

Rev.A Mar.-2023

N TO-220

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

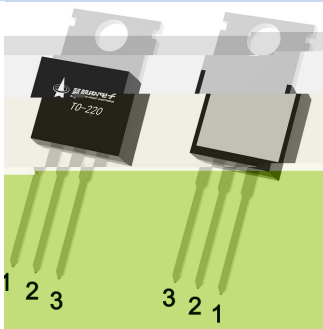
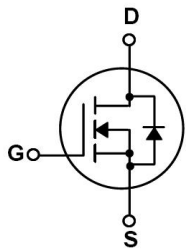
 $R_{DS(on)}$
 C_{rss}

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.

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.



PIN1 G

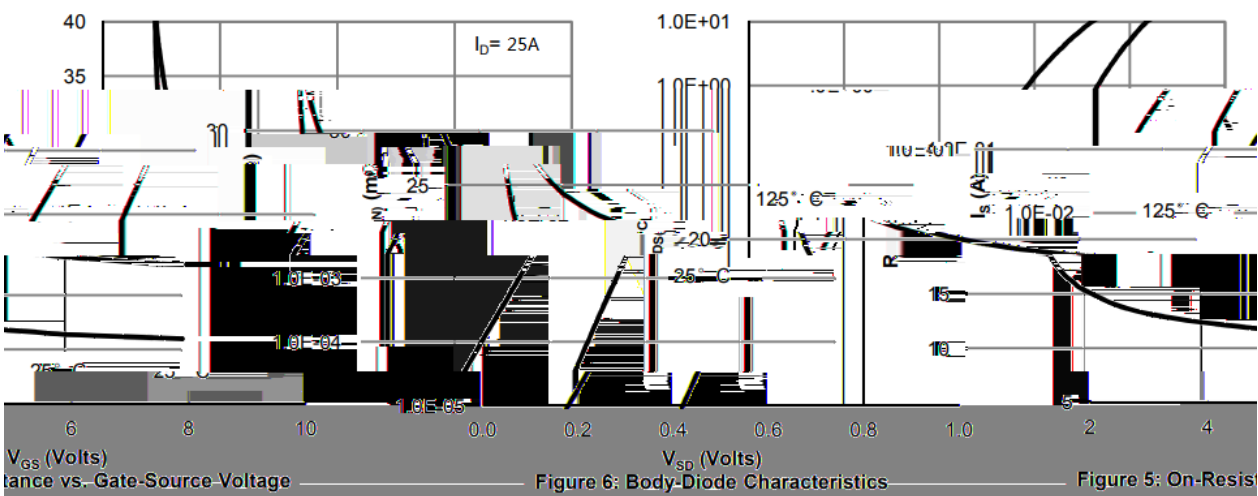
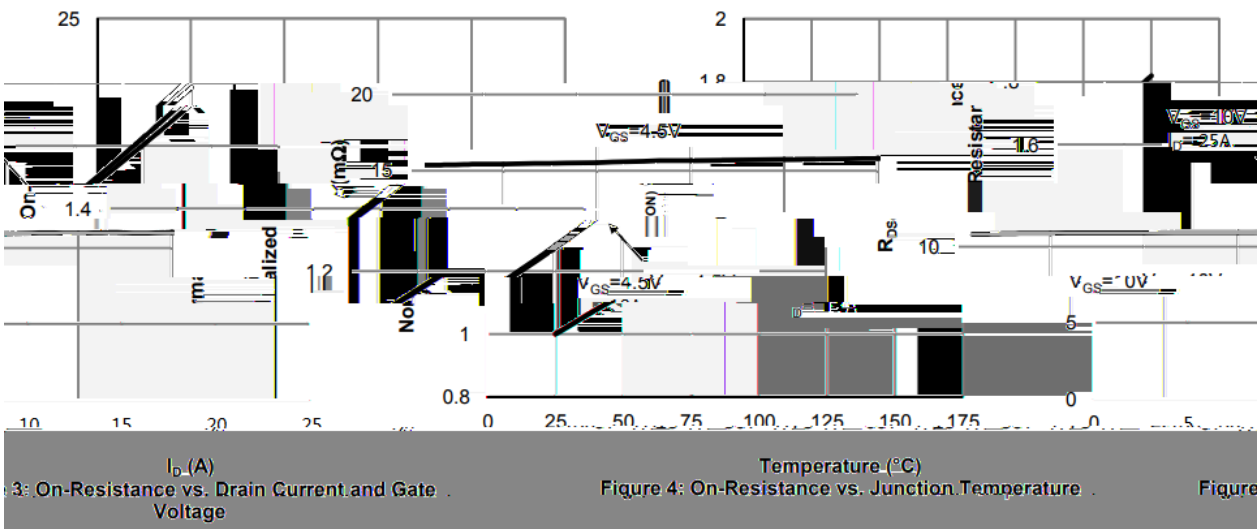
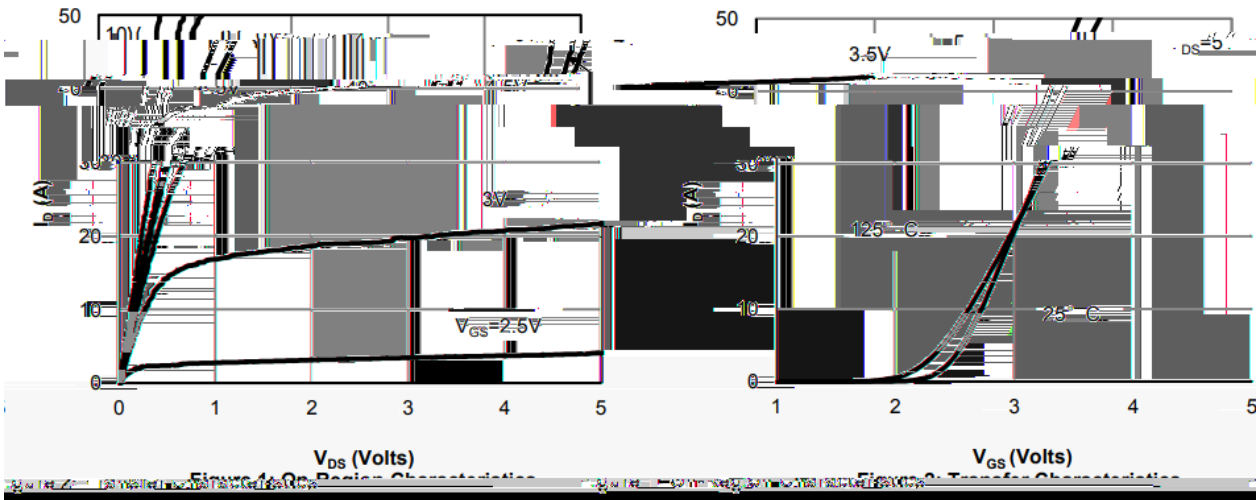
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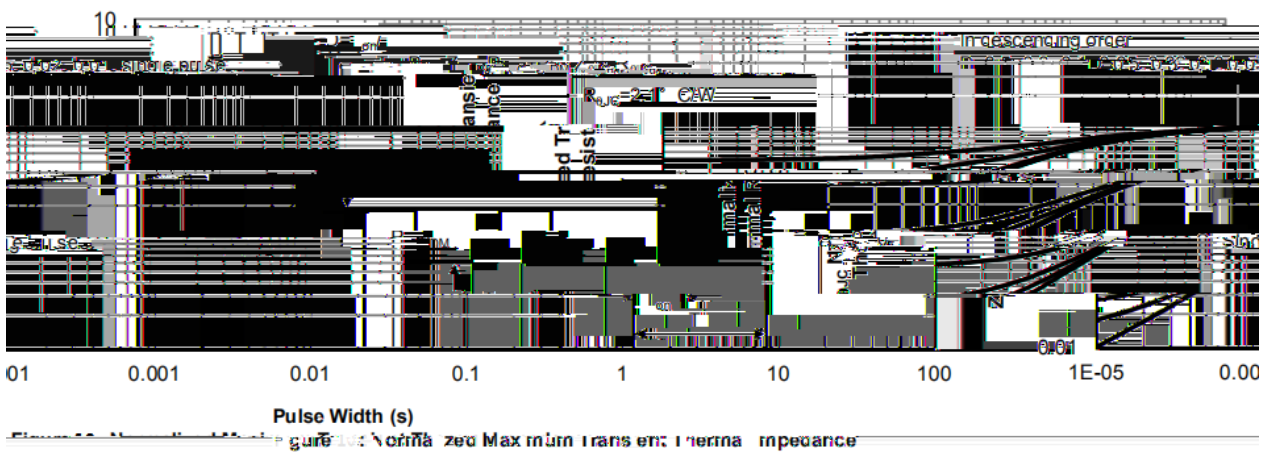
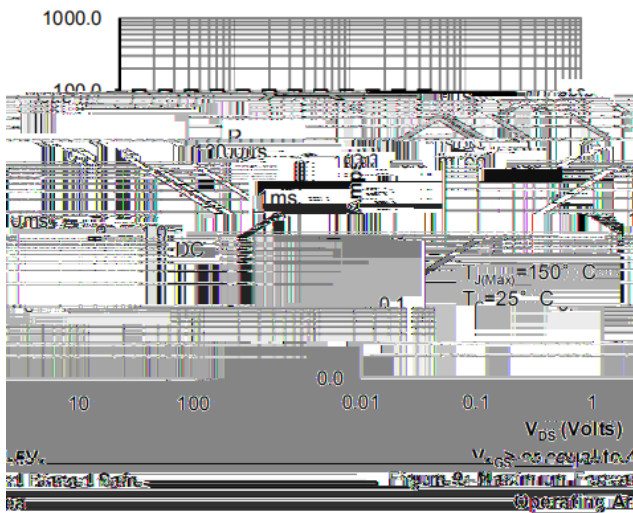
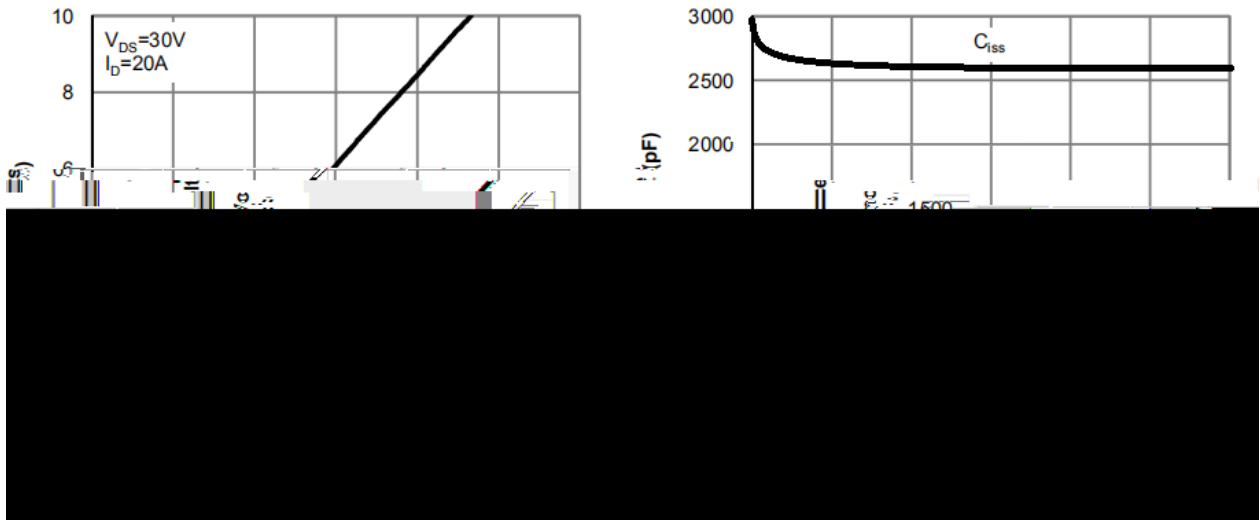
PIN 3 S

