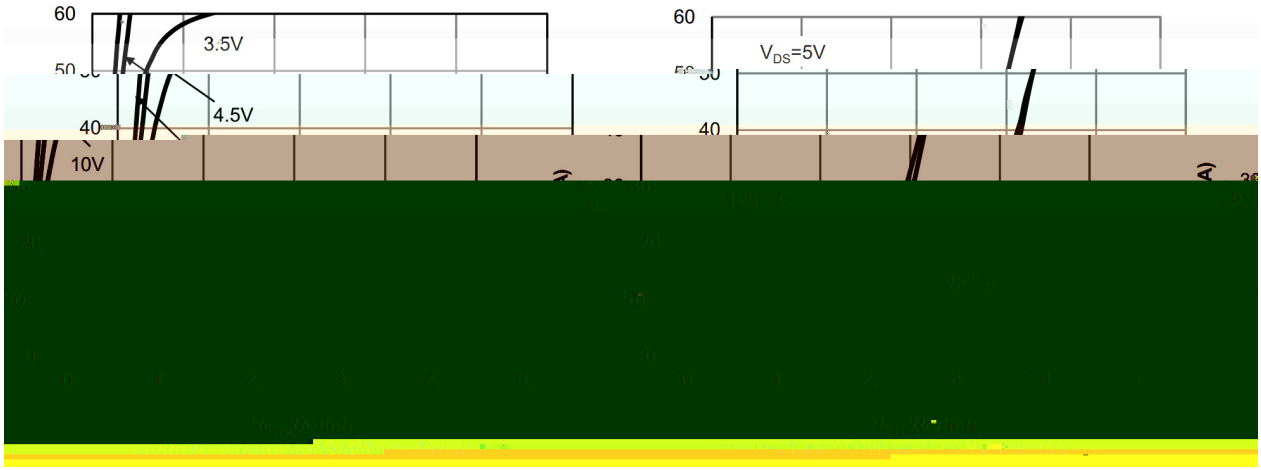
See Marking Instructions.

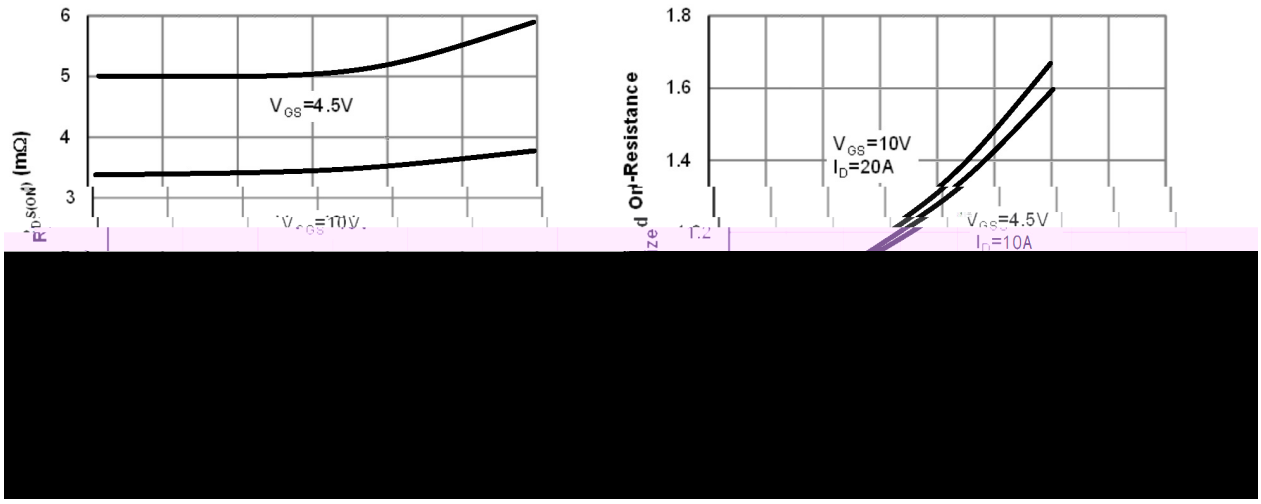
Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DSS}	30	V
Drain Current		I_D(Tc=25)	122	A
		I_D(Tc=100)	86	A
Drain Current - Pulsed		I_{DM}	260	A
Gate-Source Voltage		V_{GSS}	±20	V
Single Pulsed Avalanche Energy		E_{AS}	281	mJ
Avalanche Current		I_{AS}	26.5	A
Power Dissipation		P_D(Tc=25)	88	W
Junction and Storage Temperature Range		T_J,T_{stg}	-55 to 150	
Junction-to-Ambient	t ≤ 10	R_{JA}	22	/W
Junction-to-Ambient	Steady-State		50	
Junction-to-Case	Steady-State	R_{JC}	1.42	

