



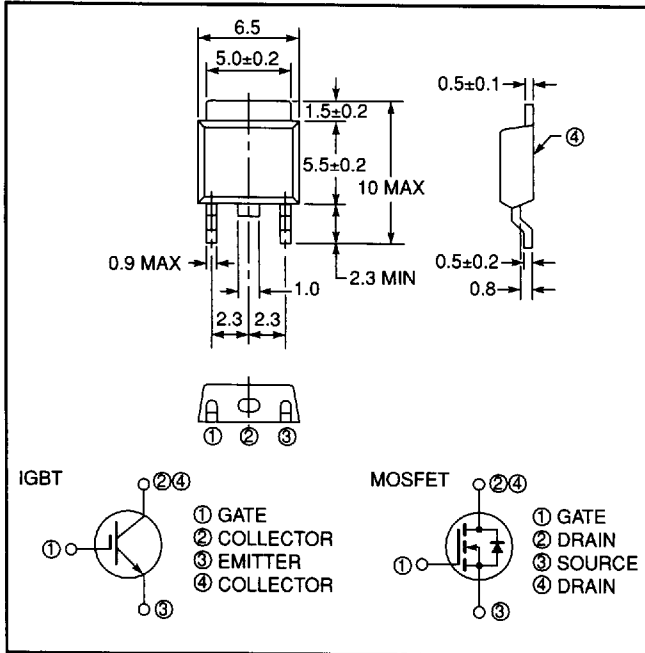
Discrete MOSFET - Low Voltage Trench Gate
2.5V Driver Voltage n-channel MOSFETs

