

BRD5N50

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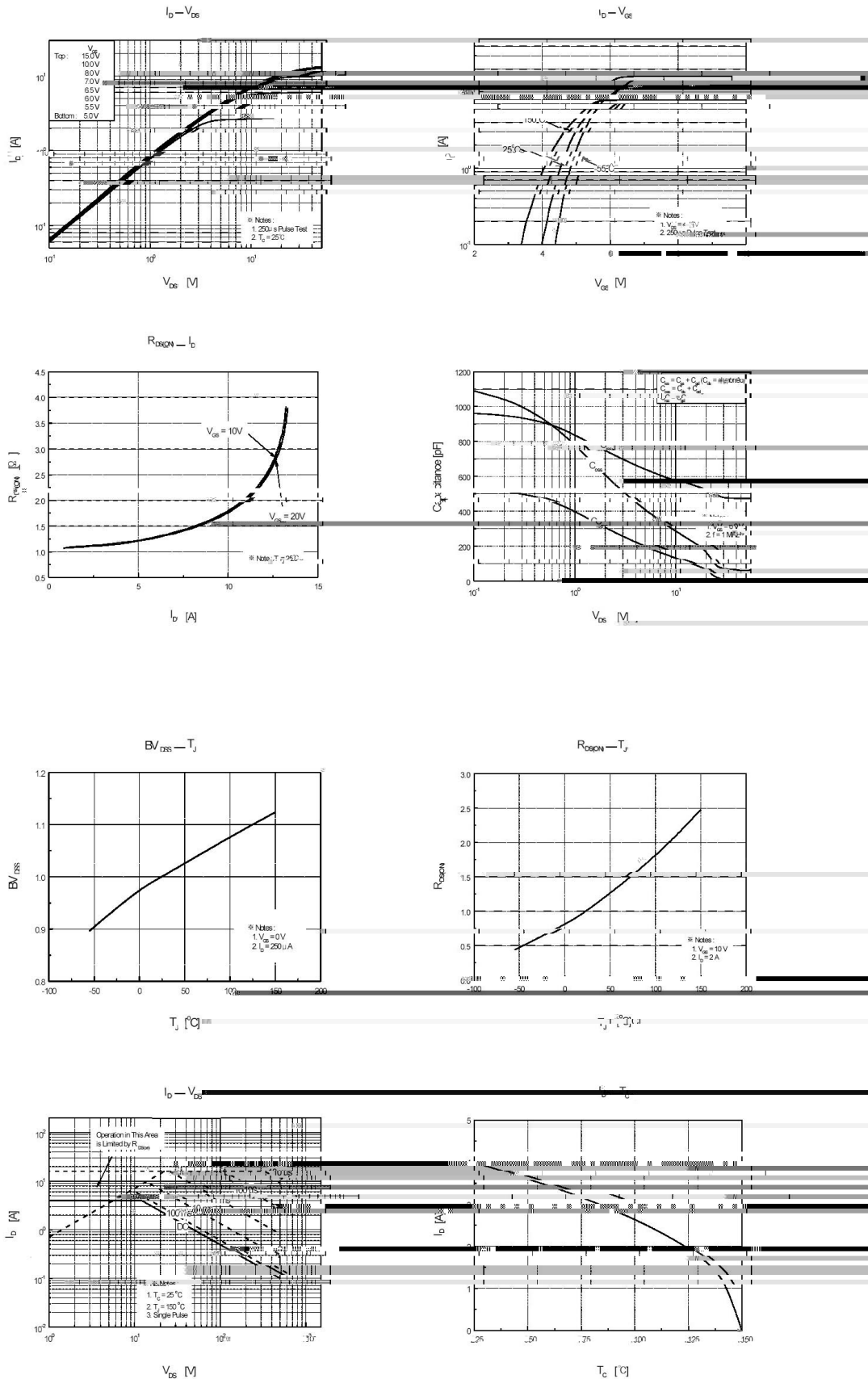
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	500	V
Drain Current	$I_D(T_C=25)$	5	A
Drain Current	$I_D(T_C=100)$	2.8	A
Drain Current - Pulsed	I_{DM}	16	A
Gate-Source Voltage	V_{GS}	± 30	V
Avalanche Current	I_{AR}	4	A
Single Pulsed Avalanche Energy	E_{AS}	300	mJ
Repetitive Avalanche Energy	E_{AR}	4.8	mJ
Power Dissipation ($T_A=25$)	P_D	2.5	W
Power Dissipation ($T_C=25$)	P_D	48	W
Operating and Storage Temperature Range	T_J, T_{STG}	-55to150	

