

BRD50P06Q  
Rev.A Sep.-2024

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

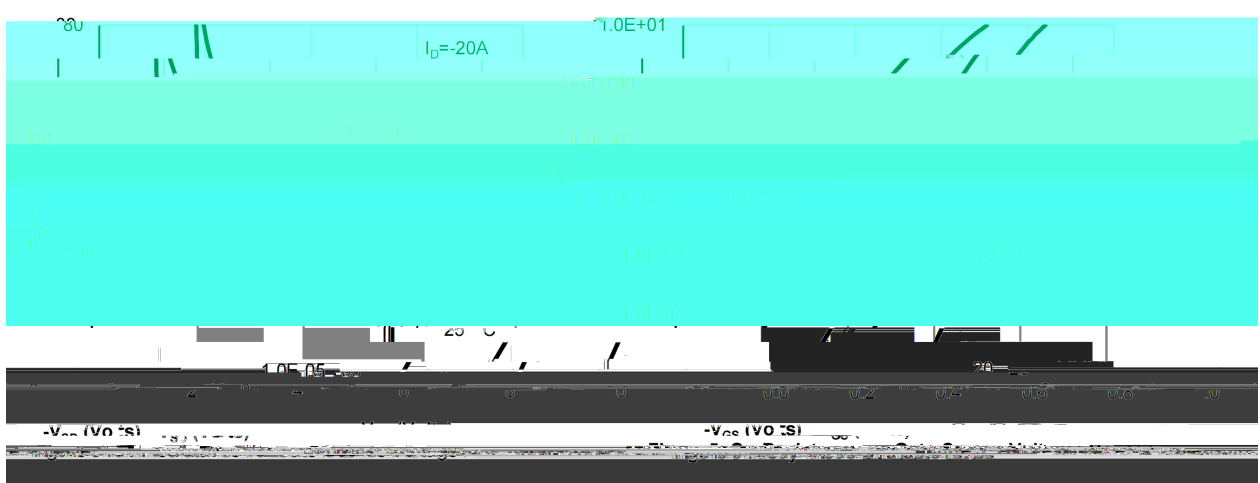
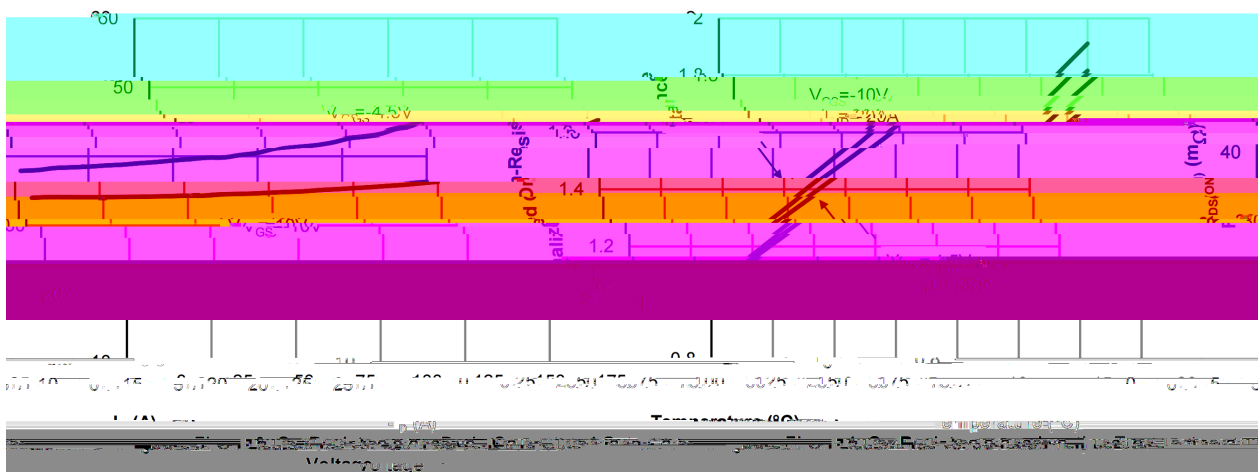
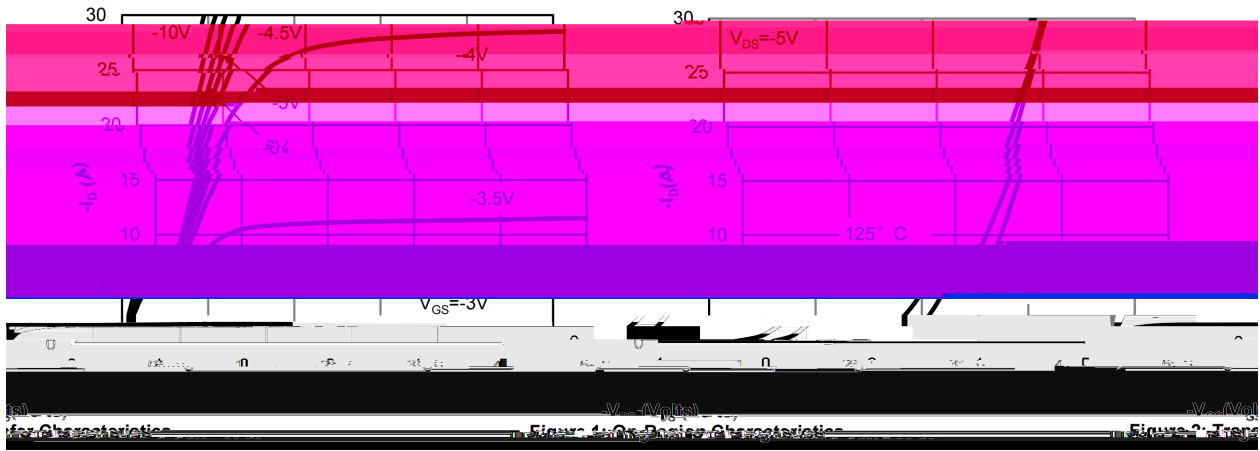
Low  $R_{DS(on)}$ , low gate charge, low  $C_{rss}$