| Device Number | Maximum Ratings, T _c = 25°C | | | | Electrical Characteristics | | | | Package | |
|---------------|--|--------------------|--------------------|----------------------|----------------------------|------|-------------------------|-----------------------|----------|------|
| | V _{DSS} (V) | I _D (A) | P _D (W) | V _{GSS} (V) | r _{DS(on)} (mΩ) | | V _{GS(th)} (V) | C _{iss} (pF) | | |
| | | | | | Typ. | Max. | | | Outline | Page |
| FS10ASH-03 | 30 | 30 | 20 | ±10 | 68 | 92 | 0.8 | 540 | MP-3 | 31 |
| FS10UMH-03 | 30 | 30 | 20 | ±10 | 68 | 92 | 0.8 | 540 | TO-220 | 31 |
| FS10VSH-03 | 30 | 30 | 20 | ±10 | 68 | 92 | 0.8 | 540 | TO-220S | 31 |
| FS10KMH-03 | 30 | 30 | 15 | ±10 | 68 | 92 | 0.8 | 540 | TO-220FN | 31 |
| FS30ASH-03 | 30 | 50 | 30 | ±10 | 34 | 46 | 0.8 | 1150 | MP-3 | 31 |
| FS30UMH-03 | 30 | 50 | 30 | ±10 | 34 | 46 | 0.8 | 1150 | TO-220 | 31 |
| FS30VSH-03 | 30 | 50 | 30 | ±10 | 34 | 46 | 0.8 | 1150 | TO-220S | 31 |
| FS30KMH-03 | 30 | 50 | 20 | ±10 | 34 | 46 | 0.8 | 1150 | TO-220FN | 31 |
| FS30SMH-03 | 30 | 50 | 30 | ±10 | 34 | 46 | 0.8 | 1150 | TO-3P | 32 |
| FS50ASH-03 | 30 | 50 | 35 | ±10 | 17 | 22 | 0.8 | 2300 | MP-3 | 31 |
| FS50UMH-03 | 30 | 50 | 45 | ±10 | 17 | 22 | 0.8 | 2300 | TO-220 | 31 |
| FS50VSH-03 | 30 | 50 | 45 | ±10 | 17 | 22 | 0.8 | 2300 | TO-220S | 31 |
| FS50KMH-03 | 30 | 50 | 25 | ±10 | 17 | 22 | 0.8 | 2300 | TO-220FN | 31 |
| FS50SMH-03 | 30 | 50 | 45 | ±10 | 17 | 22 | 0.8 | 2300 | TO-3P | 32 |
| FS70UMH-03 | 30 | 70 | 70 | ±10 | 10 | 14 | 0.8 | 4000 | TO-220 | 31 |
| FS70VSH-03 | 30 | 70 | 70 | ±10 | 10 | 14 | 0.8 | 4000 | TO-220S | 31 |
| FS70KMH-03 | 30 | 70 | 30 | ±10 | 10 | 14 | 0.8 | 4000 | TO-220FN | 31 |
| FS70SMH-03 | 30 | 70 | 70 | ±10 | 10 | 14 | 0.8 | 4000 | TO-3P | 32 |
| FS100UMH-03 | 30 | 100 | 125 | ±10 | 3.8 | 5.4 | 0.8 | 11000 | TO-220 | 31 |
| FS100VSH-03 | 30 | 100 | 125 | ±10 | 3.8 | 5.4 | 0.8 | 11000 | TO-220S | 31 |
| FS100KMH-03 | 30 | 100 | 35 | ±10 | 3.8 | 5.4 | 0.8 | 11000 | TO-220FN | 31 |
| FS100SMH-03 | 30 | 100 | 150 | ±10 | 3.8 | 5.4 | 0.8 | 11000 | TO-3P | 32 |
| FS5ASH-06 | 60 | 5 | 20 | ±10 | 112 | 150 | 0.8 | 540 | MP-3 | 31 |
| FS5UMH-06 | 60 | 5 | 20 | ±10 | 112 | 150 | 0.8 | 540 | TO-220 | 31 |
| FS5VSH-06 | 60 | 5 | 20 | ±10 | 112 | 150 | 0.8 | 540 | TO-220S | 31 |
| FS5KMH-06 | 60 | 5 | 15 | ±10 | 112 | 150 | 0.8 | 540 | TO-220FN | 31 |
| FS10ASH-06 | 60 | 10 | 30 | ±10 | 54 | 73 | 0.8 | 1150 | MP-3 | 31 |
| FS10UMH-06 | 60 | 10 | 30 | ±10 | 54 | 73 | 0.8 | 1150 | TO-220 | 31 |
| FS10VSH-06 | 60 | 10 | 30 | ±10 | 54 | 73 | 0.8 | 1150 | TO-220S | 31 |
| FS10KMH-06 | 60 | 10 | 20 | ±10 | 54 | 73 | 0.8 | 1150 | TO-220FN | 31 |
| FS10SMH-06 | 60 | 10 | 30 | ±10 | 54 | 73 | 0.8 | 1150 | TO-3P | 32 |
| FS30ASH-06 | 60 | 30 | 35 | ±10 | 25 | 30 | 0.8 | 2000 | MP-3 | 31 |
| FS30UMH-06 | 60 | 30 | 45 | ±10 | 25 | 30 | 0.8 | 2000 | TO-220 | 31 |
| FS30VSH-06 | 60 | 30 | 45 | ±10 | 25 | 30 | 0.8 | 2000 | TO-220S | 31 |
| FS30KMH-06 | 60 | 30 | 25 | ±10 | 25 | 30 | 0.8 | 2000 | TO-220FN | 31 |
| FS30SMH-06 | 60 | 30 | 45 | ±10 | 25 | 30 | 0.8 | 2000 | TO-3P | 32 |
| FS50UMH-06 | 60 | 50 | 70 | ±10 | 15 | 21 | 0.8 | 4000 | TO-220 | 31 |
| FS50VSH-06 | 60 | 50 | 70 | ±10 | 15 | 21 | 0.8 | 4000 | TO-220S | 31 |
| FS50KMH-06 | 60 | 50 | 30 | ±10 | 15 | 21 | 0.8 | 4000 | TO-220FN | 31 |
| FS50SMH-06 | 60 | 50 | 70 | ±10 | 15 | 21 | 0.8 | 4000 | TO-3P | 32 |
| FS70UMH-06 | 60 | 70 | 125 | ±10 | 5.5 | 7.5 | 0.8 | 11000 | TO-220 | 31 |
| FS70VSH-06 | 60 | 70 | 125 | ±10 | 5.5 | 7.5 | 0.8 | 11000 | TO-220S | 31 |
| FS70KMH-06 | 60 | 70 | 35 | ±10 | 5.5 | 7.5 | 0.8 | 11000 | TO-220FN | 31 |
| FS70SMH-06 | 60 | 70 | 150 | ±10 | 5.5 | 7.5 | 0.8 | 11000 | TO-3P | 32 |