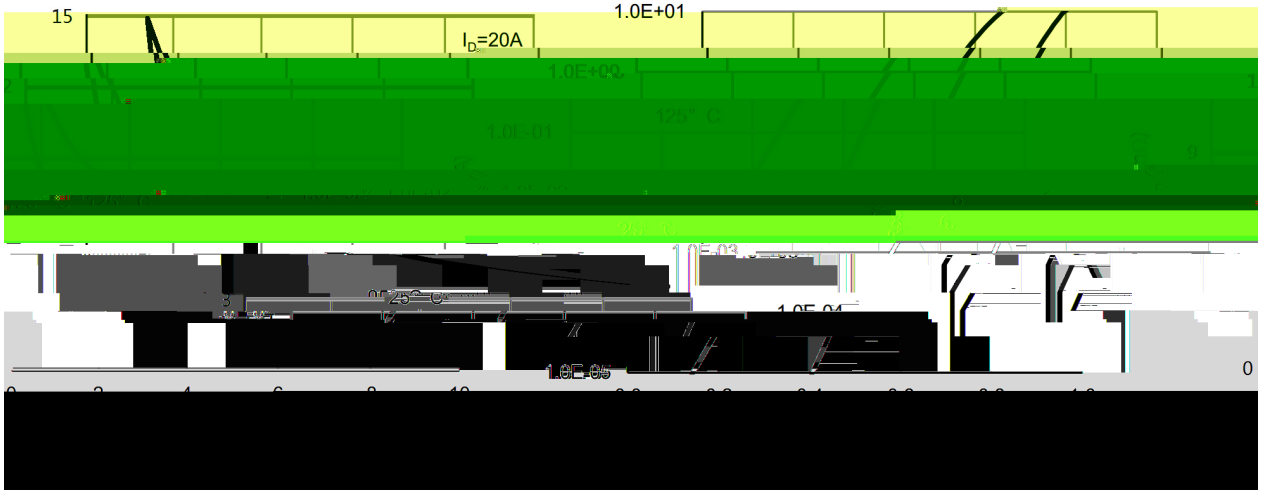
/ Electrical Characteristics(Tc=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	$Q_{g(10V)}$	V_{GS}=10V V_{DS}=15V I_D=20A		32		nC
Total Gate Charge	$Q_{g(4.5V)}$			15		
Gate Source Charge	Q_{gs}			5.2		
Gate Drain Charge	Q_{gd}			6.5		
Turn-On Delay Time	$t_{d(on)}$	V_{GS}=10V V_{DS}=15V R_L=0.75Ω R_{GEN}=3Ω		8.5		ns
Turn-On Rise Time	t_r			4.2		
Turn-Off Delay Time	$t_{d(off)}$			30		
Turn-Off Fall Time	t_f			5.7		