@ f Parameter	... Z Symbol	f › Rating	% y Unit
Drain-Source Voltage	V <sub>DS</sub>	-60	V
Drain Current	I <sub>D</sub> (T <sub>C</sub> =25 )	-50	A
Drain Current - Pulsed	I <sub>DM</sub>	-200	A
Gate-Source Voltage	V <sub>GS</sub>	±20	V
Power Dissipation	P <sub>D</sub> (T <sub>C</sub> =25 )	85	W
Single Pulsed Avalanche Energy	E <sub>AS</sub>	250	mJ
Avalanche Current(L=0.5mH)	I <sub>AS</sub>	25	A
Junction and Storage Temperature Range	T <sub>j</sub> , T <sub>stg</sub>	-55 to 150	-
Thermal resistance, junction - ambient	t 0 10s	R <sub>θJA</sub>	25
	Steady-State		50
Thermal resistance, junction - case	Steady-State	R <sub>θJC</sub>	1.5

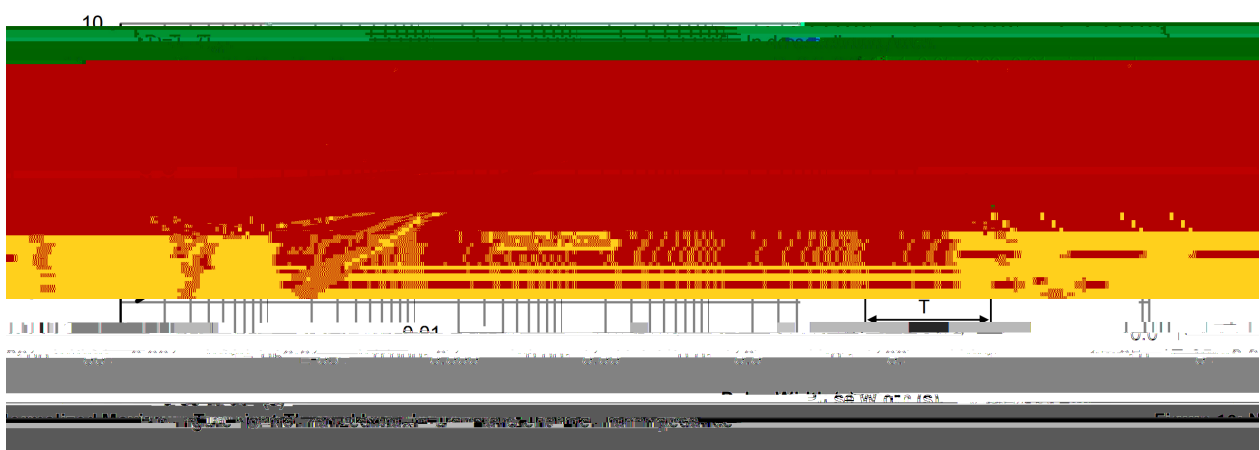