r_{DS(on)} (mΩ) - shows maximum value of on-resistance at V_{GS} = 4V

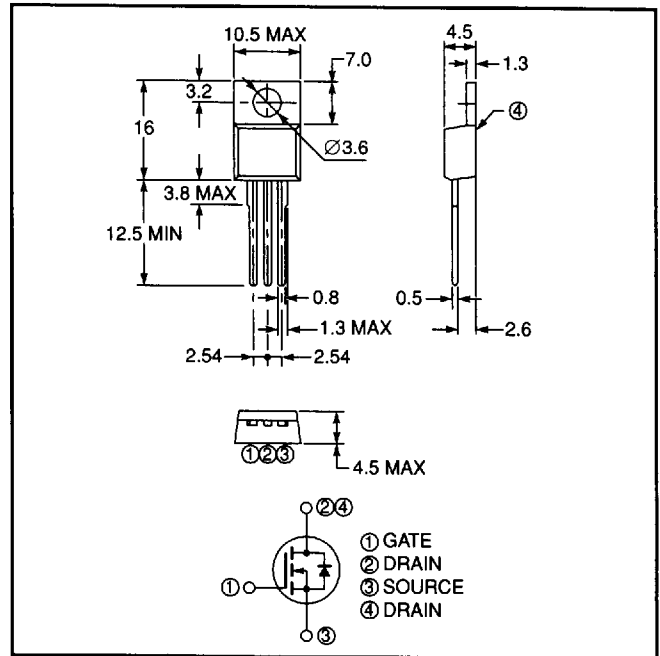
Device Outline Drawings

MP-3



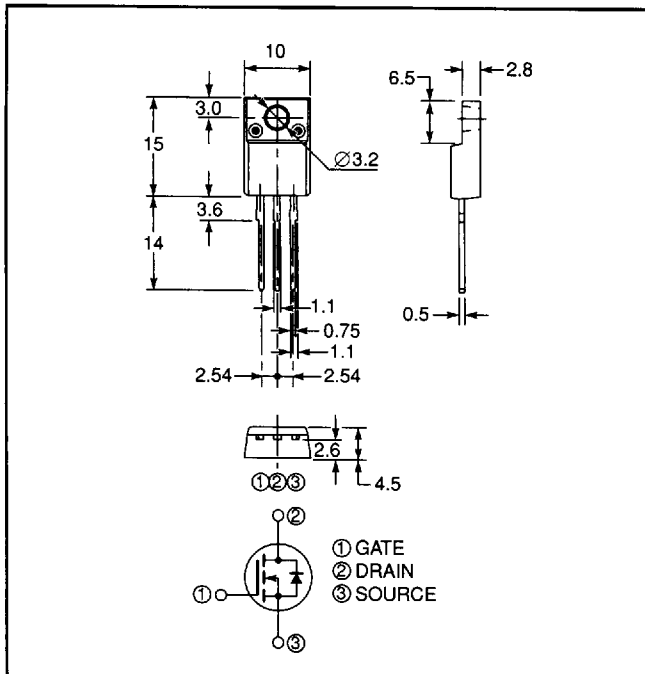
IGBT CT**AS-8
 MOSFET FS**AS-8

TO-220



