

/ Descriptions

TO-263 N

N-CHANNEL MOSFET in a TO-263 Plastic Package.

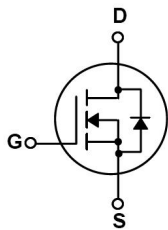
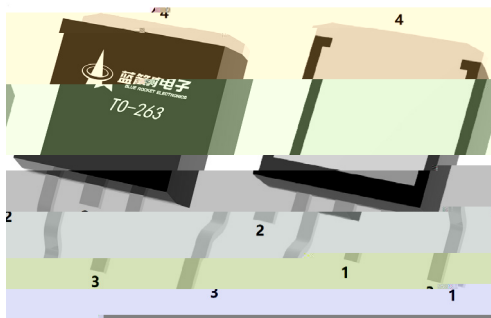
/ Features

Ultra Low On-Resistance,fast switching,HF Product.

/ Applications

PFC

These devices are well suited for high efficient switched mode power supplies Active power factor correction, electronic lamp ballast based on half bridge topology.

/ Equivalent Circuit**/ Pinning**

PIN1 G PIN 2 4 D PIN 3 S

/ Marking

See Marking Instructions.

BRCS050N04BD

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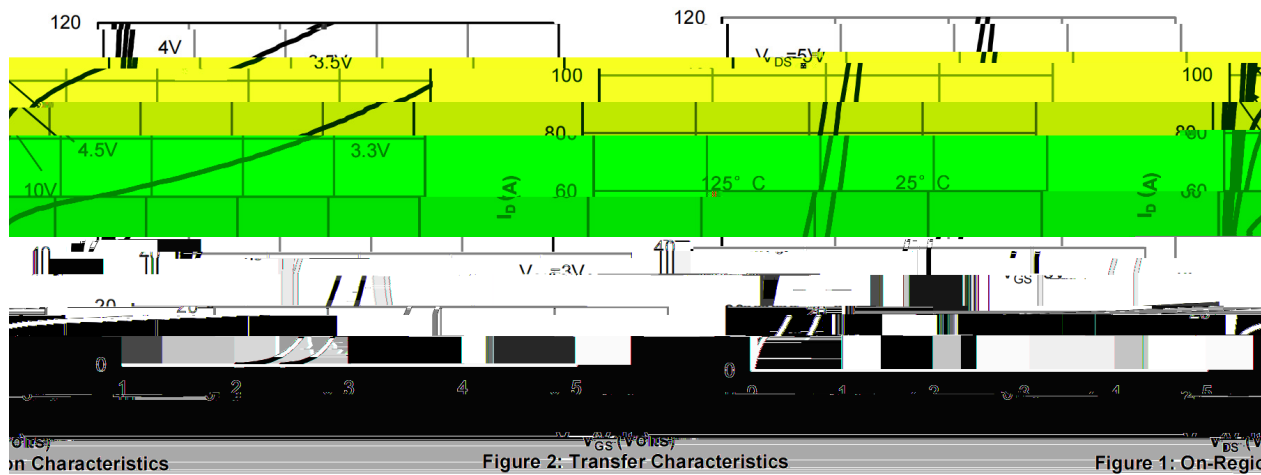