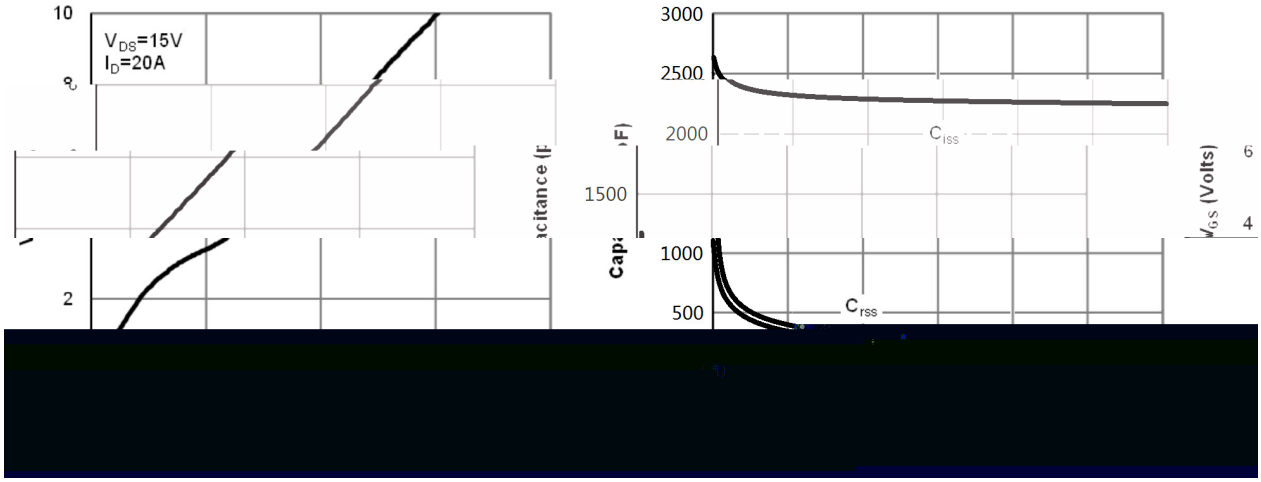
/ Electrical Characteristic Curve







/ Electrical Characteristic Curve



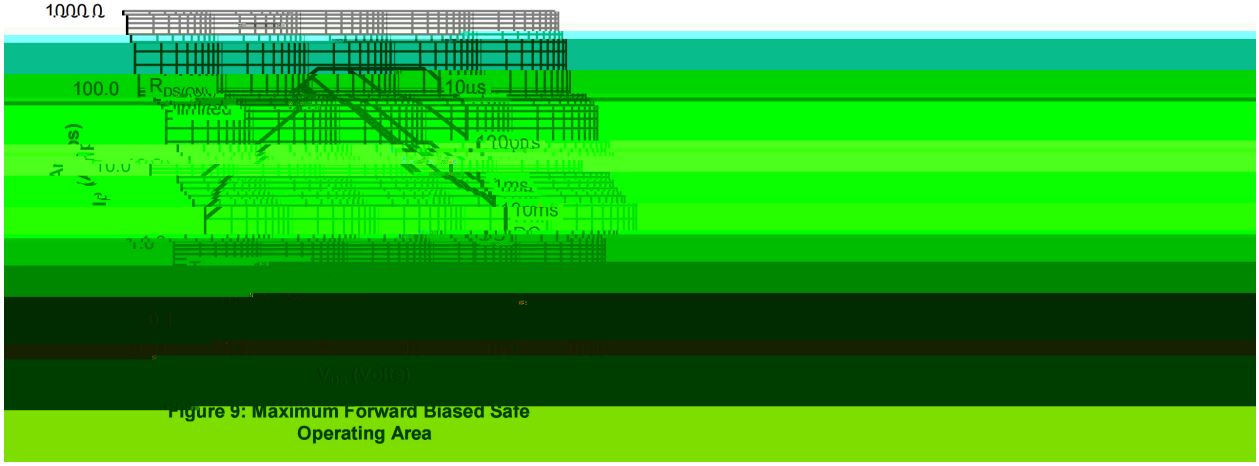
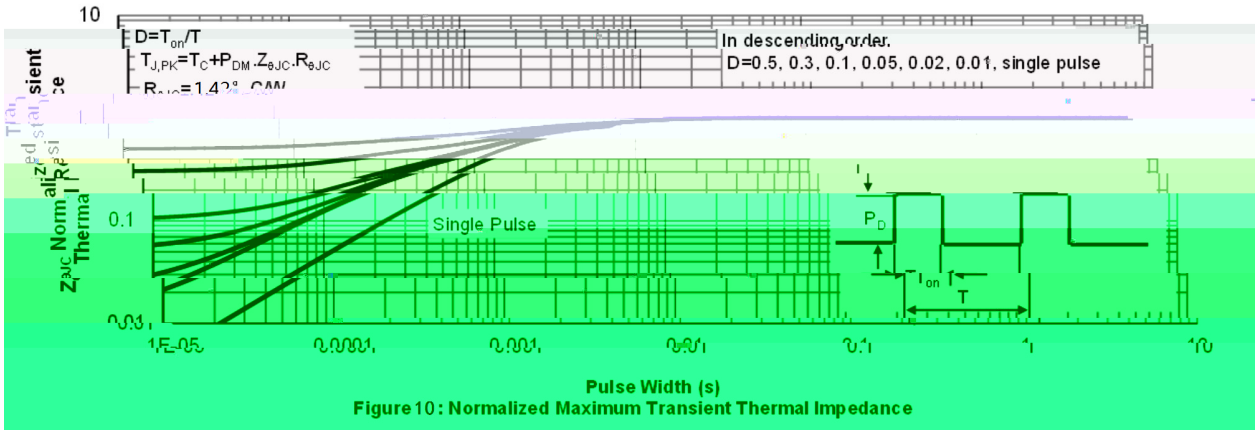