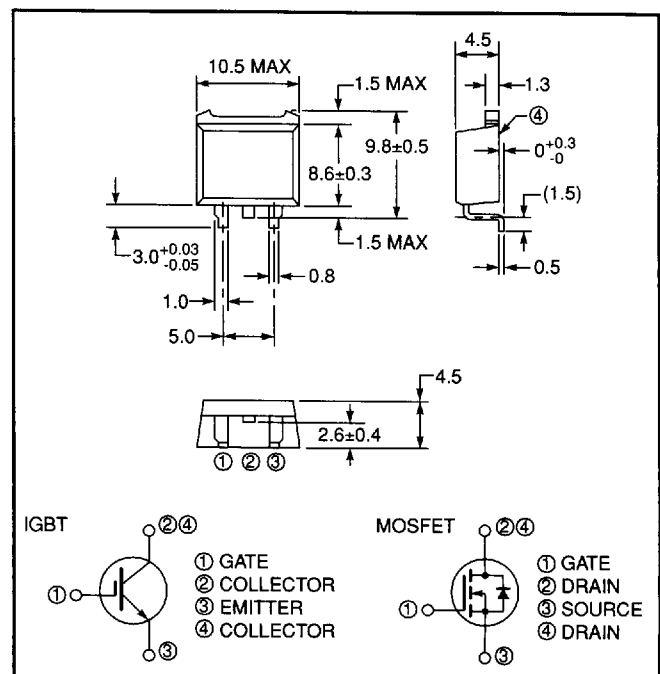
MOSFET FK**UM-**, FS**UM-**

TO-220FN



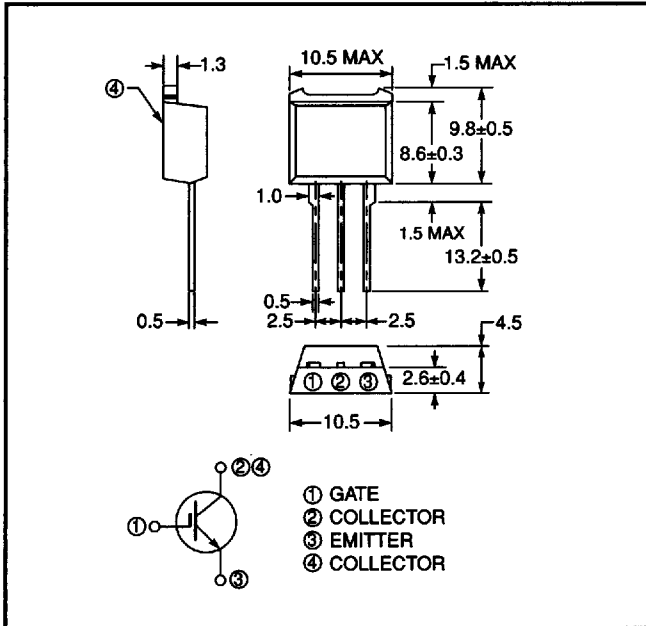
MOSFET FK**KM-**, FS**KM-**

TO-220S



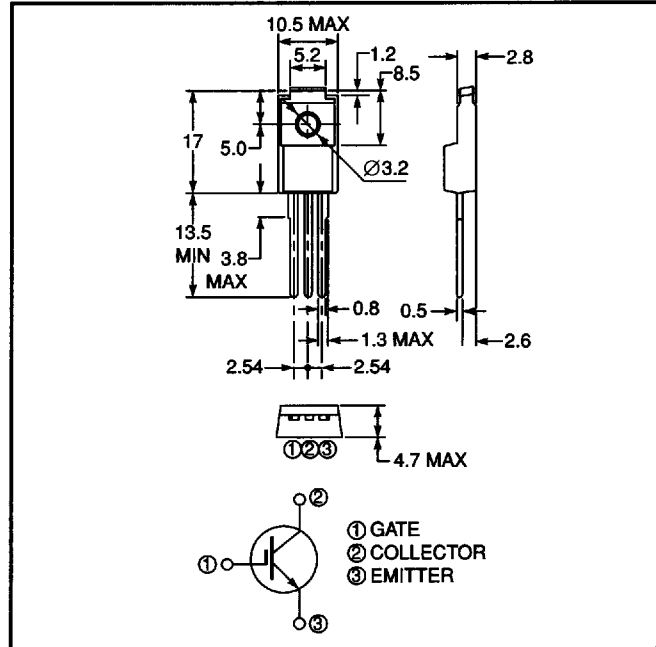
IGBT CT**VS-8
 MOSFET FK**VS-**, FS**VS-**