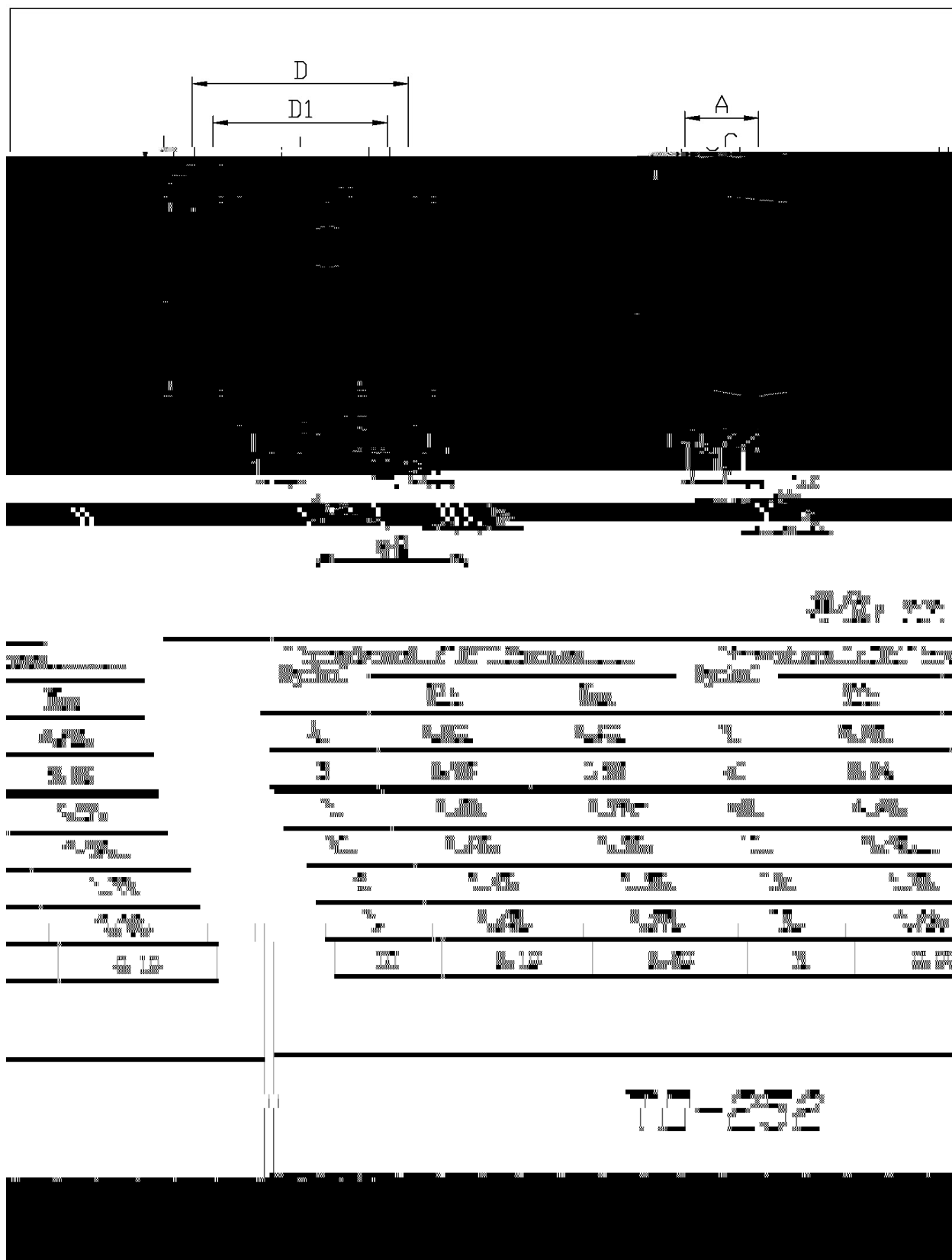
/ Electrical Characteristics(Ta=25)