Figure 9: Maximum Forward Biased Safe Operating Area



Pulse Width (s)
Figure 10: Normalized Maximum Transient Thermal Impedance

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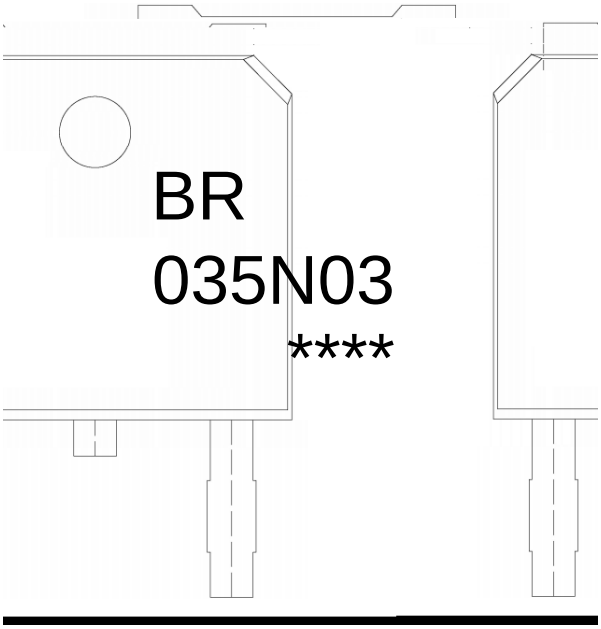
/ Marking Instructions



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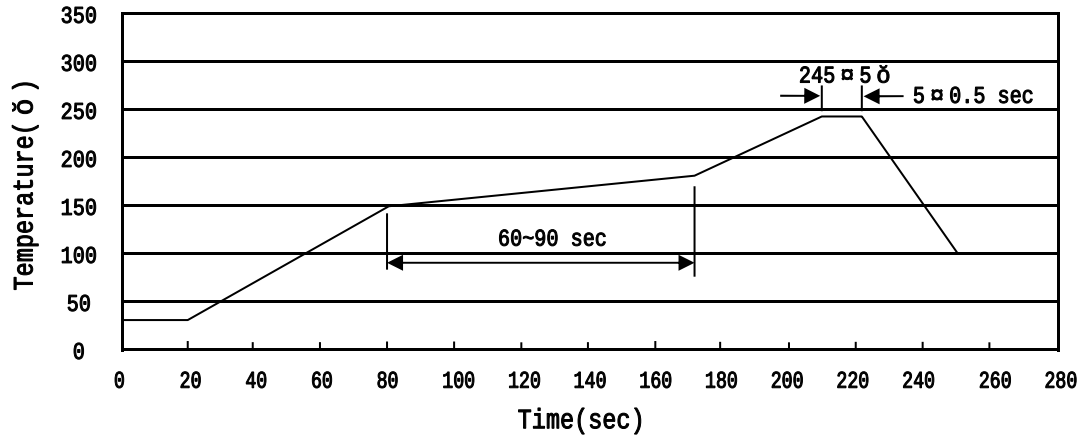
Note:

BR:	Company Code
035N03:	Product Type Code
****:	Lot No. Code, code change with Lot No.

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



1	150 180 60 90sec;		Note: 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.

/ Resistance to Soldering Heat Test Conditions

260±5	10±1 sec.	Temp.:260±5	Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension		(unit mm³)
TO-252	2,500	2	5,000	6	30,000	13 ×16	360×360×50	380×335×366

/ TUBE

Package Type	Units					Dimension		(unit mm³)
TO-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180

/ Notices

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