TO-220C



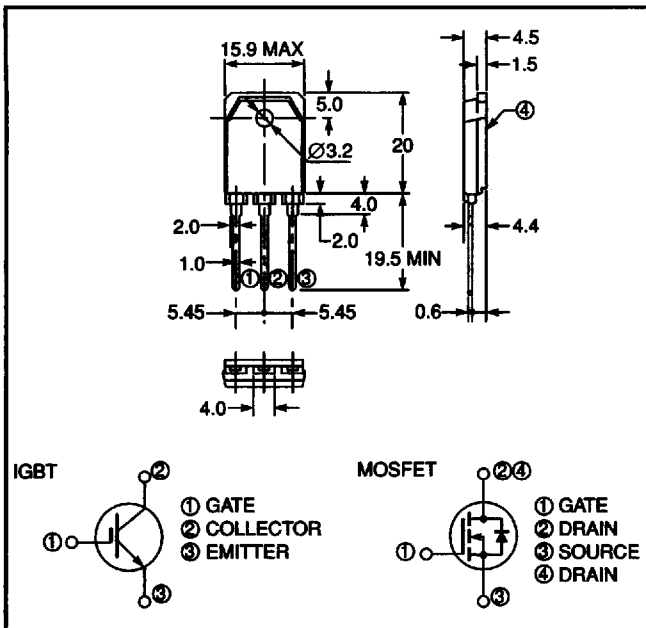
IGBT CT**VM-8

TO-220F



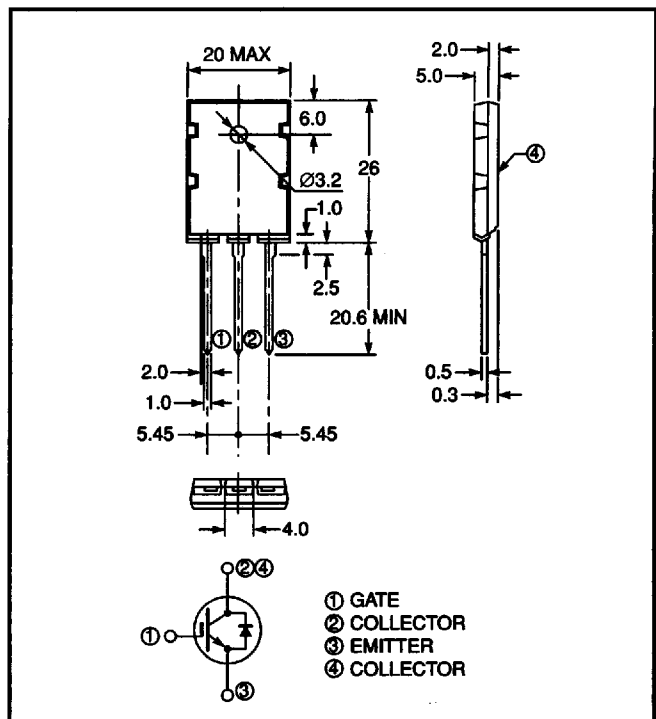
IGBT CT**TM-**

TO-3P



IGBT CT**SM-8
 MOSFET FK**SM-**, FS**SM-**

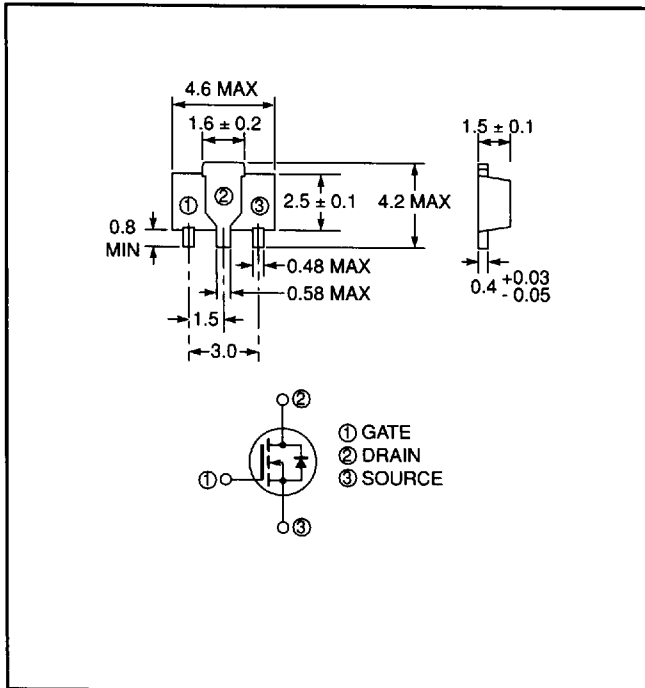
TO-3PL



IGBT CT**AM-**

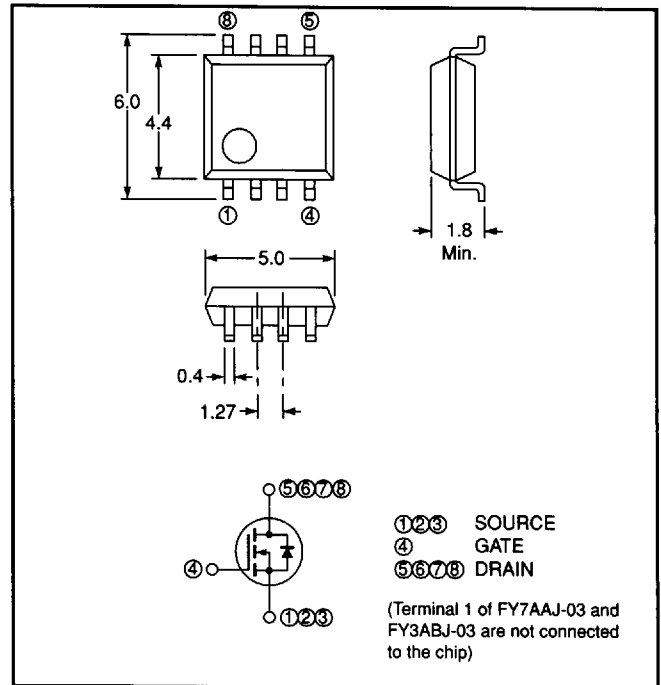
Device Outline Drawings

SOT-89



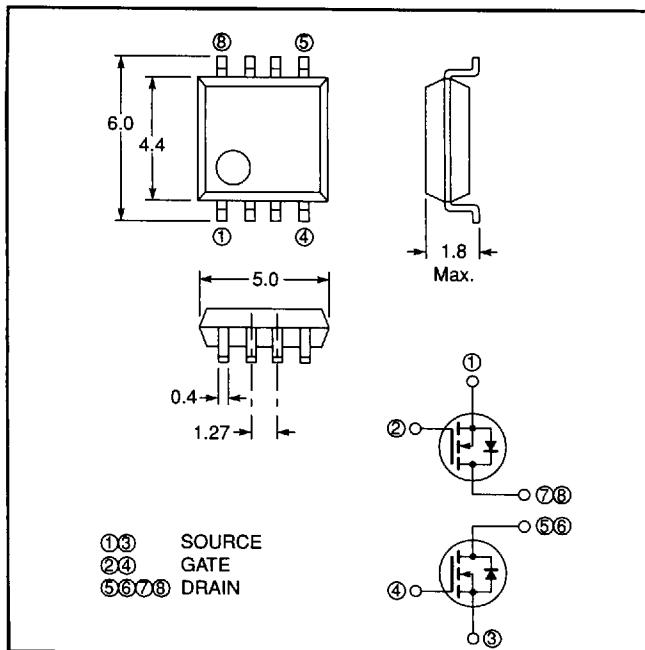
MOSFET FS**, FX**

SOP-8 (Single)



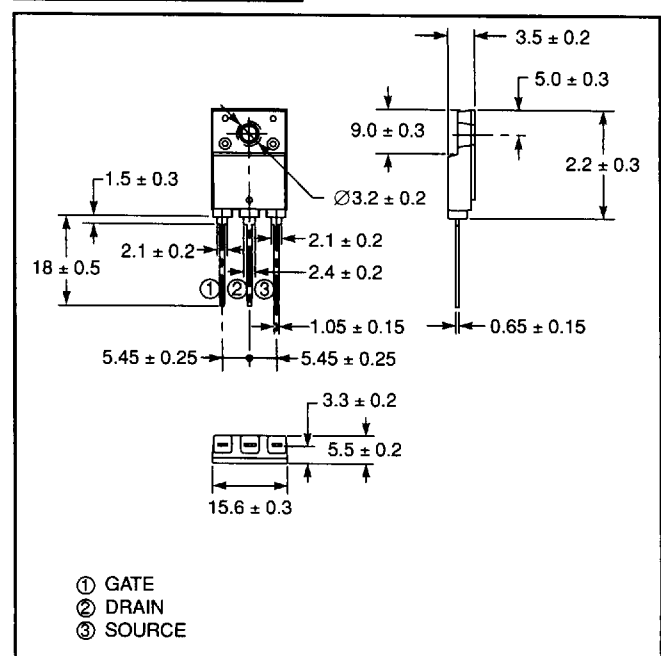
MOSFET FY**

SOP-8 (Dual)



MOSFET FY**

TO-3PF