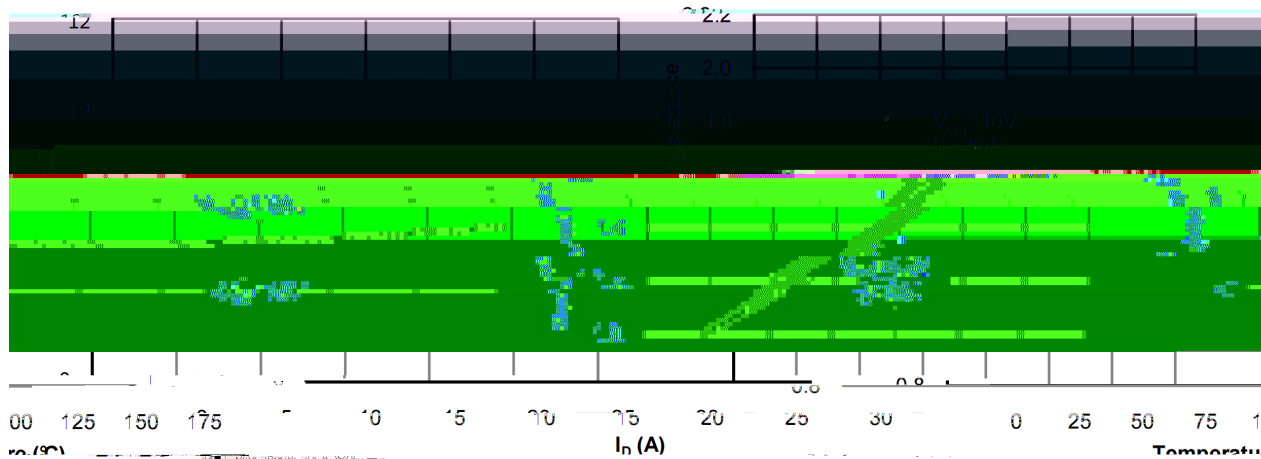
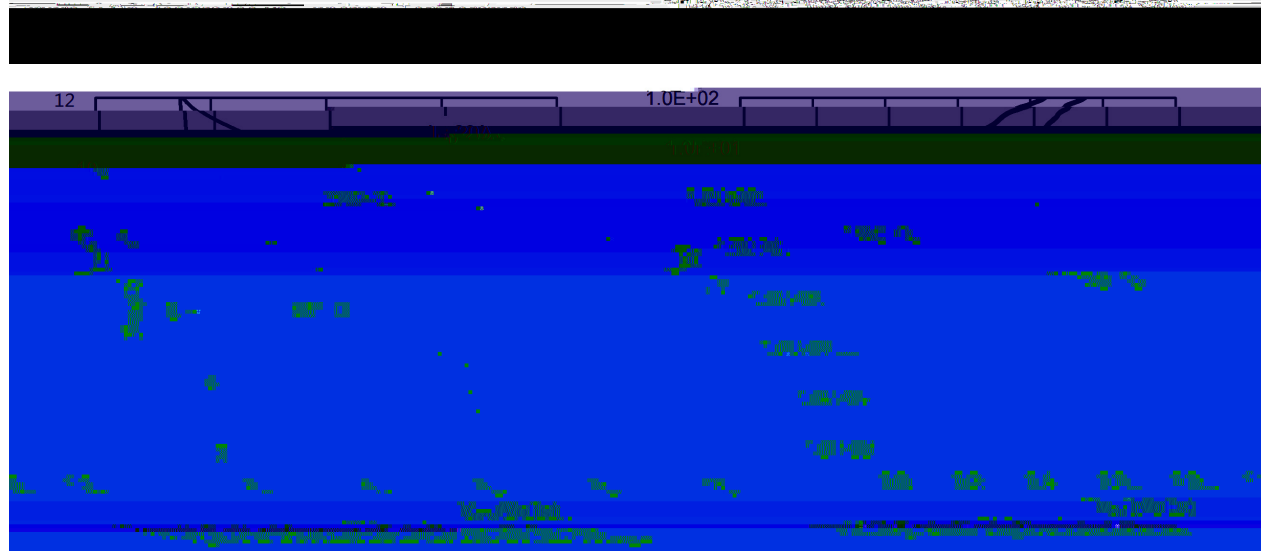
Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DSS}	40	V
Drain Current		$I_D(T_c=25^\circ\text{C})$	196	A
Pulsed Drain Current		I_{DM}	500	A
Gate-Source Voltage		V_{GS}	± 20	V
Single Pulsed Avalanche Energy(L=0.5mH)		E_{AS}	561.8	mJ
Avalanche Current		I_{AS}	26.5	A
Total Power Dissipation		$P_D(T_c=25^\circ\text{C})$	347	W
Junction and Storage Temperature Range		T_J, T_{STG}	-55 to 150	
Thermal Resistance-Junction to Ambient	$t \leq 10s$	$R_{\theta JA}$	15	/W
	Steady-State		60	
Thermal Resistance-Junction to Case	Steady-State	$R_{\theta JC}$	0.36	