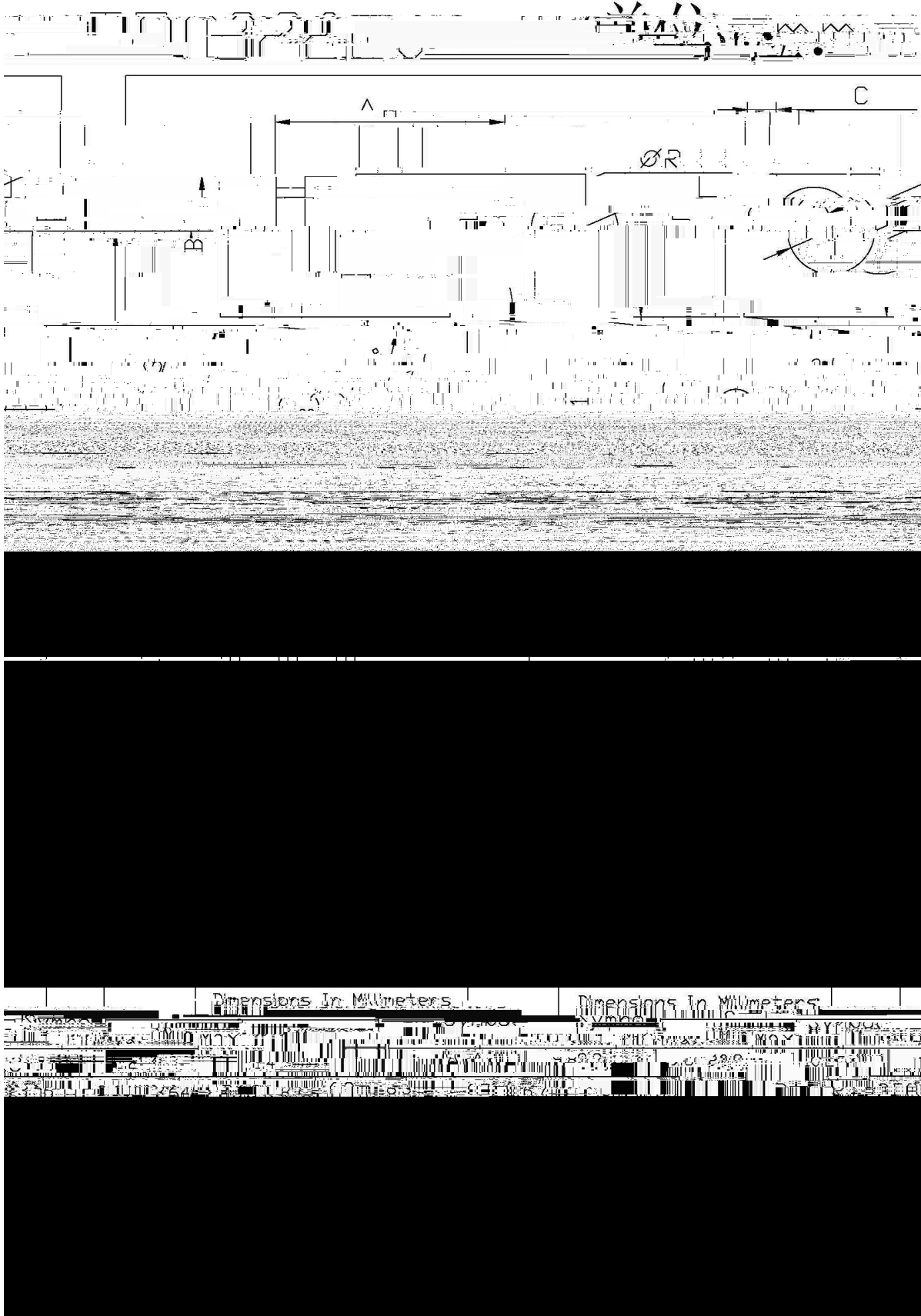
See Marking Instructions.