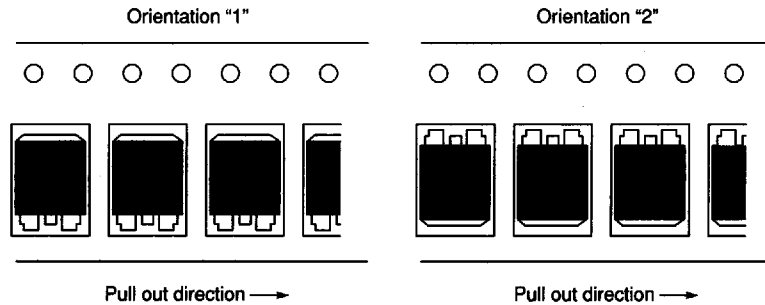
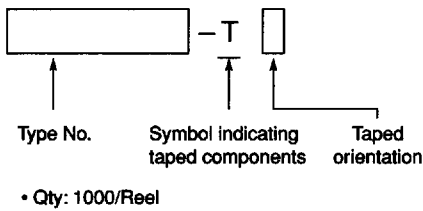
MOSFET FS**RM-**

MOSFET Packing Quantities and Types

| Package | Outline Code | Packing | Minimum Quantity per Package |
|----------|--------------|---------|------------------------------|
| TO-220 | UM | Bag | 100 |
| TO-220FN | KM | Tube | 50 |
| TO-220S | VS | Bag | 100 |
| TO-220S | VS | Reel | 1000 |
| TO-3P | SM | Bag | 20 |
| MP-3 | AS | Bag | 500 |
| MP-3 | AS | Reel | 3000 |
| SOP-8 | FY | Reel | 3000 |