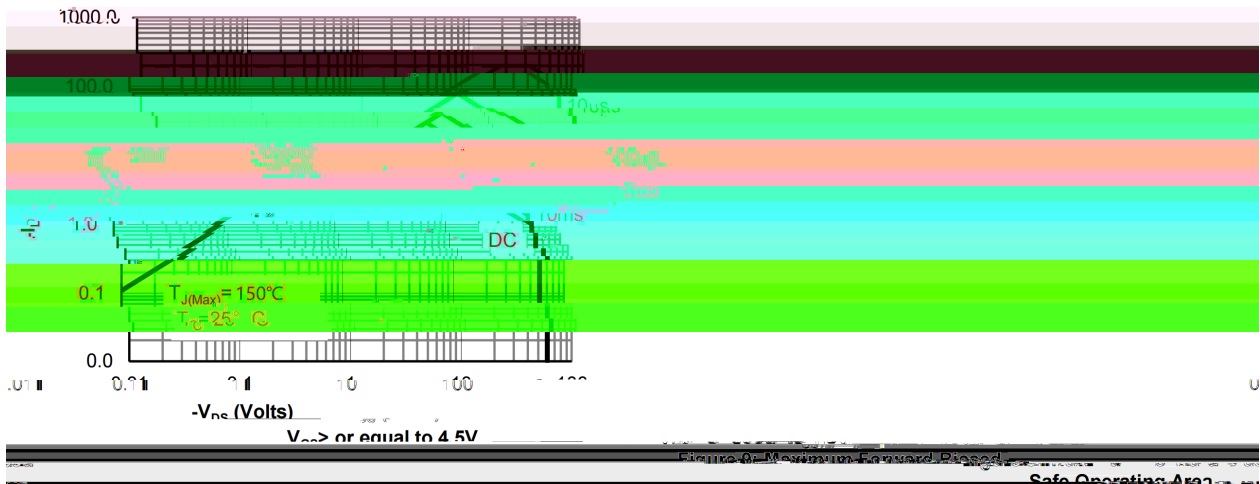
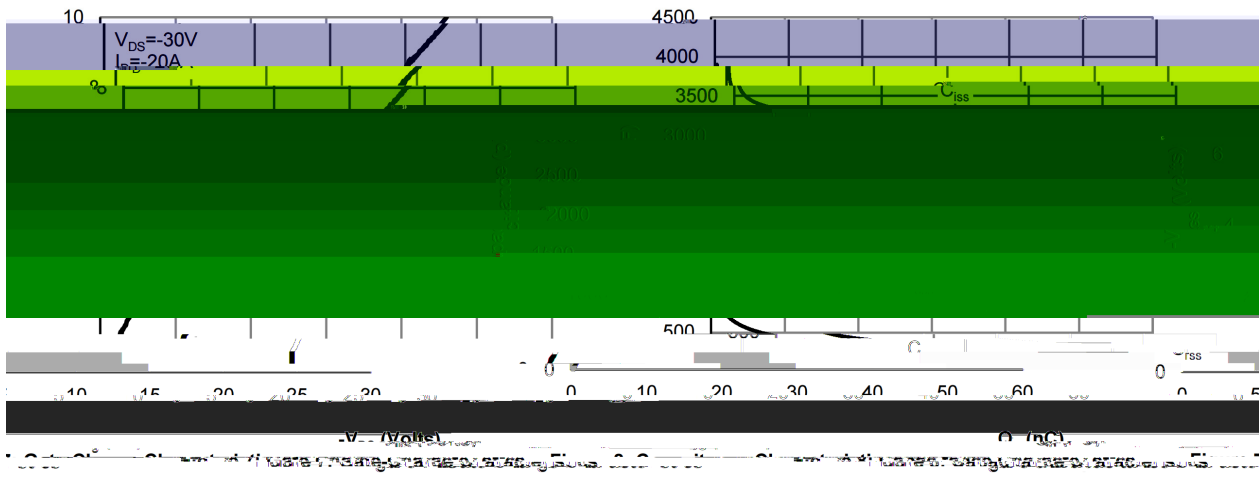
@ f Parameter	... Z Symbol	y i Ú ^ Test Conditions	Â 4 › Min	Á ° › Typ	Â Ý › Max	% y Unit
Drain-Source Breakdown Voltage	BV <sub>DSS</sub>	V <sub>GS</sub> =0V I <sub>D</sub> =-250 A	-60	-68		V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =-60V V <sub>GS</sub> =0V			-1.0	A
		V <sub>DS</sub> =-48V T <sub>C</sub> =150			-10	
Gate-Body Leakage Current Forward	I <sub>GSS</sub>	V <sub>GS</sub> =±20V V <sub>DS</sub> =0V			±0.1	A
Gate Threshold Voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> =V <sub>GS</sub> I <sub>D</sub> =-250 A	5.5	6.8	7.5	V