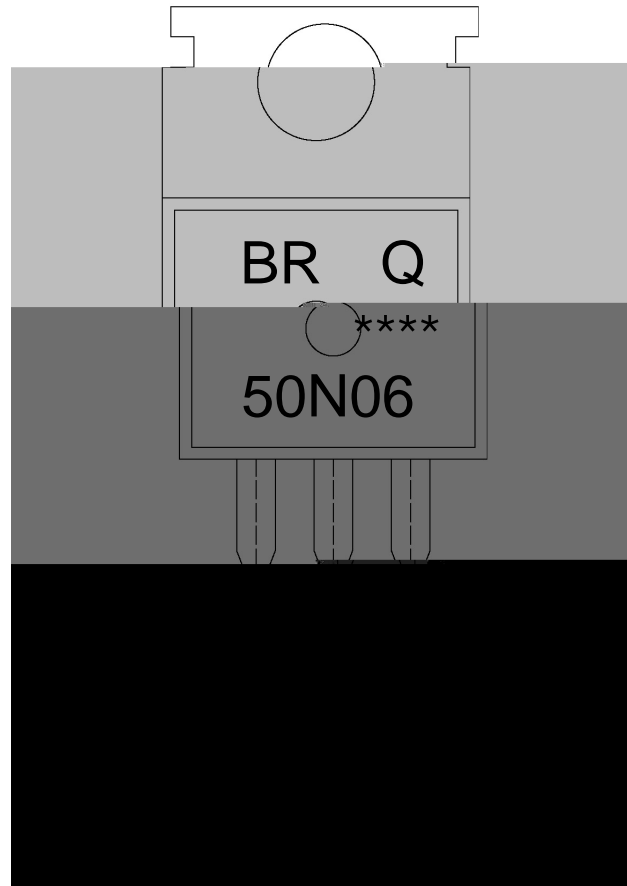
| Parameter | Symbol | Rating | Unit |
|------------------------|-----------------------|----------|------|
| Drain-Source Voltage | V_{DSS} | 60 | V |
| Drain Current | $I_D(T_C=25^\circ C)$ | 50 | A |
| Drain Current - Pulsed | I_{DM} | 200 | A |
| Gate-Source Voltage | V_{GS} | ± 20 | V |
| Avalanche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

