"Yب / Descriptions

N TO-220

N-CHANNEL MOSFET in a TO-220 Plastic Package.

◕ È / Features

$R_{DS(on)}$ C_{rss} AEC-Q101

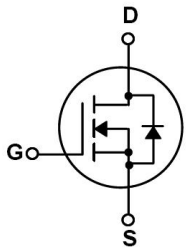
Low $R_{DS(on)}$,low gate charge, low C_{rss}, fast switching, Trench Technologies, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

¥ ِ / Applications

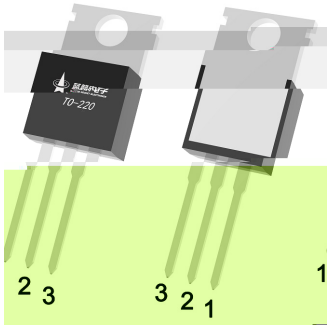
DC/DC

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.

Л ً ً ≠ ɛ / Equivalent Circuit



ã ﺍ ṳ ˜ / Pinning



PIN1 G PIN 2 D PIN 3 S

ł. ʜ ڈ / Marking

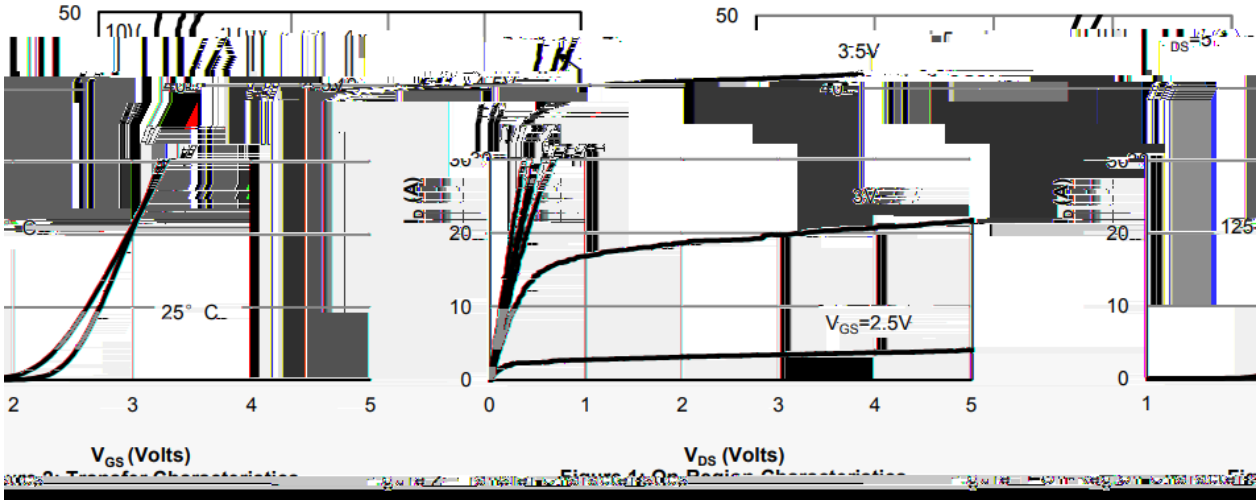
See Marking Instructions.

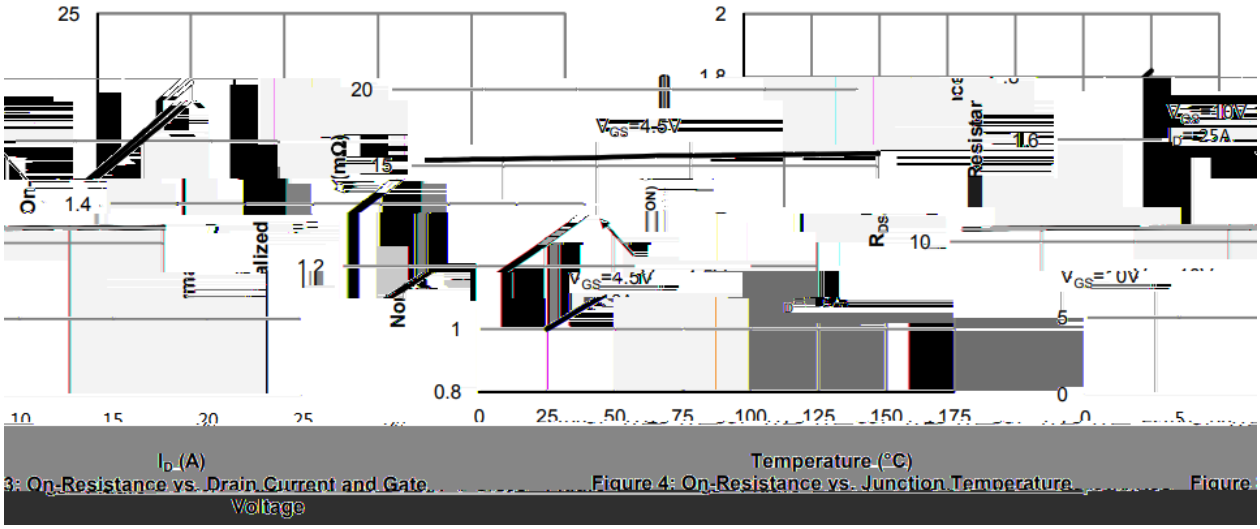
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	60	V
Drain Current	I_D(Tc=25)	50	A
Drain Current - Pulsed	I_{DM}	200	A
Gate-Source Voltage	V_{GS}	±20	V
Avalanche Current	I_{AS}		

