5 Ø / Descriptions

TO-252 .> / / x N ?œ 3 « | o
N-CHANNEL MOSFET in a TO-252 Plastic Package.

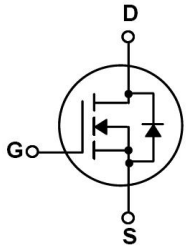
/ " / Features

8* 9 U T 4 k y > z k) X Y 4 k … , ‰ k)í D }o
Low $R_{DS(0)}$,low gate charge, low C_{rss} , fast switching, HF Product

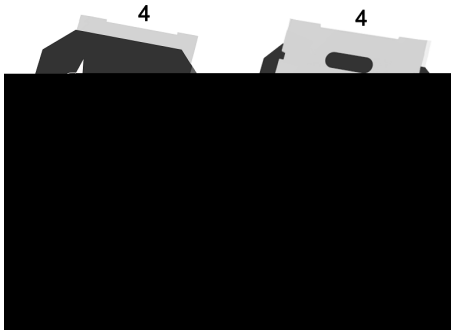
— ÷ / Applications

9 z 9 Ł òy V æ Ło *) *) ôEo ' D } ä| ôEo
Suited for low voltage applications such as automotive, DC/DC Converters, and high efficiecy switching for power maagemeti portable ad battery operated products

^ W] Ô / Equivalent Circuit



Û- æ / Pinning



PIN1 y G PIN 2 y D PIN 3 y S PIN 4 y D

, M V / Marking

- ~ " ¢o

See Markig Instructios

ˆ a ? d / Absolute Maximum Ratings(Ta=25 ;)

@ Parameter		Z Symbol	Ratg	% y Uit
Drai-Source Voltage		V DSS	30	V
Drai Current		ID(Tc=25)	100	A
Drai Current- Pulsed		I DM	215	A
Gate-Source Voltage		V GS	f 20	V
Avalache Current		I AS	23.5	A
Sigle Pulsed Avalache Eergy(L=0.5mH)		E AS	220.9	mJ
Power Dissipato		PD(Tc=25)	85	W
Juto ad Storage Temperate Rage		TJ, TSTG	-55 to 150	
Thermal Resistace-Juto to Ambiet	t 0 10s	R ' JA	20	/W
	Steady-State		50	
Thermal Resistace-Juto to Case	Steady-State	R ' JC	1.47	

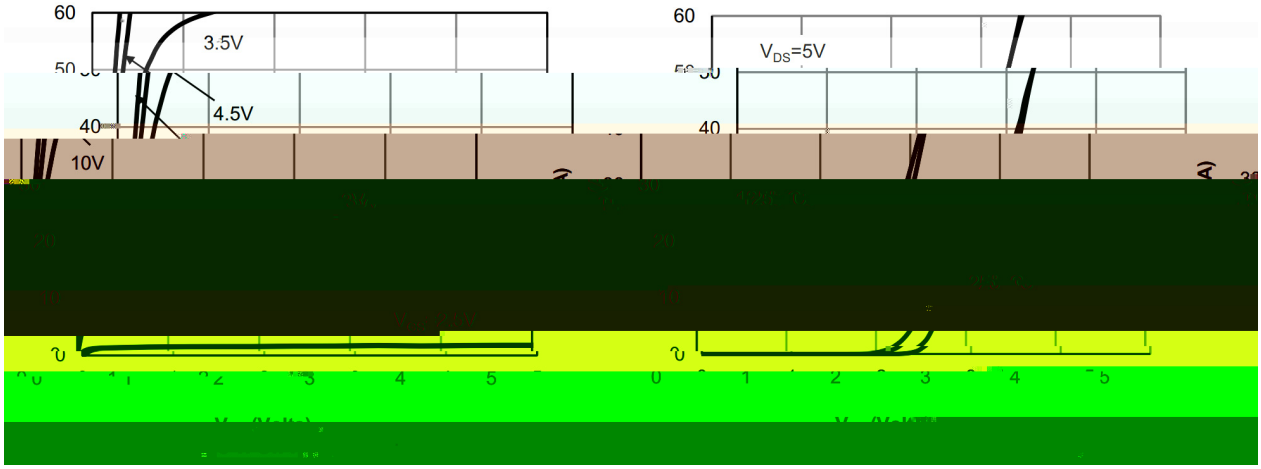
Ôì ×? d / Electrical Characteristics(Ta=25 ;)

