

/ Descriptions

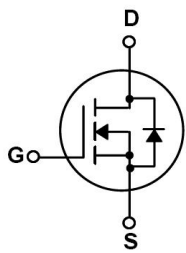
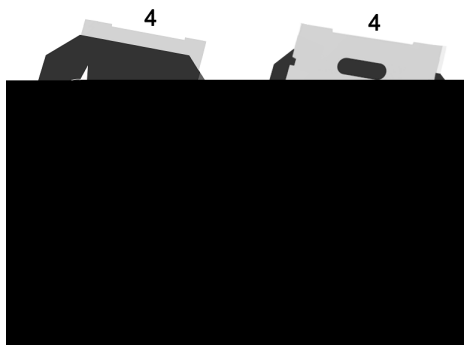
TO-252 N

N-CHANNEL MOSFET in a TO-252 Plastic Package.

/ Features $R_{DS(on)}$ C_{rss} Low $R_{DS(on)}$, low gate charge, low C_{rss} , fast switching, HF Product.**/ Applications**

DC/DC

Suited for low voltage applications such as automotive, DC/DC Converters, and high efficiency switching for power management in portable and battery operated products, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit**/ Pinning**

PIN1 G

PIN 2 D

PIN 3 S

PIN 4 D

/ Marking

See Marking Instructions.

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	40	V
Drain Current		$I_D(T_c=25^\circ\text{C})$	136	A
Drain Current - Pulsed		I_{DM}	280	A
Gate-Source Voltage		V_{GS}	± 20	V
Avalanche Current		I_{AS}	33	A
Single Pulsed Avalanche Energy(L=0.5mH)		E_{AS}	435	mJ
Power Dissipation		$P_D(T_c=25^\circ\text{C})$	118	W
Junction and Storage Temperature Range		T_J, T_{STG}	-55 to 150	
Thermal Resistance-Junction to Ambient	$t \leq 10\text{s}$	$R_{\theta JA}$	20	/W
	Steady-State		50	
Thermal Resistance-Junction to Case	Steady-State	$R_{\theta JC}$	1.06	