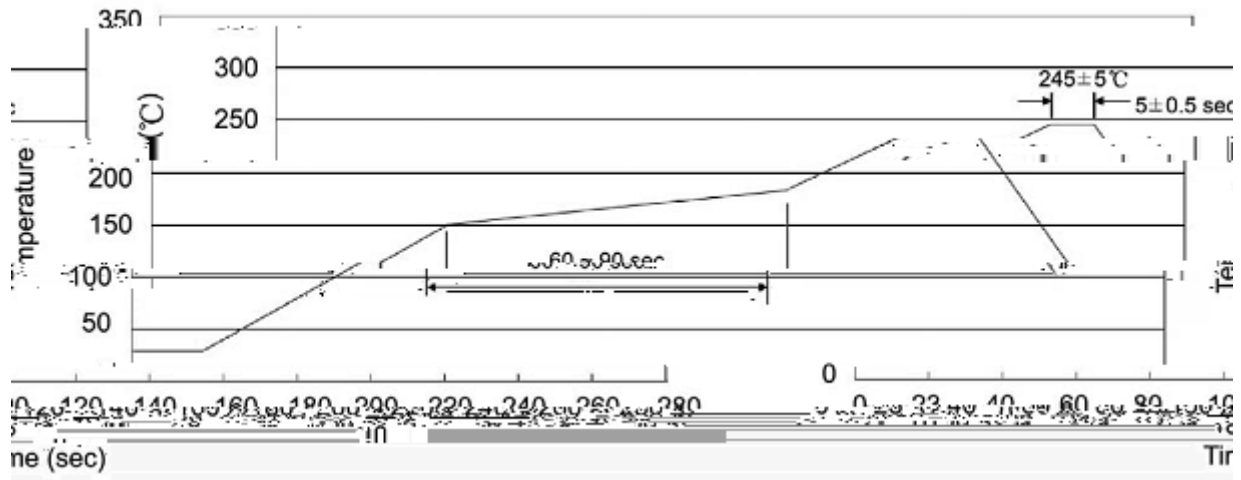
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DS}	$V_{GS}=0V$ $I_D=250\mu A$	500			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=500V$ $V_{GS}=0V$			1	μA
		$V_{DS}=400V$ $T_C=125$			10	μA
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 30V$ $V_{DS}=0V$			± 0.1	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	2		4	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=2.5A$		1.14	1.4	Ω
Forward Transconductance	g_{FS}	$V_{DS}=40V$ $I_D=2A$		5.2		S
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=5A$			1.4	V
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1MHz$		480	625	pF
Output Capacitance	C_{oss}			80	105	pF
Reverse Transfer Capacitance	C_{rss}			15	20	pF
Turn-On Delay Time	$t_{d(on)}$	$V_{DD}=250V$ $I_D=5A$ $R_G=25\Omega$		12	35	ns
Turn-On Rise Time	t_r			46	100	ns
Turn-Off Delay Time	$t_{d(off)}$			50	110	ns
Turn-Off Fall Time	t_f			48	105	ns

/ Electrical Characteristic Curve



Package Dimensions





Note:

1 25 150 60