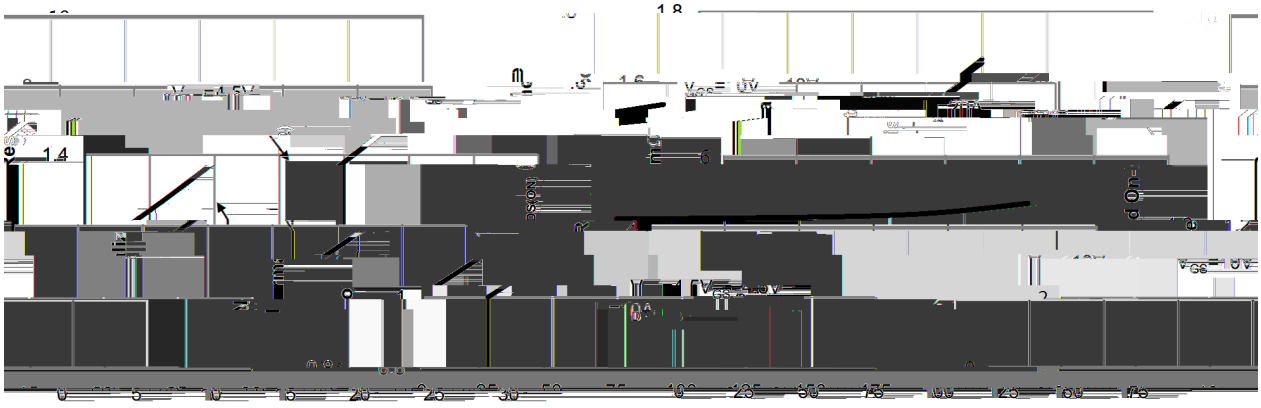
@ Parameter	Z Symbol	y ¡ Ú^ Test Coditos	´ 4 Mi	` " Typ	´ Ý Max	% y Uit
Drai-Source Breakdow Voltage	BVDSS	VGS=0V ID=250 A	30			V
Zero Gate Voltage Drai Current I	DSS	VDS=30V VGS=0V			1.0	A
Gate-Body Leakage Current Forward	IGSS	VGS=±20V V DS=0V			f 100	A
Gate Threshold Voltage V	GS(th)	VDS=VGS ID=250 A	1.0	1.7	2.5	V
Static Drai-Source O-Resistace	RDS(o)	VGS=10V ID=20A		4.3	5	m
		VGS=4.5V ID=10A		6.7	8	
Drai-Source Diode Forward Voltage	VSD	VGS=0V IS=1A		0.72	1.4	V
Gate resistace	R g	VGS=0V VDS=0V, f=1MHz		3.1		
Input Capacitace C	is	VDS=25V VGS=0V f=1.0MHz		2030		p
Output Capacitace C	os			168		
Reverse Trasfer Capacitace C	rs			163		
Total Gate Charge	Q g(10V)	VGS=10V, VDS=15V, ID=20A		40		C
Total Gate Charge	Q g(4.5V)			22		
Gate Source Charge	Q gs			11		
Gate Drai Charge	Q gd			5		

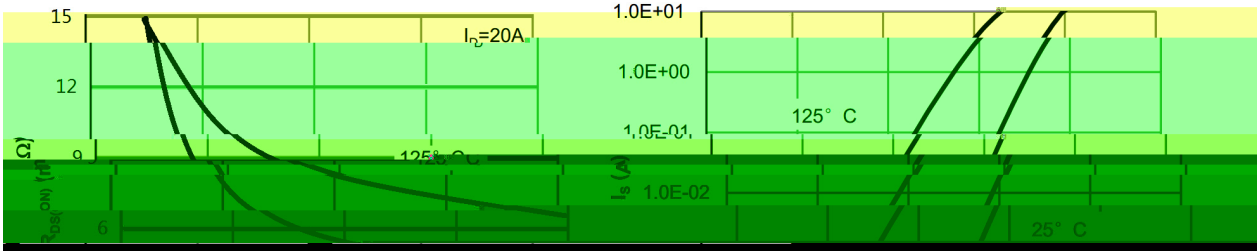
Ĉ4ì ×? d / Electrical Characteristics(Ta=25 ;)