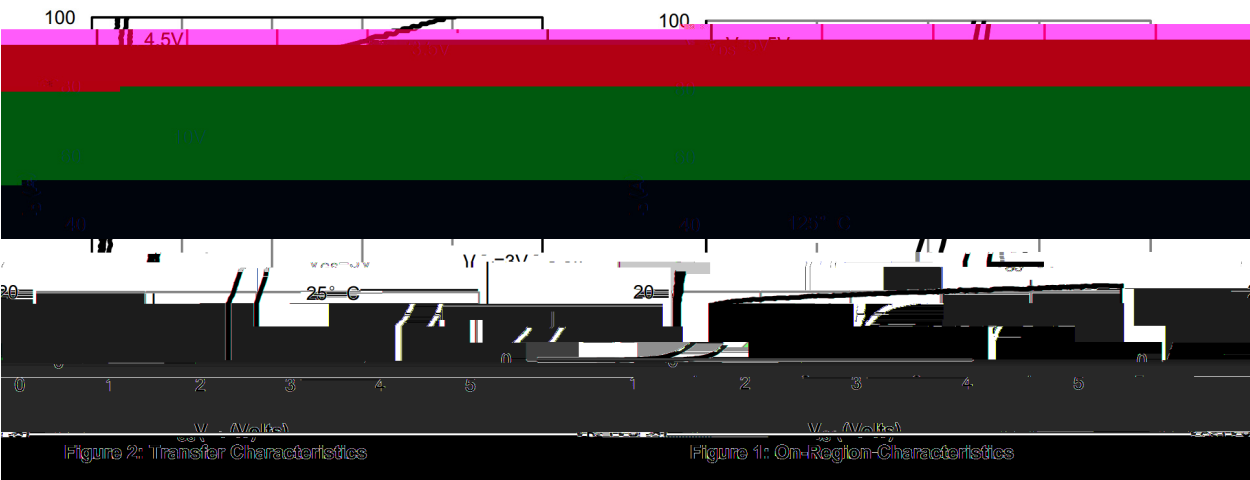
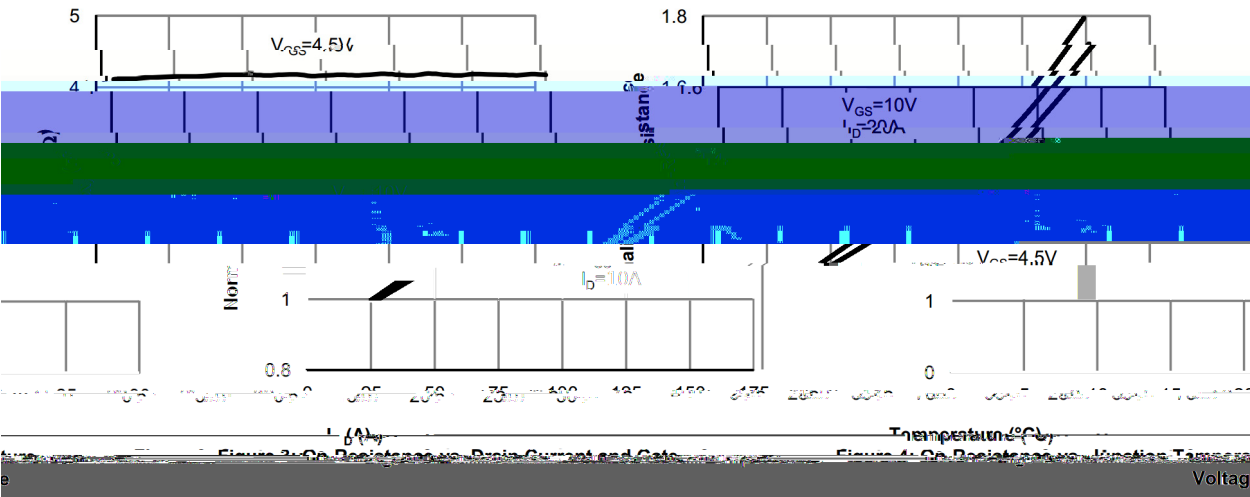
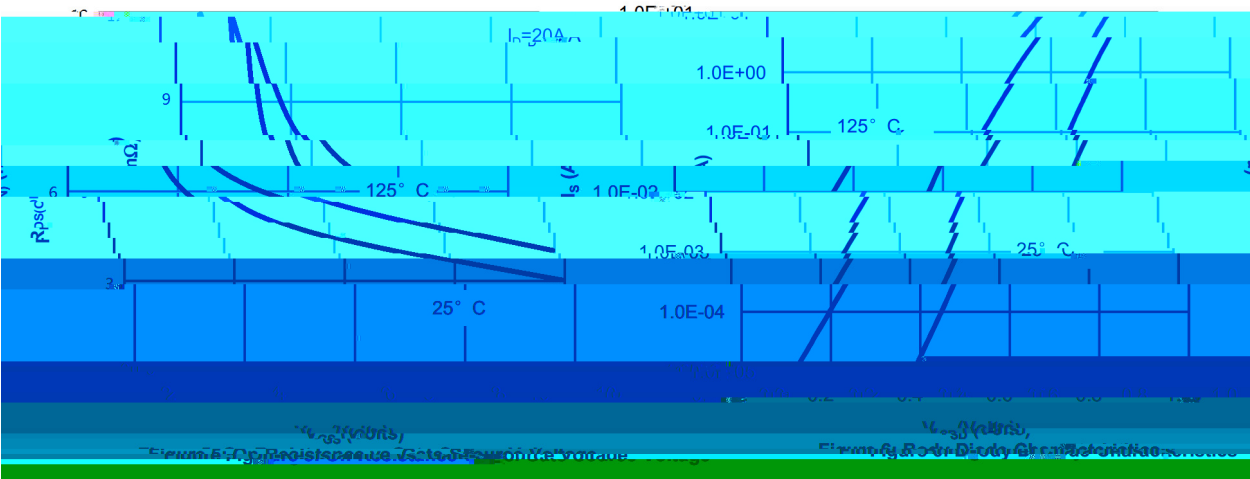
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DS}	$V_{GS}=0V$ $I_D=250\mu A$	40			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=40V$ $V_{GS}=0V$			1.0	μA
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20V$ $V_{DS}=0V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	1.0	1.7	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=20A$		3.0	3.5	m Ω
		$V_{GS}=4.5V$ $I_D=10A$		4.0	5.0	
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=1A$			1.4	V
Gate resistance	R_g	$V_{GS}=0V$ $f=1MHz$ $V_{DS}=0V$		1.16		Ω