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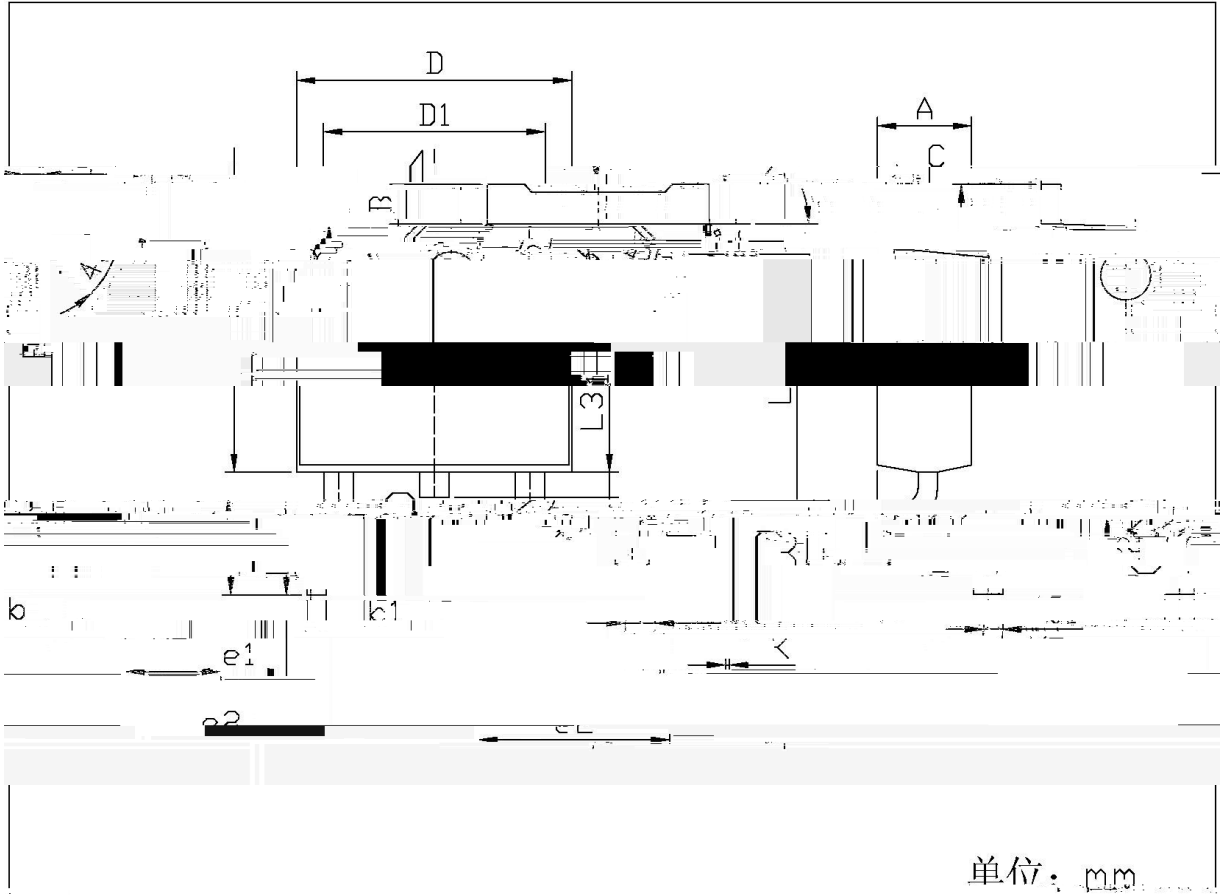
Electrical Characteristic Curve