@ Parameter	Z Symbol	y ¡ Ú^ Test Conditions	´ 4 Mi	` " Typ	´ Ý Max	% y Uit
Tru-O Delay Time	t d(0)	V_{GS}=10V V_{DS}=15V R_L=0.75 ¡ R_{GEN}=3 ¡		11		s
Tru-O Rise Time	t r			14		
Tru-Off Delay Time	t d(off)			38		
Tru-Off Fall Time	t f			10		

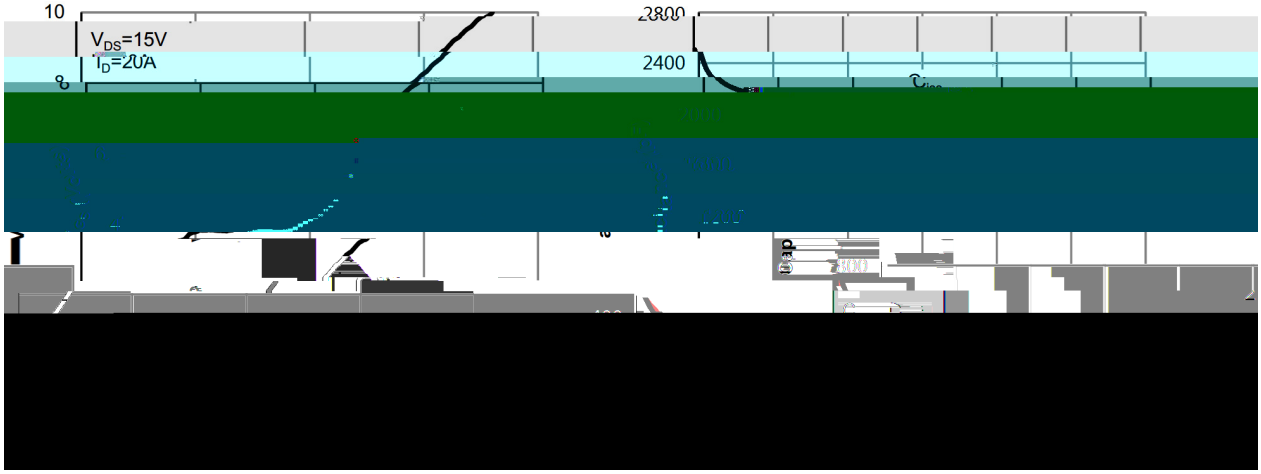
Ô? d ¢ / Electrical Characteristic Curve