≠ ∧ Ǝ Ạ / Electrical Characteristics(Ta=25 ⅃)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	V_{GS}=10V V_{DS}=30V R_L=1.5Ω R_{GEN}=3ϥ		8		ns
Turn-On Rise Time	t_r			5		
Turn-Off Delay Time	$t_{d(off)}$			30		
Turn-Off Fall Time	t_f			5.5		

≠ Ǝ ÃˊE ᛋ ƒ / Electrical Characteristic Curve





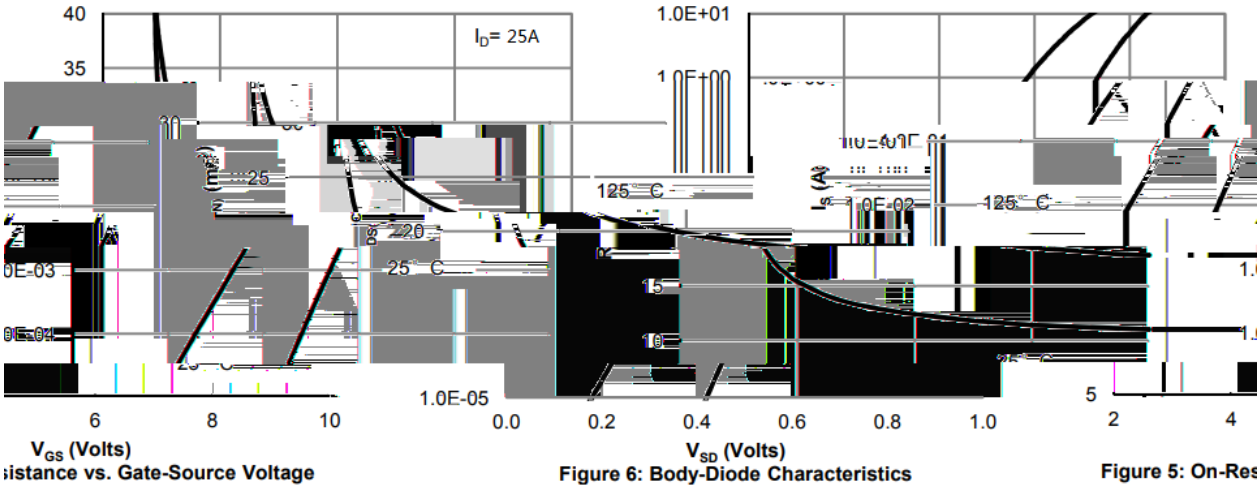


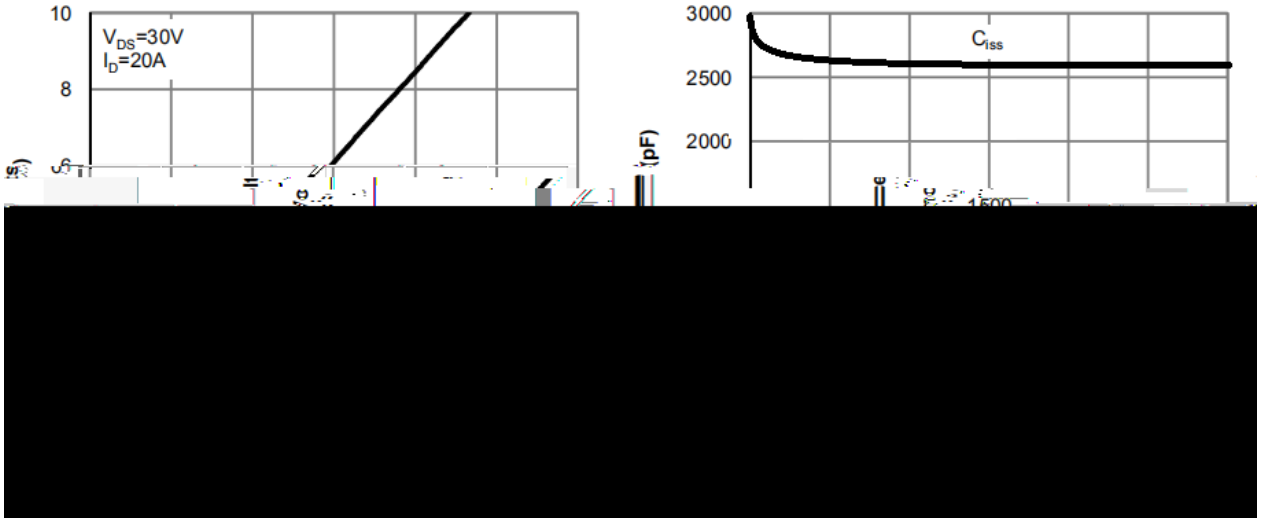
Figure 3: On-Resistance vs. Drain Current and Gate Voltage