Electrical Characteristic Curve



∅ □ = ) ∅ / Package Dimensions

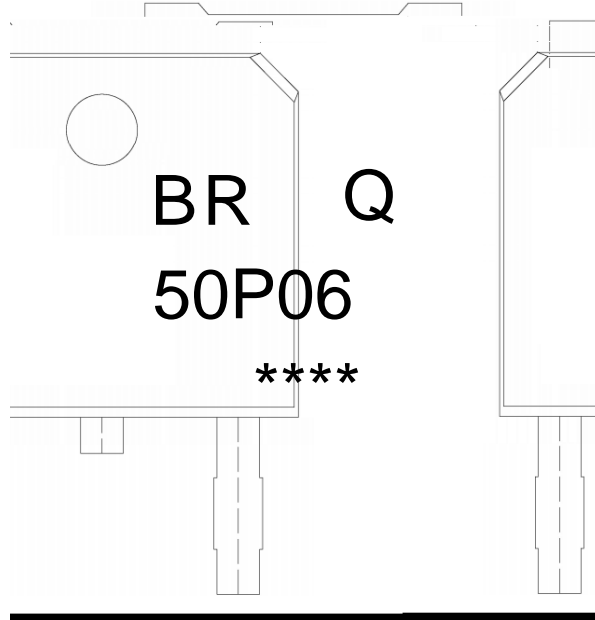


单位: mm

Dimensions	Millimeters		Dimensions In Millimeters	
	Min.	Max.	Min.	Max.
B	0.95	1.25	e1	2.24
b	0.70	0.80	b1	4.73
h	0.35	0.45	h1	9.85
Y	0.045	0.55	Y	2.53
6.45	6.75	13.00	0.00	0.00
D1	5.70	5.50	0.00	0.10

TO-252

, M y f / Marking Instructions



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 BR y           , [ W A  
 Q y            V ñ —)í D } ö œ  
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     y         ÿ D Z W A k š ÿ D Z J

Note:

- BR: Company Code
- Q: Automobile halogen-free product Code
- 50P06: Product Type Code
- \*\*\*\*: Lot No. Code, code change with Lot No

šWD t...•Žç (x/ ) / :KSVKXGZ[XK 6XULORK LUX /8 8KLRU] 9URJKXOTM 6


a ç y

Note:

- 1. Preheating: 150~200 - , Time: 60~120sec.
- 2. Peak Temp.: 255 r5 - , Duration: 5 r0.5sec.
- 3. Cooling Speed: 2~10 - /sec.

ÂD /Cã p ~ » ] / Resistance to Soldering Heat Test Conditions

"† y 260 r5 - ž • y 10 r1 sec. Temp.: 260±5 Time: 10±1 sec

G P á / Packaging SPEC.

2 & x / REEL

Package Type	Units ;>û !H					Dimension ;>û p . (unit /mm <sup>3</sup> )	
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Dimension Box ;>û
TO-252	2,e/T !5ôbPHêsNb Te 4â		YA0sN4è••Ø Â1"\$-y I... s1á #.Â ù Ga15"3	SQ15 15'15	SS S v Y•TMC`\$Q ññ 1H		