

BRCS050N03ZC

Rev.C Oct.-2025

DATA SHEET

/ Absolute Maximum Ratings(T_a=25)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V _{DS}	30	V
Drain Current - Continuous	I _D	32	A
Drain Current – Pulsed	I _{DM}	128	A
Gate-Source Voltage	V _{GS}	± 20	V
Power Dissipation	P _D (T _c =25)	26	W
Single Pulse Avalanche Energy(L=0.5mH)	E _{AS}	274	mJ
Avalanche Current(L=0.5mH)	I _{AS}	28	A
Junction and Storage Temperature Range	T _j , T _{stg}	-55 to 150	
Thermal resistance, junction - ambient	t 10s	R _{JA}	/ W
	Steady-State		
Thermal resistance, junction - case	Steady-State	R _{JC}	55
			4.8

/ Electrical Characteristics(T_a=25)

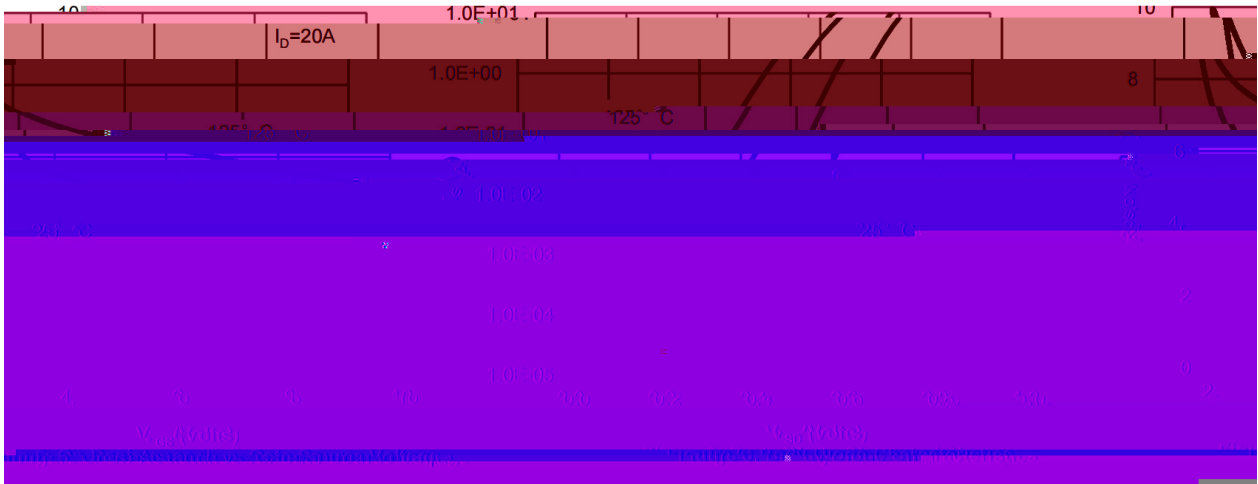
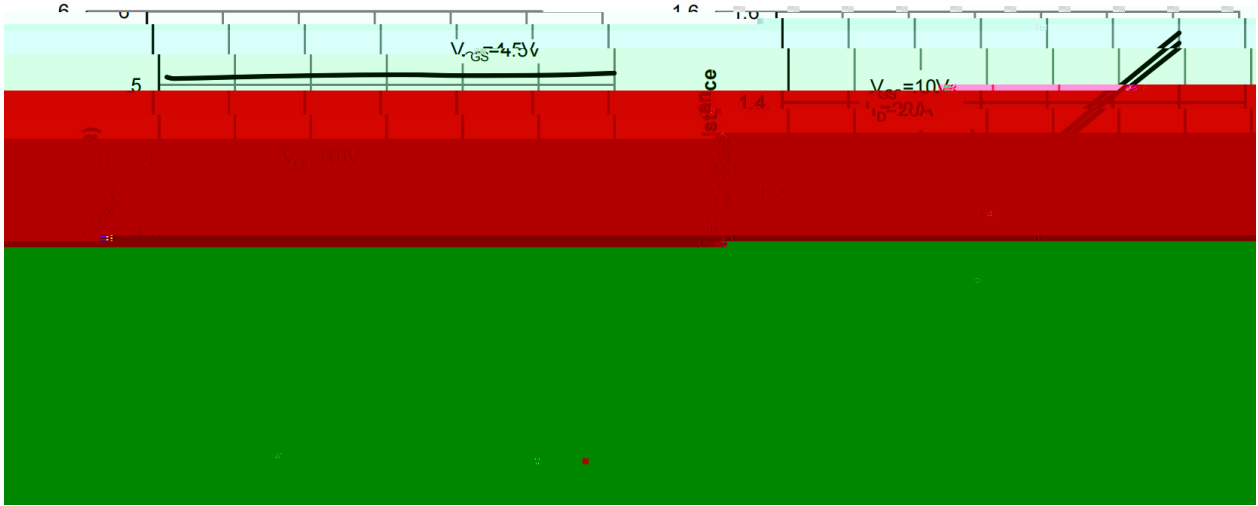
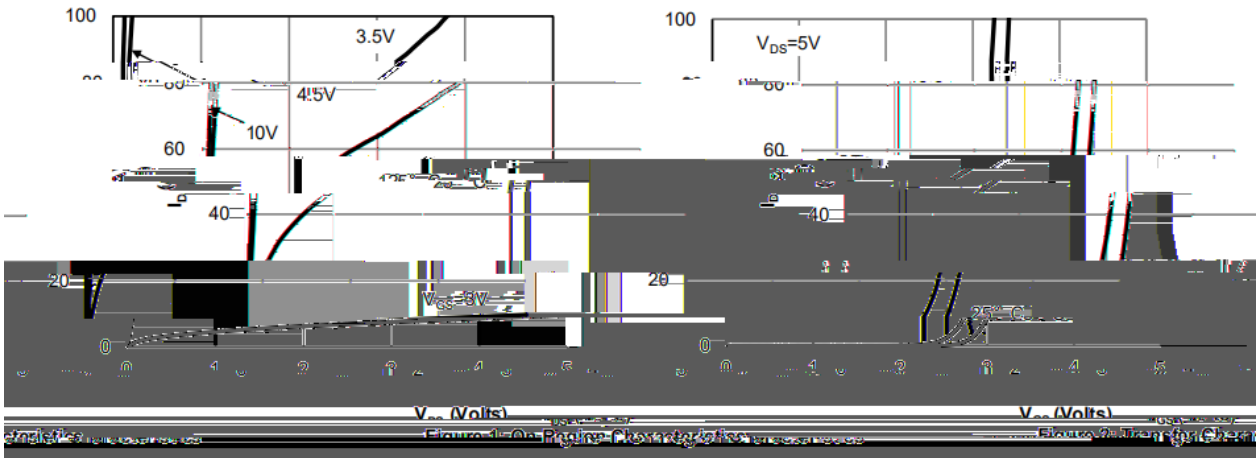
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV _{DSS}	I _D =250uA, V _{GS} =0V	30	33		V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =30V, V _{GS} =0V			1.0	uA
Gate-Body leakage current	I _{GSS}	V _{DS} =0V, V _{GS} = ±20V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250uA	1	1.5	3	V
Static Drain-Source On-Resistance	R _{DS(ON)}	V _{GS} =10V, I _D =20A		3.7	4.5	m
		V _{GS} =4.5V, I _D =10A		5.1	6	
Diode Forward Voltage	V _{SD}	I _S =1A, V _{GS} =0V			1.2	V
Input Capacitance	C _{iss}	V _{DS} =25V V _{GS} =0V f=1.0MHz		2500		pF
Output Capacitance	C _{oss}			280		
Reverse Transfer Capacitance	C _{rss}			210		
Gate resistance	R _g	V _{GS} =0V V _{DS} =0V f=1MHz		3.3		
Total Gate Charge	Q _{g(10V)}	V _{GS} =10V, V _{DS} =15V, I _D =20A		30		nC
Total Gate Charge	Q _{g(4.5V)}			13.5		
Gate Source Charge	Q _{gs}			5.5		
Gate Drain Charge	Q _{gd}			3.5		