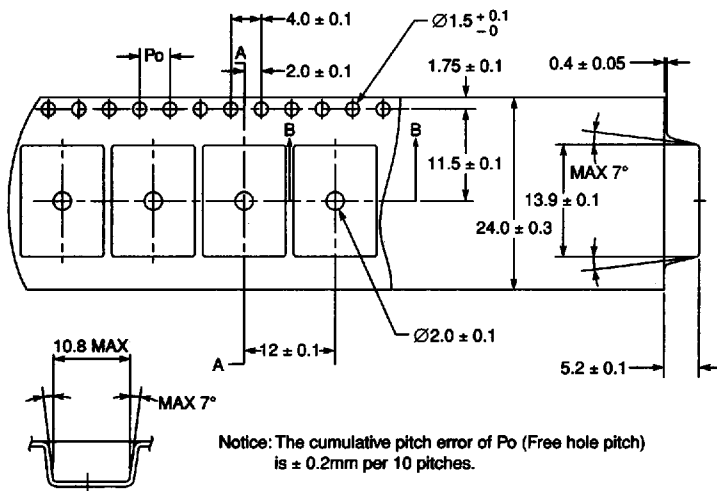
TO-220S Taping

(a) Marking

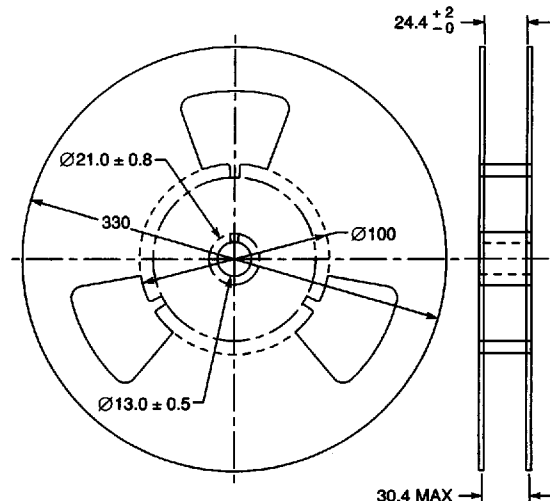


(b) Taping

• Tape Shape and Dimensions

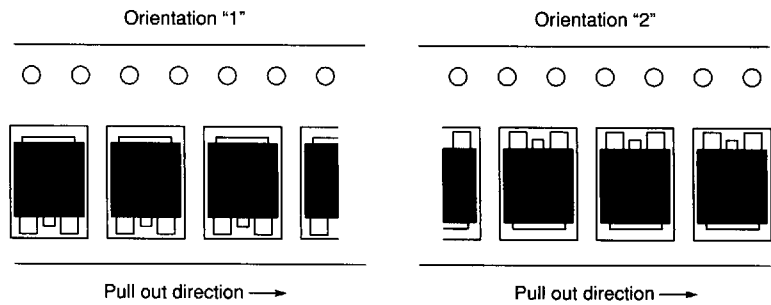
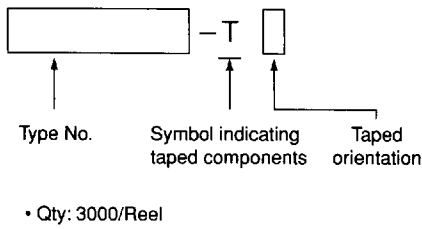


