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1.DATA SHEET

BC856 SERIES

PNP GENERAL PURPOSE TRANSISTORS

VOLTAGE 65/45/30 Volts **POWER** 225 mW

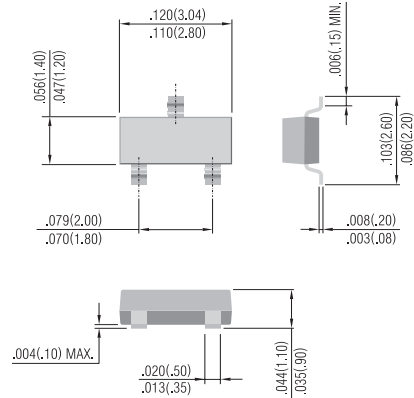
FEATURES

General Purpose Amplifier Applications
 NPN Epitaxial Silicon, Planar Design
 Collector Current $I_C = -100\text{mA}$
 Complimentary (PNP) Devices : BC846/BC847/BC848/BC849 Series
 In compliance with EU RoHS 2002/95/EC directives

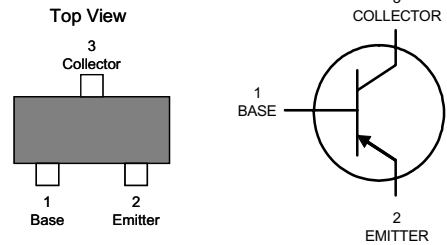
MECHANICAL DATA

Case: SOT-23
 Terminals : Solderable per MIL-STD-750,Method 2026
 Approx Weight: 0.008 grams
 Device Marking :

SOT-23 Unit: inch (mm)



| | | | |
|------------|------------|------------|------------|
| BC856A=56A | BC857A=57A | BC858A=58A | |
| BC856B=56B | BC857B=57B | BC858B=58B | BC859B=59B |
| | BC857C=57C | BC858C=58C | BC859C=59C |



ABSOLUTE MAXIMUM RATINGS

| PARAMETER | SYMBOL | BC856 | BC857 | BC858 | BC859 | UNITS |
|--|----------------|-------|-------------|-------|-------|-------|
| Collector-Emitter Voltage | V_{CE0} | -65 | -45 | -30 | | V |
| Collector-Base Voltage | V_{CB0} | -80 | -50 | -30 | | V |
| Emitter-Base Voltage | V_{EB0} | | -5 | | | V |
| Collector Current-Continuous | I_C | | -100 | | | mA |
| Max Power Dissipation (Note 1) | P_{TOT} | | 225 | | | mW |
| Operating Junction and Storage Temperature Range | T_J, T_{STG} | | -50 TO +150 | | | °C |



BC856 SERIES

THERMAL CHARACTERISTICS

| PARAMETER | SYMBOL | Value | UNIT |
|--|-----------------|-------|---------------|
| Thermal Resistance , Junction to Ambient | $R_{\theta JA}$ | 556 | $^{\circ}C/W$ |

Note 1: Transistor mounted on FR-5 board 1.0 x 0.75 x 0.062 in. Minimum pad layout.

ELECTRICAL CHARACTERISTICS ($T_J=25\text{ C}$, unless otherwise noted)

| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNIT |
|--|--------------------------------|--|------|-------|------|
| Collector - Emitter Breakdown Voltage ($I_C=10\text{mA}$, $I_B=0$) | BC856A,B | -65 | - | - | V |
| | BC857A,B,C | $V_{(BR)CEO}$ -45 | - | - | |
| | BC858A,B,C, BC859B,C | -30 | - | - | |
| Collector - Base Breakdown Voltage ($I_C=10\mu\text{A}$, $I_E=0$) | BC856A,B | -80 | - | - | V |
| | BC857A,B,C | $V_{(BR)CBO}$ -50 | - | - | |
| | BC858A,B,C, BC859B,C | -30 | - | - | |
| Emitter - Base Breakdown Voltage ($I_E=-1\mu\text{A}$, $I_C=0$) | $V_{(BR)EBO}$ | -5.0 | - | - | V |
| Emitter-Base Cutoff Current ($V_{EB}=-5\text{V}$) | I_{EBO} | - | - | -100 | nA |
| Collector-Base Cutoff Current ($V_{CB}=-30\text{V}$, $I_E=0$) | I_{CBO} | - | - | -15 | nA |
| | | $T_J=150\text{ }^{\circ}\text{C}$ | - | - | -4.0 |
| DC Current Gain ($I_C=10\mu\text{A}$, $V_{CE}=5\text{V}$) | BC856A, BC857A, BC858A | - | 90 | - | - |
| | BC856B, BC857B, BC858B, BC859B | - | 150 | - | |
| | BC857C, BC858C, BC859C | - | 270 | - | |
| | h_{FE} | | | | |
| ($I_C=2.0\text{mA}$, $V_{CE}=5\text{V}$) | BC856A, BC857A, BC858A | 110 | 180 | 220 | - |
| | BC856B, BC857B, BC858B, BC859B | 200 | 290 | 450 | |
| | BC857C, BC858C, BC859C | 420 | 520 | 800 | |
| | h_{FE} | | | | |
| Collector – Emitter Saturation Voltage ($I_C=10\text{mA}$, $I_B=0.5\text{mA}$) | $V_{CE(SAT)}$ | - | - | -0.3 | V |
| | | ($I_C=100\text{mA}$, $I_B=5.0\text{mA}$) | - | - | |
| Base – Emitter Saturation Voltage ($I_C=10\text{mA}$, $I_B=0.5\text{mA}$) | $V_{BE(SAT)}$ | - | -0.7 | - | V |
| | | ($I_C=100\text{mA}$, $I_B=5.0\text{mA}$) | - | -0.9 | |
| Base – Emitter On Voltage ($I_C=2.0\text{mA}$, $V_{CE}=5.0\text{V}$) | $V_{BE(ON)}$ | -0.60 | - | -0.75 | V |
| | | ($I_C=10\text{mA}$, $V_{CE}=5.0\text{V}$) | - | - | |
| Collector - Base Capacitance ($V_{CB}=-10\text{V}$, $I_E=0$, $f=1\text{MHz}$) | C_{CB} | - | - | 4.5 | pF |
| Current-Gain - Bandwidth Product ($I_C=10\text{mA}$, $V_{CE}=5.0\text{V}$, $f=100\text{MHz}$) | F_T | - | 200 | - | MHz |