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/ Electrical Characteristic Curve

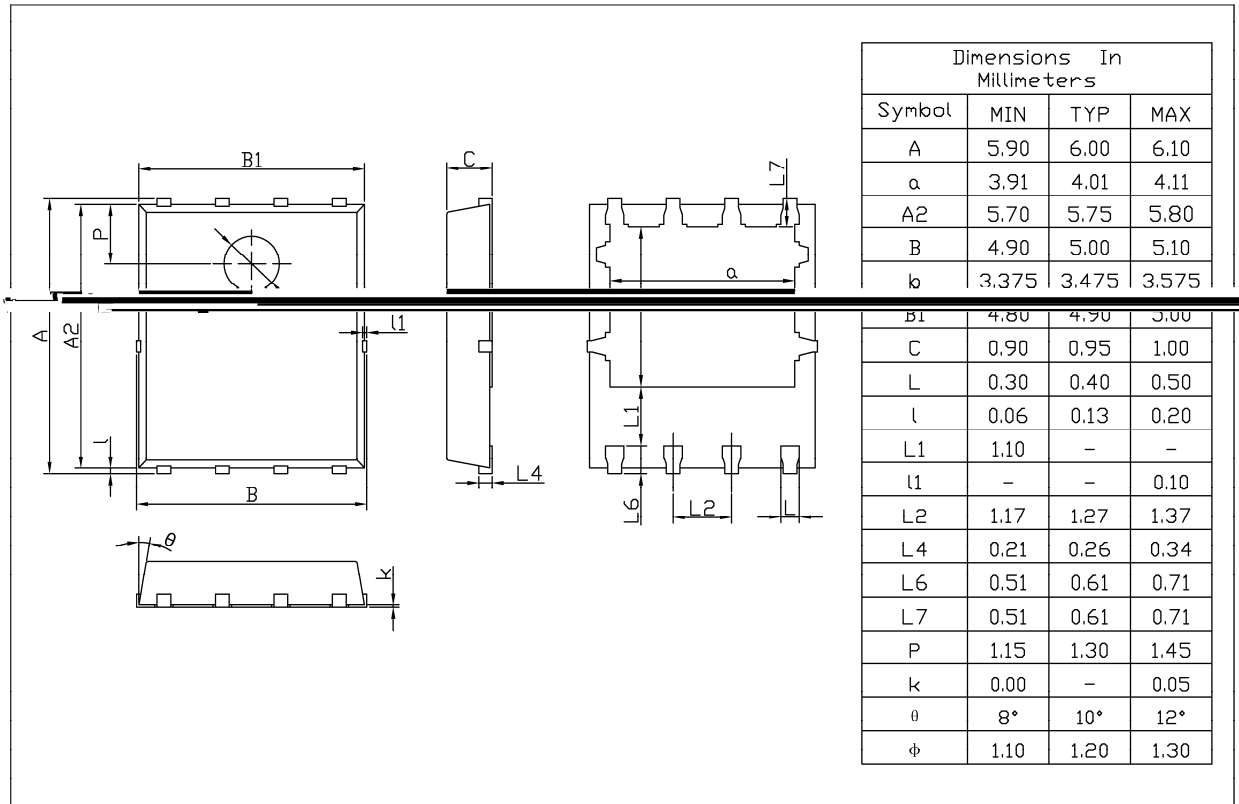


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/ Package Dimensions

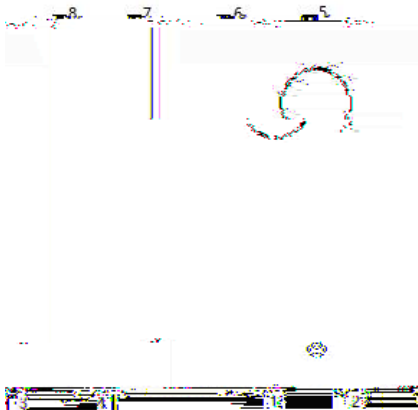
PDFN5 X6

Unit:mm



Rev.02 202510

/ Marking Instructions



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050N03
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Note
BR Company Code
050N03 Product Type Code
****: Lot No. Code, code change with Lot No.

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