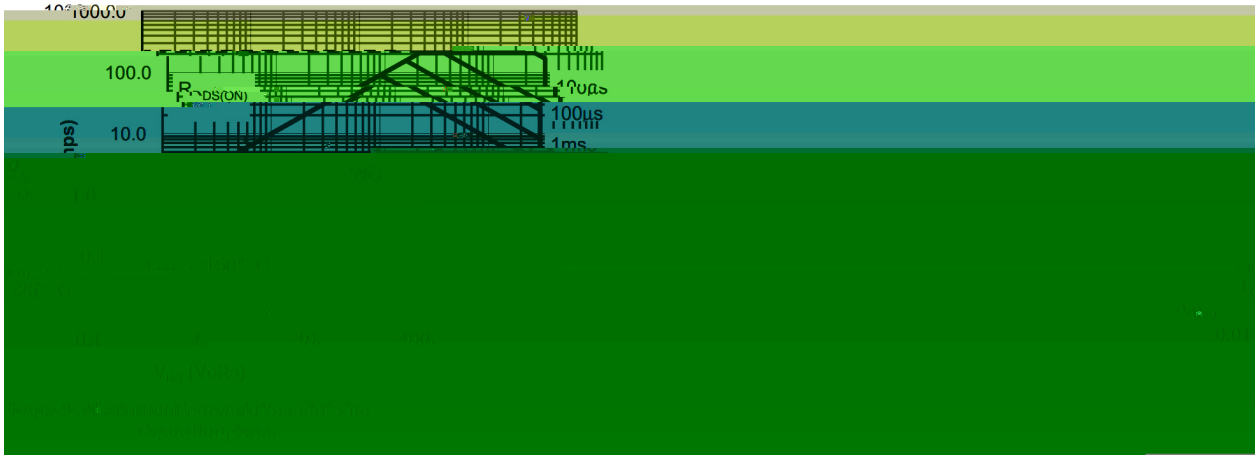


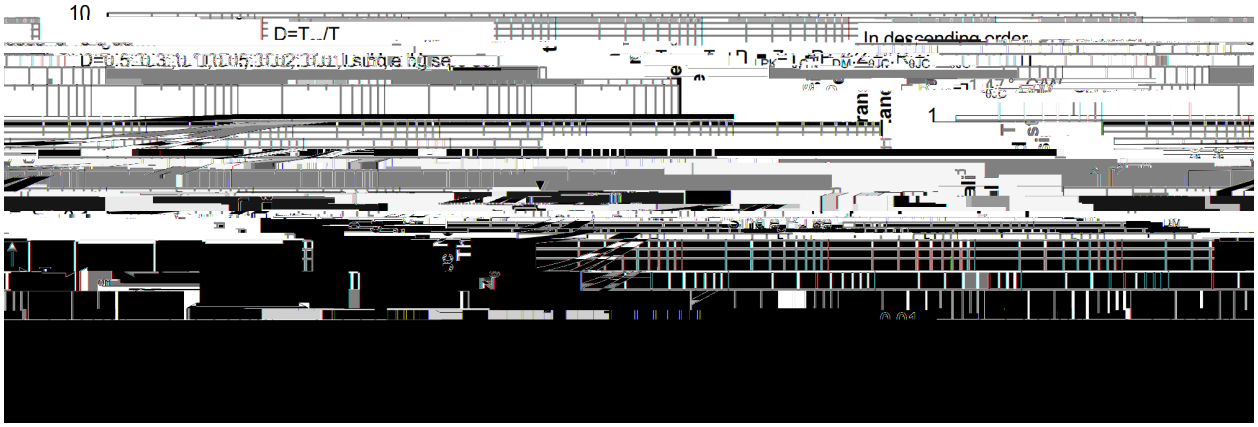




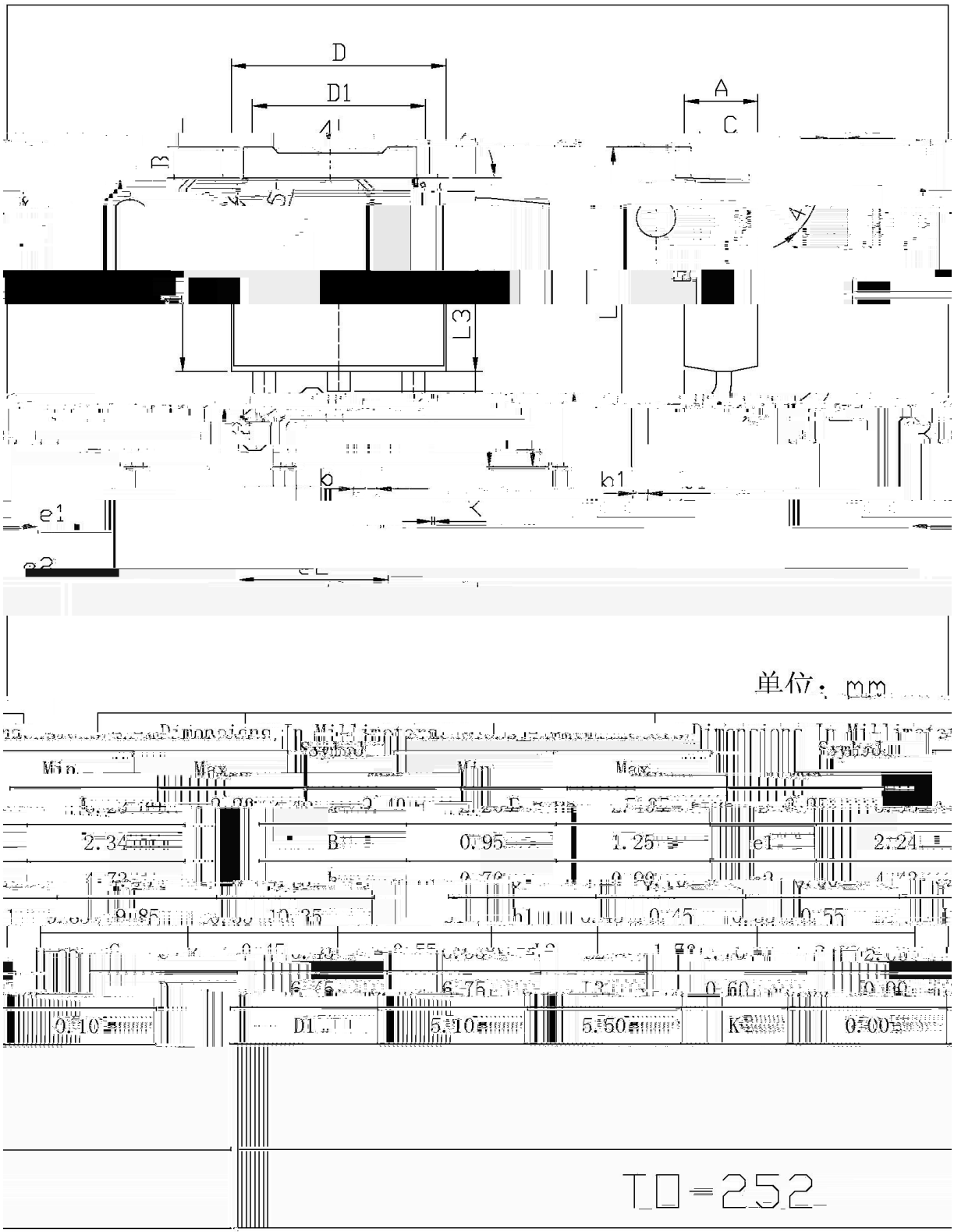
Ô? d ¢ / Electrical Characteristic Curve





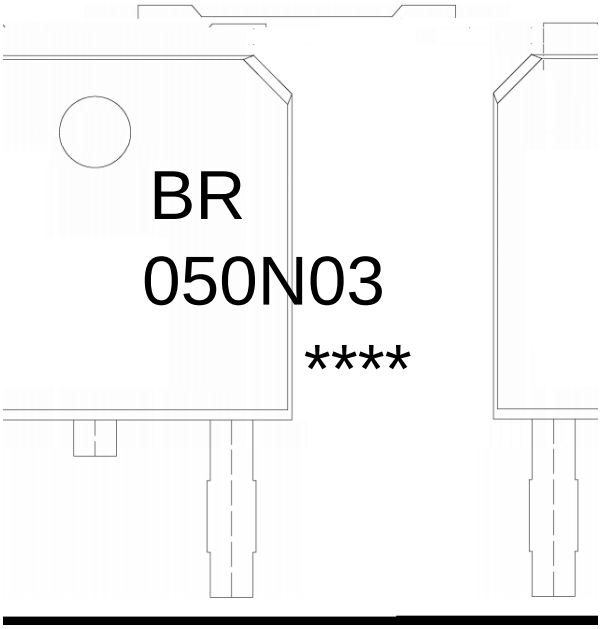


Ø =) ¢ / Package Dimensions



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min.	Max.		Min.	Max.
A	2.34		B	0.95	1.25
e1	2.24				
h1	0.85	10.35		0.15	0.55
D1	5.10			5.50	
K	0.00				

, M y / Marking Instructions



“ ¢ y

BR y , [W A

050N03 y ” Z W A

y ÿD Z W A k ÿD Z J

Note:

BR: Company Code

050N03: Product Type Code

****: Lot No. Code, code chage in Lot No