BC856 SERIES

ELECTRICAL CHARACTERISTICS CURVES

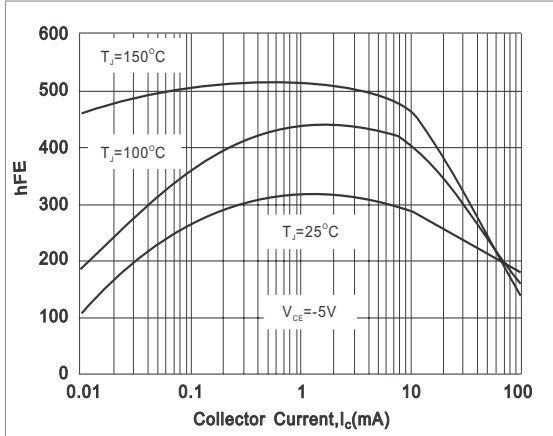


Fig.1-TYPICAL h_{FE} vs. Collector Current

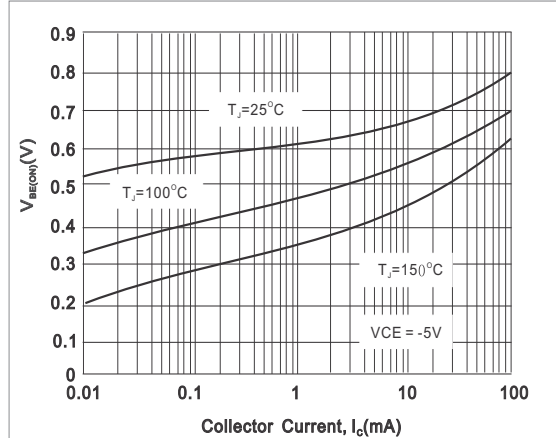


Fig.2-TYPICAL $V_{BE(on)}$ vs. Collector Current

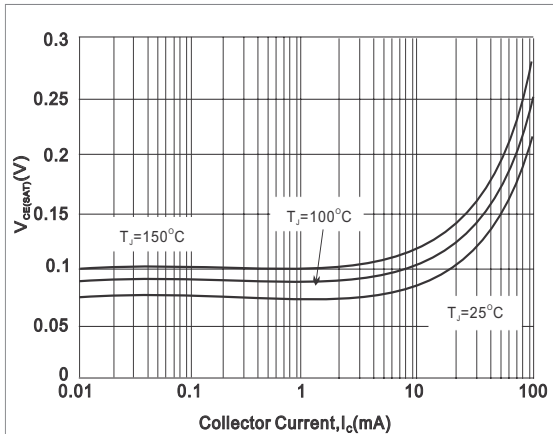


Fig.3-TYPICAL $V_{CE(sat)}$ vs. Collector Current

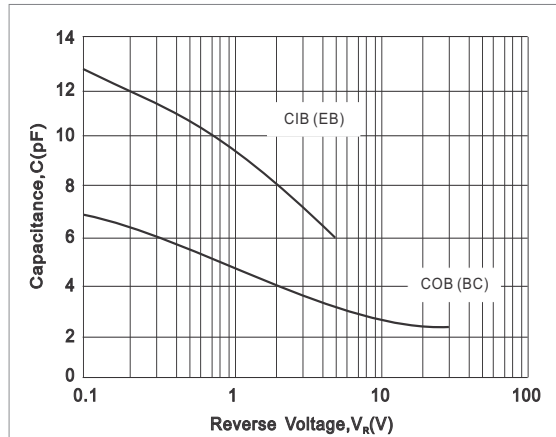


Fig.4-TYPICAL CAPACITANCES vs. REVERSE VOLTAGE

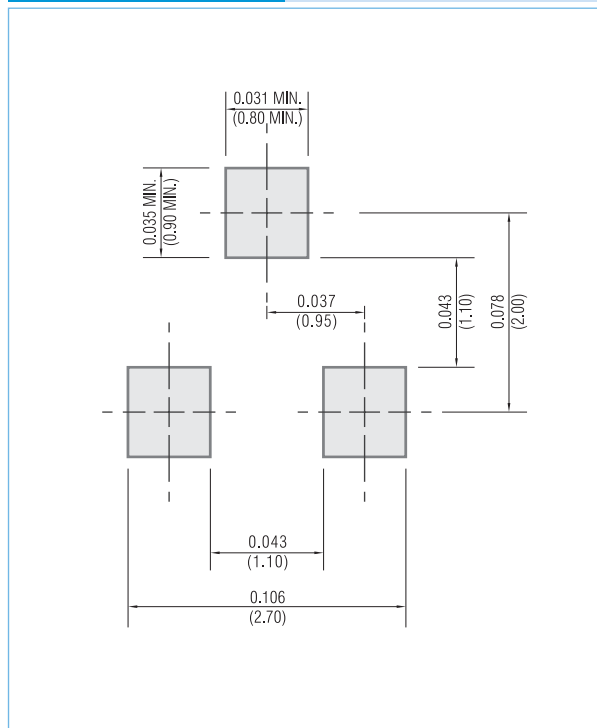


BC856 SERIES

MOUNTING PAD LAYOUT

SOT-23

Unit: inch (mm)