Figure 4: On-Resistance vs. Junction Temperature

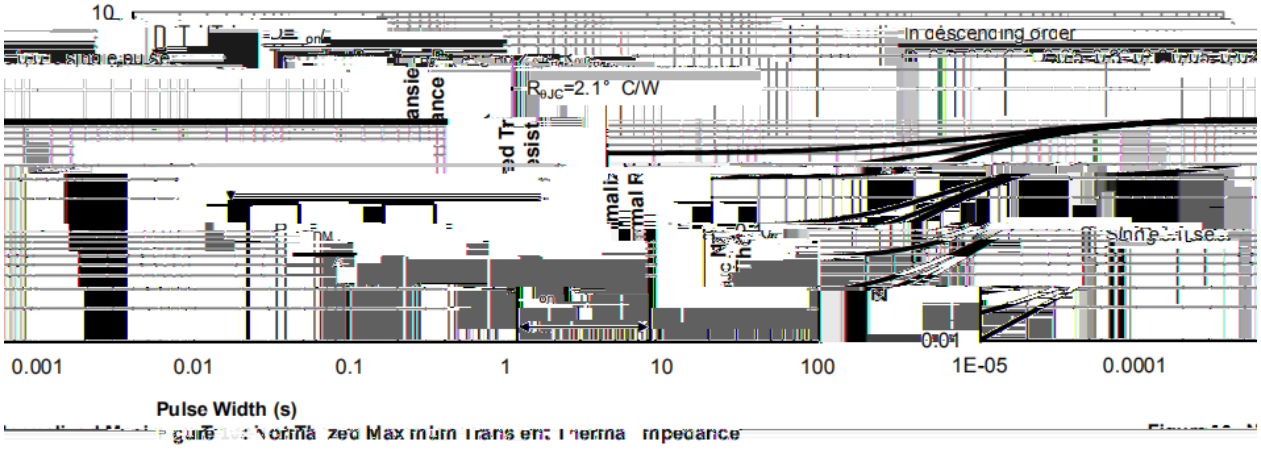
Figure 6: Body-Diode Characteristics

Figure 5: On-Res

≠ Ǝ ÃˊE ᛋ ƒ / Electrical Characteristic Curve

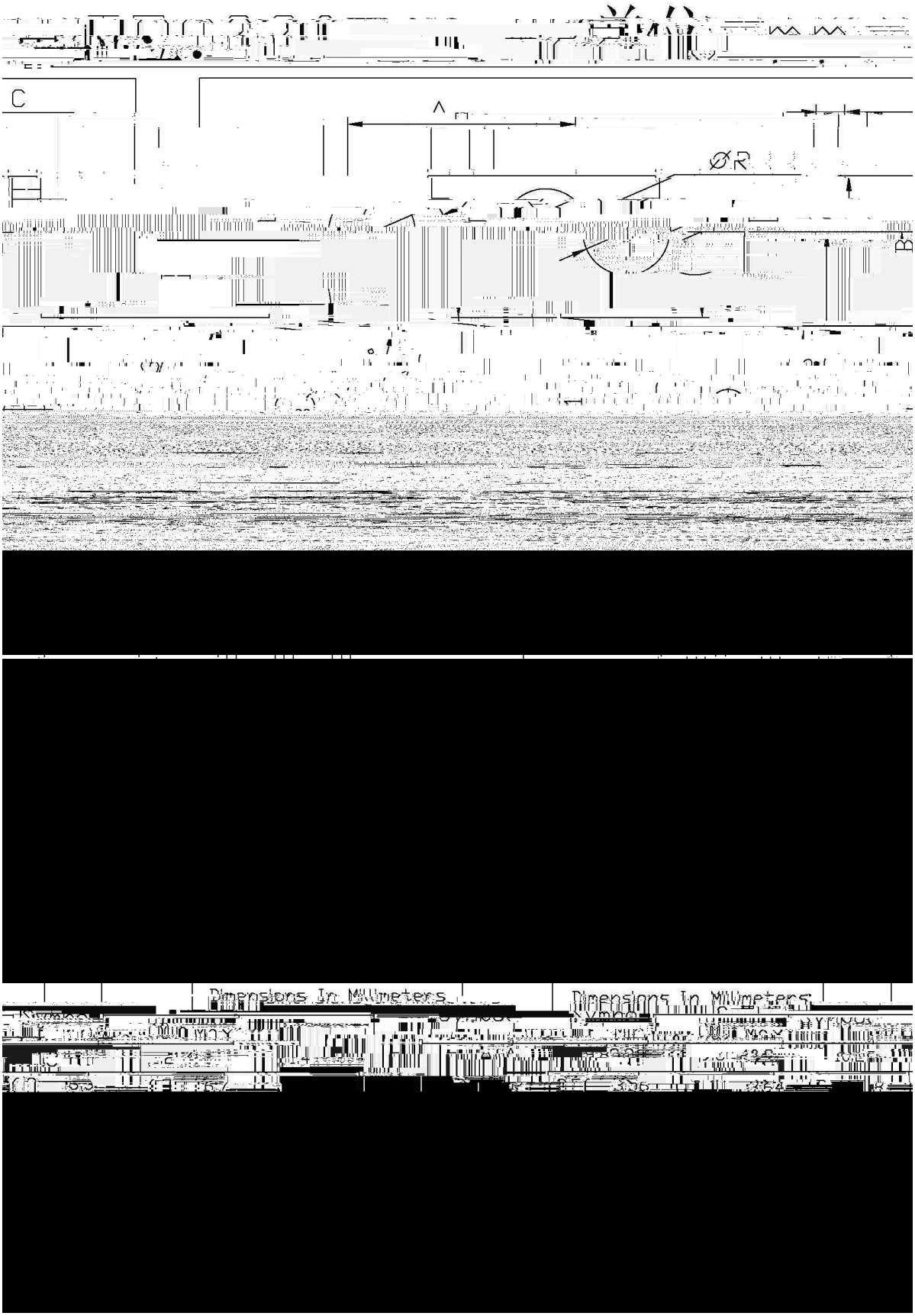




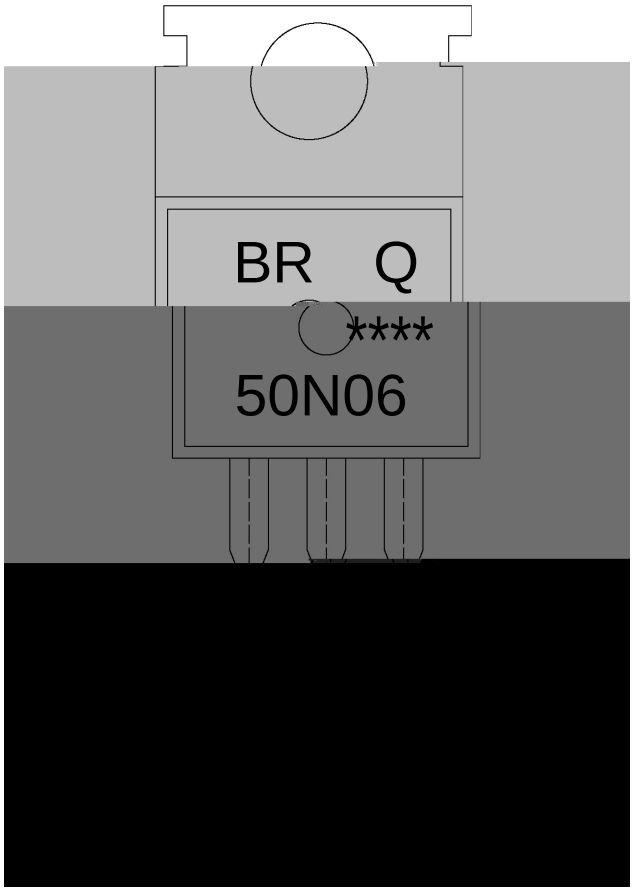


gure : Normalized Maximum Transient Thermal Impedance

ᵘ ĖÒĻ ƒ / Package Dimensions



ł. Ļ"Ω / Marking Instructions



BR

Q

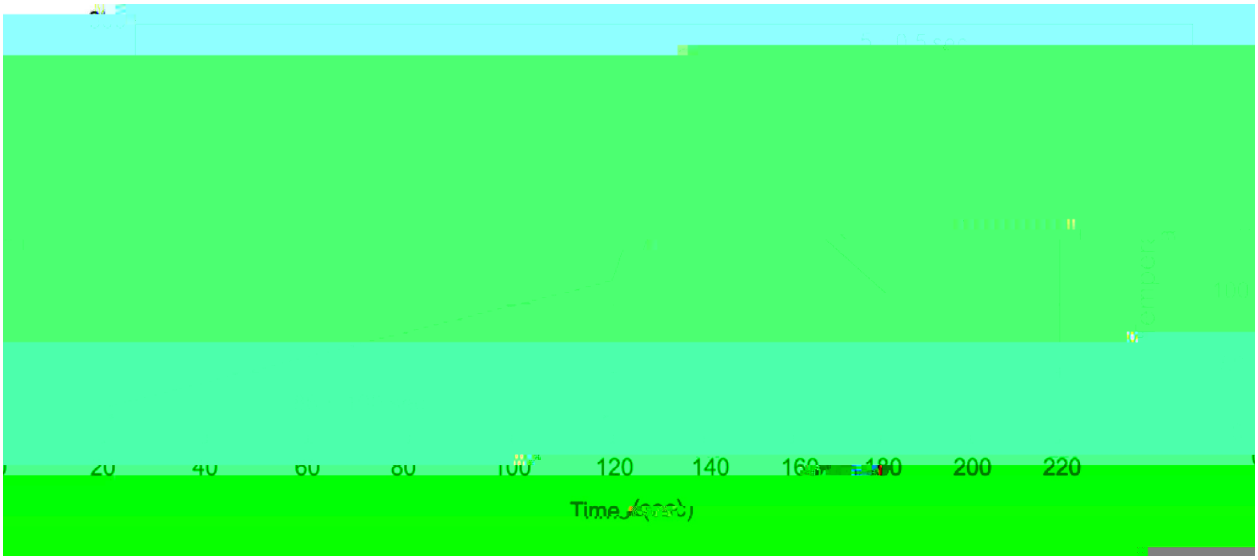
50N06

****

Note:

BR:	Company Code
Q:	Automobile halogen-free product Code
50N06:	Product Type
****:	Lot No. Code, code change with Lot No

↓ ș ╕ẃ´E ⅵ ƒ (ὼ ᴈ) / Temperature Profile for Dip Soldering(Pb-Free)



				Note:	
1	25 150		60 90sec;	1.Preheating:25~150 , Time:60~90sec.	
2	255±5		5±0.5sec;	2.Peak Temp.:255±5 , Duration:5±0.5sec.	
3		2 10	/sec.	3. Cooling Speed: 2~10 /sec.	

ⅎ ŭ ɋ ‾ `Y Ţ / Resistance to Soldering Heat Test Conditions

270±5	10±1 sec.	Temp.:270±5	Time:10±1 sec

ɒ Ŀ ᴋ — / Packaging SPEC.

/ BULK

Package Type	Units					Dimension		(unit mm³)
	Units/Bag /	Bags/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Bag	Inner Box	Outer Box
TO-220/F	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

/ TUBE

Package Type	Units					Dimension		(unit mm³)
	Units/Tube /	Tubes/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Tube	Inner Box	Outer Box
TO-220/F	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180

ä ѵ Ļ Ѿ / Notices