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---------------------|--------------|--|-----|-----|-----|------|
| Turn-On Delay Time | $t_{d(on)}$ | $V_{GS}=10V$ $V_{DS}=30V$ $R_L=1.5$ $R_{GEN}=3$ | | 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 | | |









BR

Q

50N06

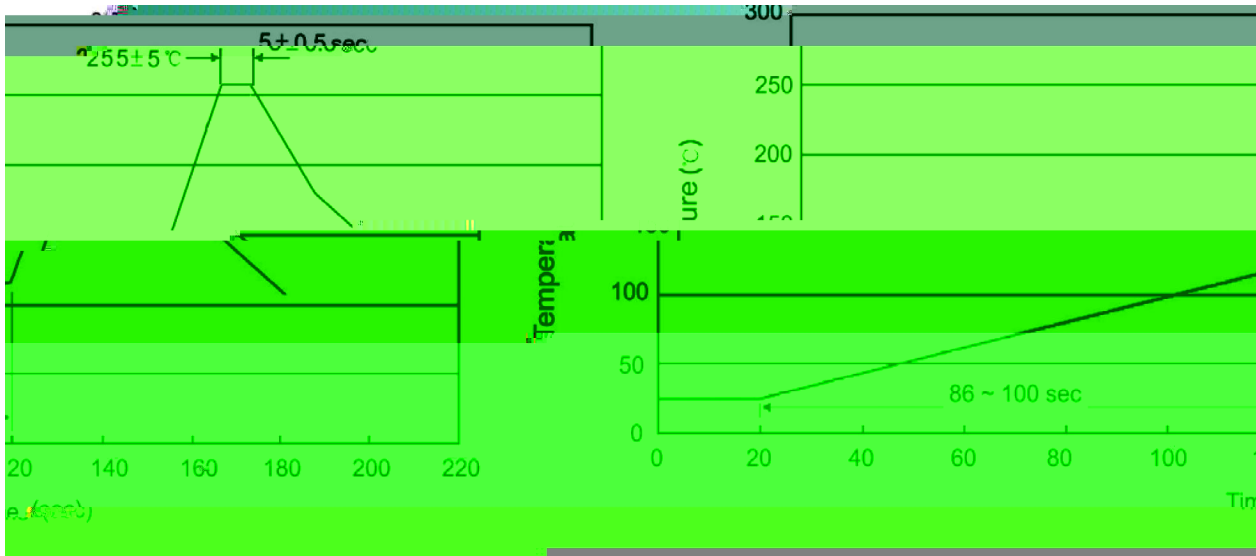
Note:

BR: Company Code

Q: Automobile halogen-free product Code

50N06: Product Type

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


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. |

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

/ BULK

| Package Type | Units | | | | | Dimension (unit mm ³) | | |
|--------------|-------------|------------------|-------------------|-------------------------|-------------------|-----------------------------------|-------------|-------------|
| | 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 mm ³) | | |
|--------------|--------------|-------------------|-------------------|-------------------------|-------------------|-----------------------------------|------------|-------------|
| | 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 |