Input Capacitance

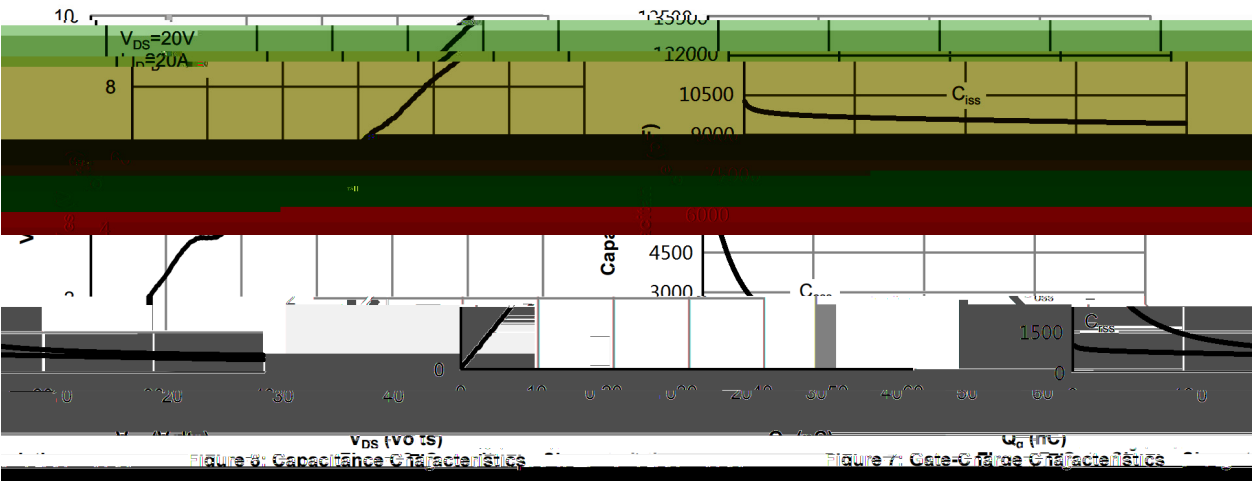
 C_{iss} $V_{DS}=25V$ $V_{GS}=10V$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	t					