• Reel Shape and Dimensions



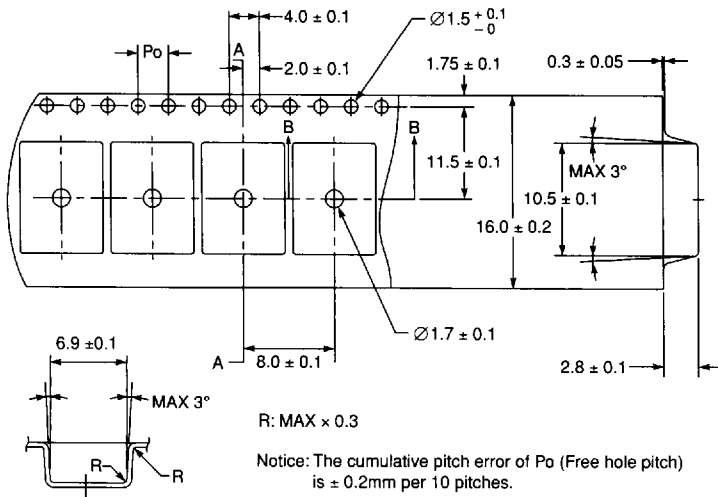
MP-3 Taping

(a) Marking

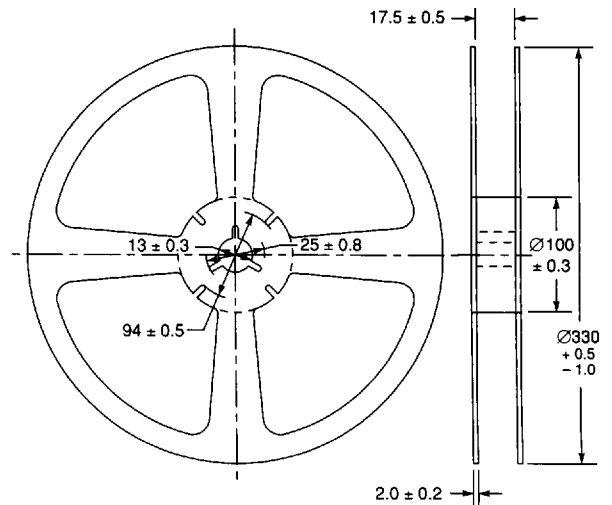


(b) Taping

• Tape Shape and Dimensions

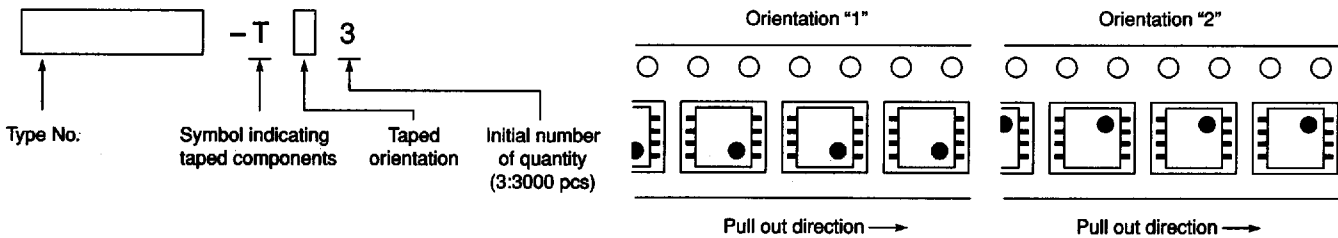


• Reel Shape and Dimensions



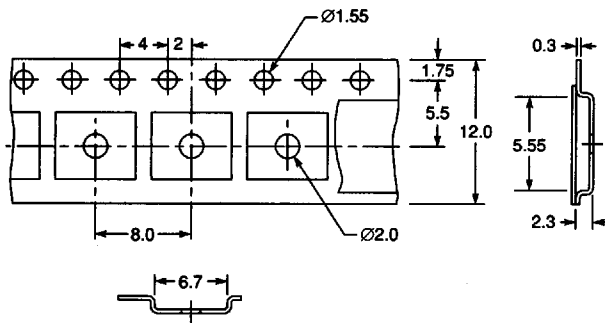
SOP-8 Taping

(a) Marking

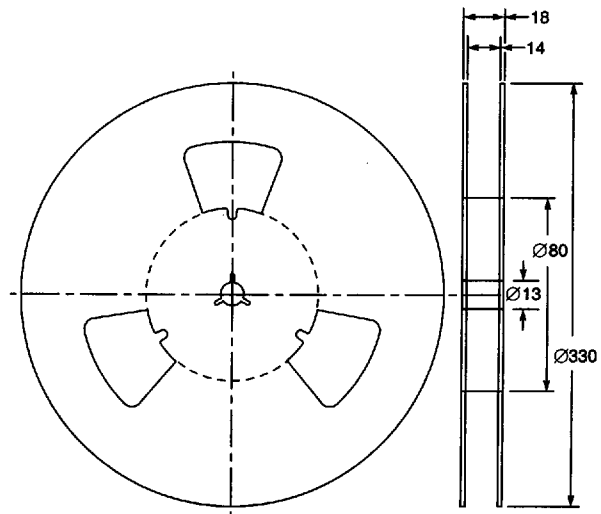


(b) Taping

- Tape Shape and Dimensions

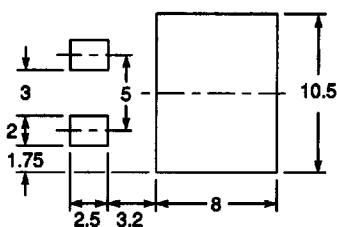


- Reel Shape and Dimensions

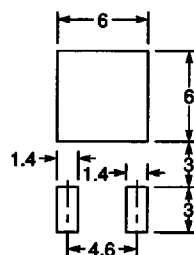


Recommended Mounting Pad

TO-220S Package



MP-3 Package



SOP-8 Package