ORDER INFORMATION

- Packing information

T/R - 12K per 13" plastic Reel

T/R - 3K per 7" plastic Reel

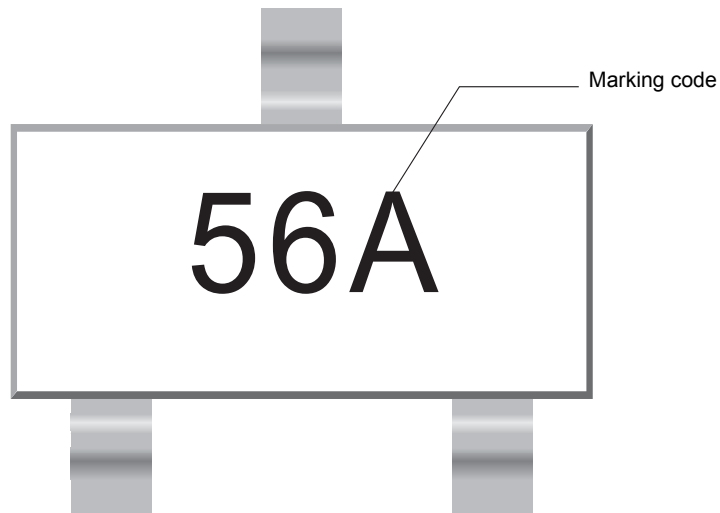
LEGAL STATEMENT

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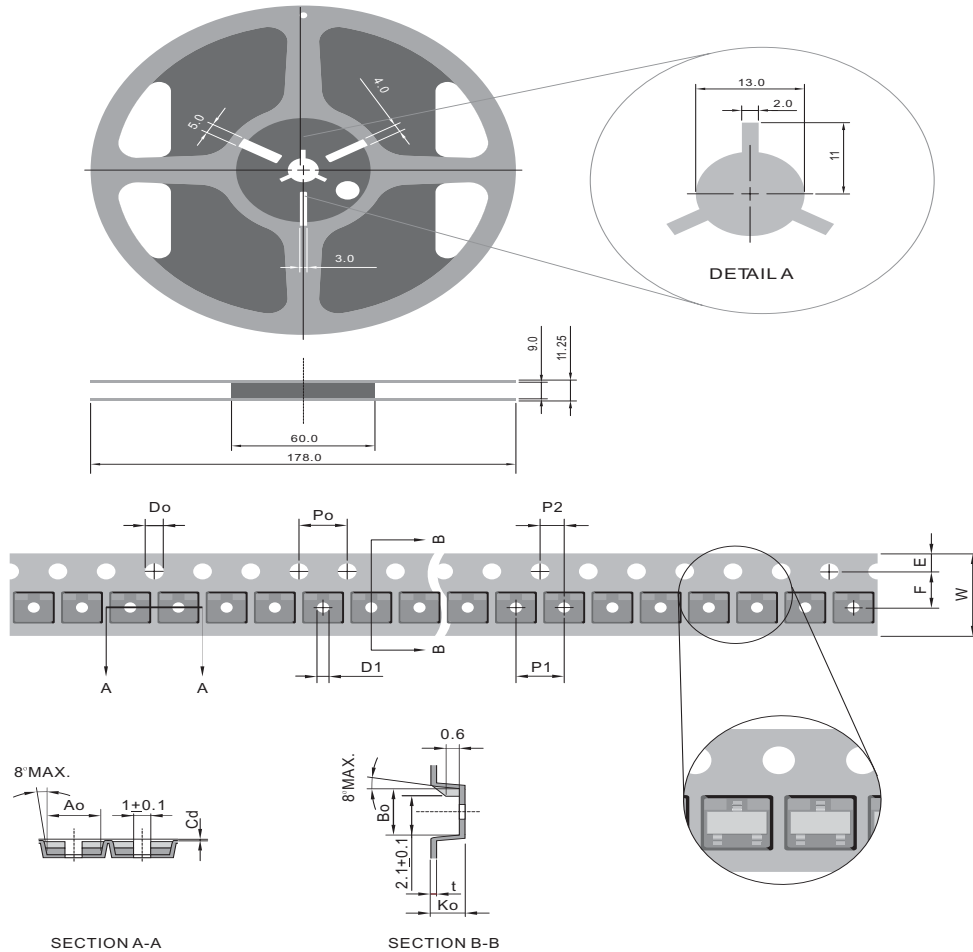


2. MARKING





3. TAPING



| SYMBOL | mm (INCH) |
|-----------|----------------------------|
| TYPE SIZE | 8.00 (0.314) |
| Ao | 3.15 ± 0.10(0.124 ± 0.004) |
| Bo | 2.65 ± 0.10(0.104 ± 0.004) |
| Do | 1.55 ± 0.05(0.610 ± 0.002) |
| D1 | 1.00 ± 0.10(0.039 ± 0.004) |
| E | 1.75 ± 0.10(0.069 ± 0.004) |
| F | 3.50 ± 0.05(0.137 ± 0.002) |
| Ko | 1.17 ± 0.10(0.046 ± 0.004) |
| Po | 4.00 ± 0.10(0.157 ± 0.004) |
| P1 | 4.00 ± 0.10(0.157 ± 0.004) |
| P2 | 2.00 ± 0.05(0.009 ± 0.002) |
| t | 0.20 ± 0.05(0.008 ± 0.002) |
| W | 8.00 ± 0.30(0.314 ± 0.012) |
| Ao' | 3.00 ± 0.10(0.118 ± 0.004) |
| Bo' | 2.55 ± 0.10(0.100 ± 0.004) |

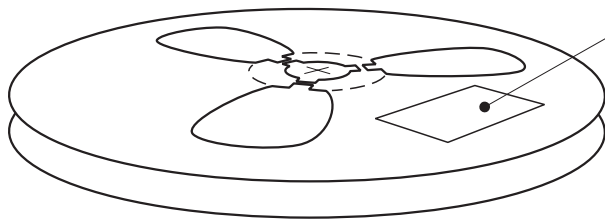
NOTE:

1. There shall be leader of 230 mm minimum which may consist of carrier and or cover tape follower by a minimum of 160 mm of carrier tape sealed with cover tape.
2. There shall e minimum of 160 mm of empty component pockets sealed with cover tape.
3. Devices are packed in accordance whit EIA standard EIA-481-A and specifications given above.