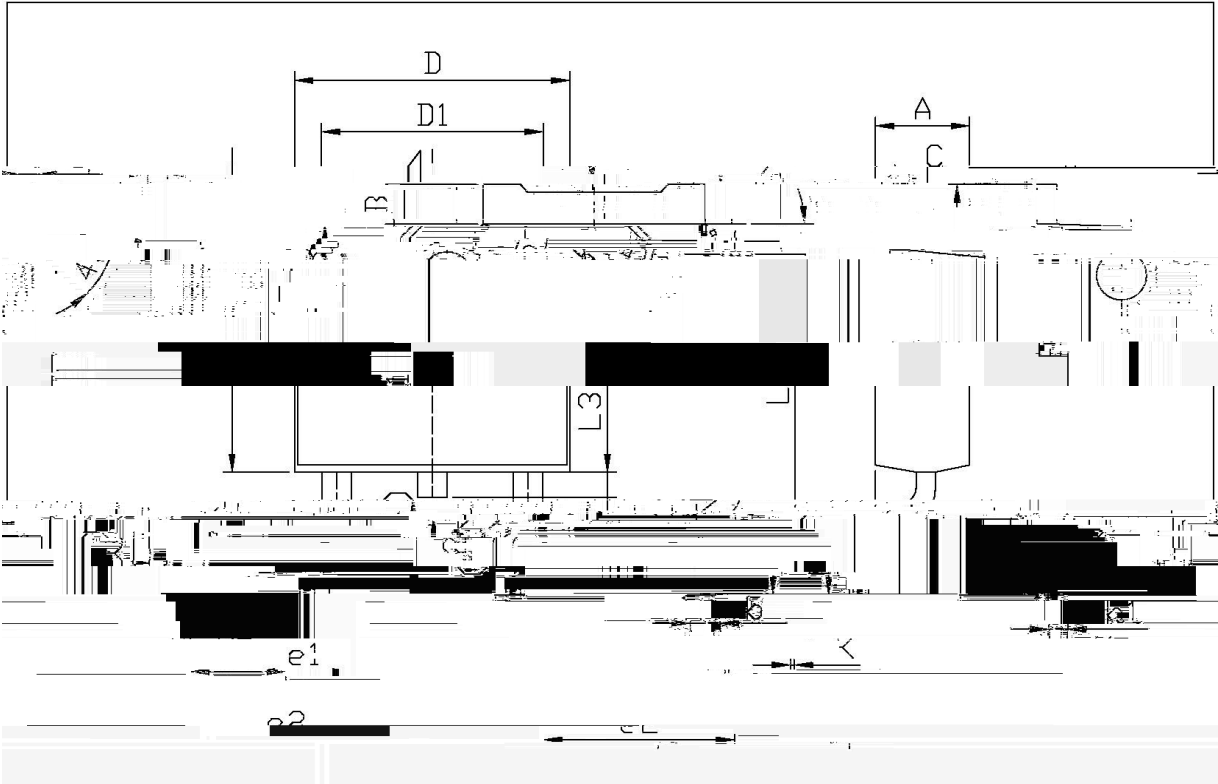
/ Electrical Characteristic Curve



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/ Package Dimensions

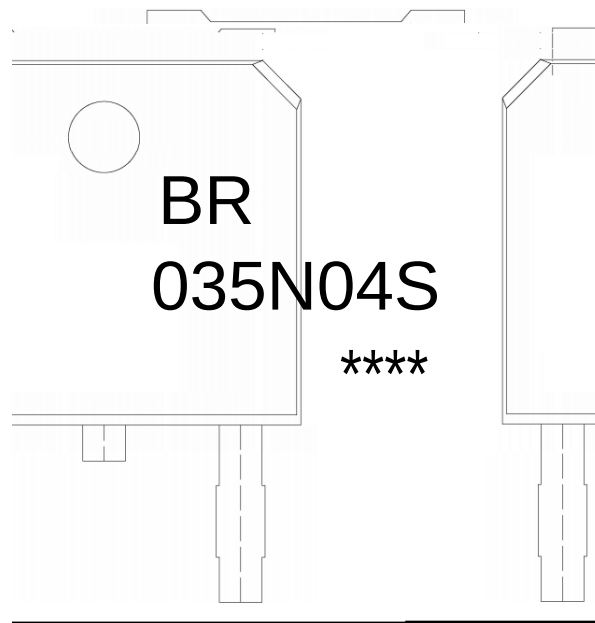


单位: mm

Dimensions in Millimeters				Dimensions in Millimeters			
Min	Max	Symbol	Min	Max	Symbol	Min	Max
0.05	0.08	A	0.05	0.08	C	0.05	0.08
2.24	2.34	e1	0.95	1.25	B	0.70	0.90
4.42	4.72	e2	0.70	0.90	L3	0.55	0.75
0.55	0.85	L3	0.55	0.75	K	0.55	0.75
5.10	5.50	D1	0.60	0.90	A	0.60	0.90

T0-252

/ Marking Instructions



BR

035N04S

Note:

BR: Company Code

035N04S: Product Type Code

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

BRCS035N04SDP