Parameter

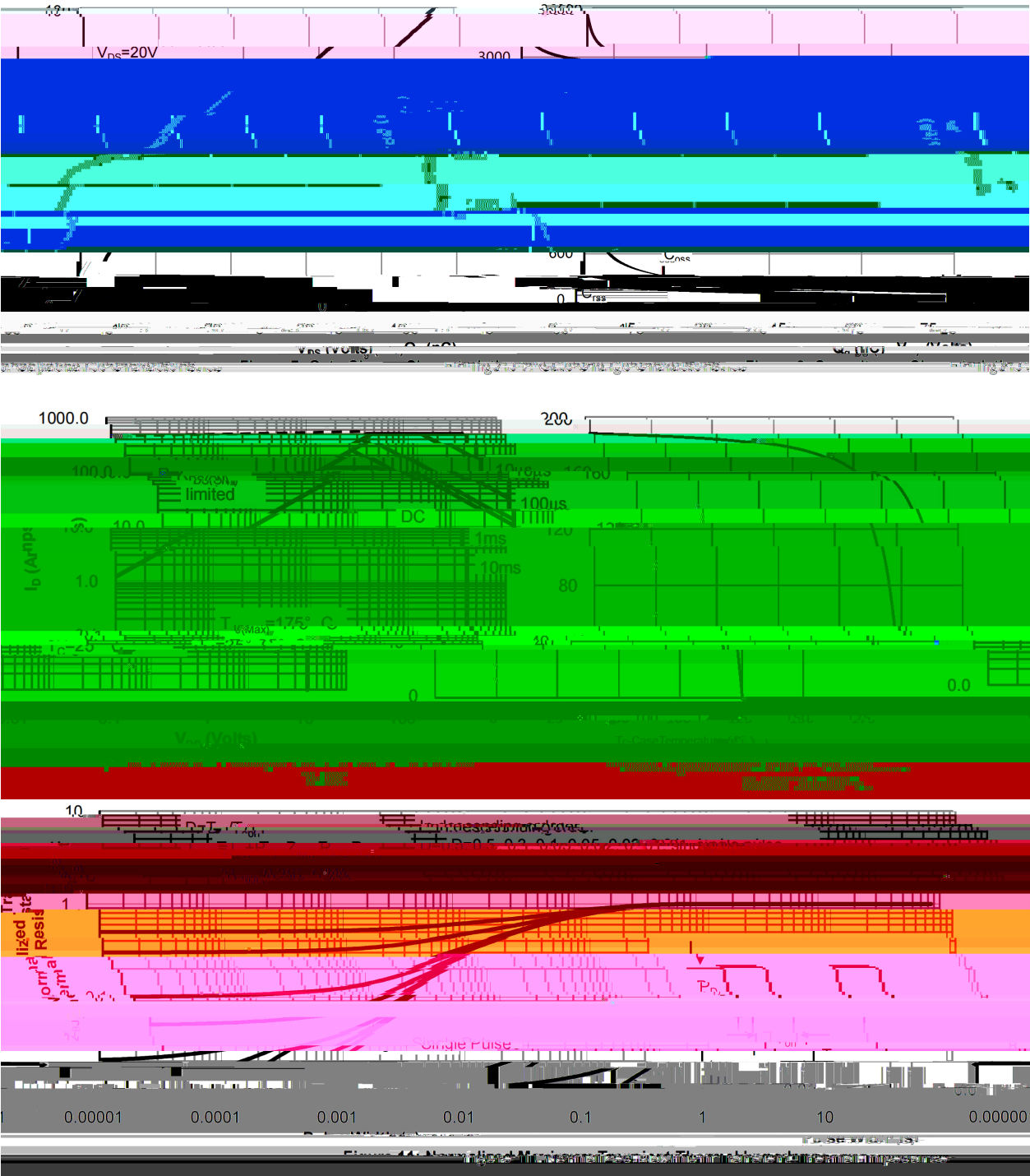


Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	$Q_g(10V)$	$V_{GS}=10V$ $V_{DS}=20V$ $I_D=20A$		70		nC
Total Gate Charge	$Q_g(4.5V)$			15		
Gate Source Charge	Q_{gs}			15		
Gate Drain Charge	Q_{gd}			22		
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=20V$ $R_L=1\Omega$ $R_{GEN}=3\Omega$		15		ns
TuTime	t_r			30		
Tuf Delay Time	$t_{d(off)}$			54		
Tuf Fall Time	t_f			20		

/ Electrical Characteristic Curve



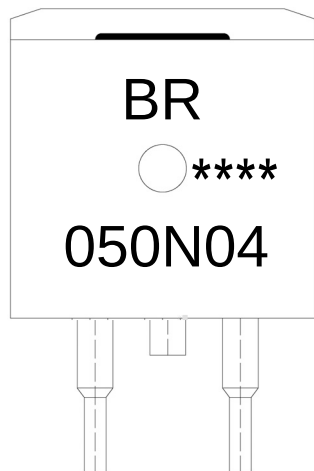
/ Electrical Characteristic Curve



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/ Marking Instructions



BR

050N04

Note:

BR: Company Code

050N04: Product Type

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