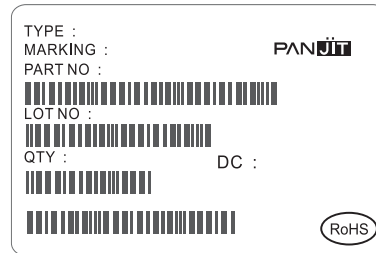
4. PACKING

REEL PACKING

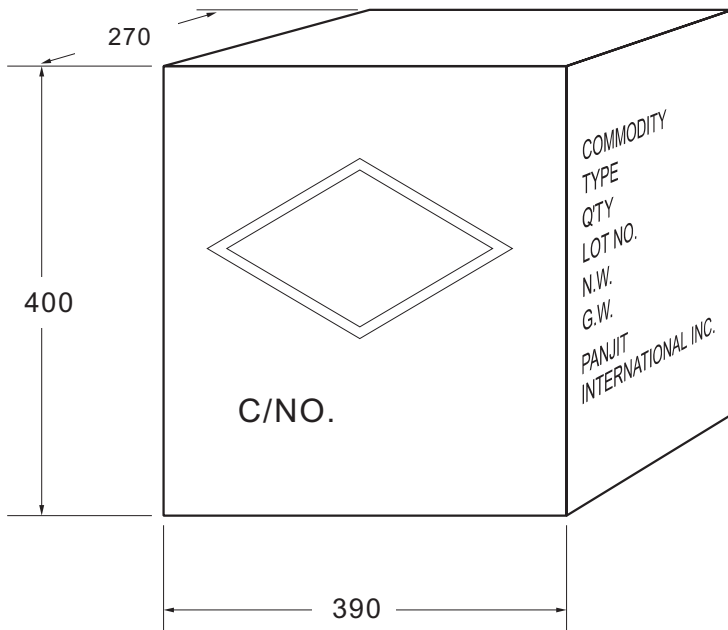


Quantity per Reel: 3,000 pcs

LABEL TYPE

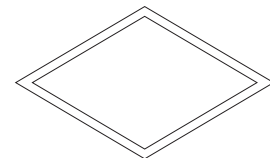


CARTON



Box Dimensions : mm
Quantity per Box: 240,000pcs

SHIPPING MARK



C/NO.
PRODUCT COUNTRY

SIDE MARK

COMMODITY:
TYPE:
Q'TY:
LOT NO.
N.W.
G.W.
PANJIT
INTERNATIONAL INC.



Bulk Packing

| PACKAGE | INNER SIZE | BOX | CARTON SIZE | CARTON | APPROX. GROSS WEIGHT |
|----------------------|-----------------|-------|-----------------|---------|----------------------|
| | (m/m) | (EA) | (m/m) | (EA) | (Kg) |
| Bulk Packing | | | | | |
| A-405 | 198 x 84 x 20 | 1,000 | 459 x 214 x 256 | 50,000 | 12.7 |
| AG / RB-10 (WOB) | 258 x 190 x 77 | 1,000 | 395 x 270 x 400 | 10,000 | 15 |
| AM | 258 x 190 x 77 | 1,000 | 395 x 270 x 400 | 10,000 | 15 |
| CM / KBPC | 193 x 193 x 46 | 50 | 405 x 210 x 265 | 500 | 17 |
| CMW / KBPC-W | 193 x 193 x 46 | 50 | 405 x 210 x 265 | 500 | 17 |
| KBPC-P /CP | 193 x 193 x 46 | 50 | 405 x 210 x 265 | 500 | 9.5 |
| KBPC-PW /CPW | 193 x 193 x 46 | 50 | 405 x 210 x 265 | 500 | 9.5 |
| CP-3 / 6 (K-3 / K-6) | 219 x 115 x 90 | 200 | 600 x 235 x 198 | 2,000 | 7.3/8.8 |
| CP-8 / 10 (K-8) | 219 x 115 x 90 | 200 | 600 x 235 x 198 | 2,000 | 13.8 |
| DIP | - | - | 495 x 214 x 256 | 12,000 | 6.5 |
| DO-15 | 200 x 85 x 25 | 1,000 | 459 x 214 x 256 | 40,000 | 20.7 |
| DO-201AD | 200 x 85 x 40 | 500 | 495 x 214 x 256 | 12,500 | 16 |
| DO-201AE | 200 x 85 x 40 | 500 | 495 x 214 x 256 | 12,500 | 16 |
| DO-34 | 240 x 100 x 90 | 2,000 | 406 x 335 x 257 | 120,000 | 14.5 |
| DO-35 | 240 x 100 x 90 | 2,000 | 406 x 335 x 257 | 120,000 | 17.1 |
| DO-41 | 198 x 84 x 20 | 1,000 | 459 x 214 x 265 | 50,000 | 19.3 |
| DO-41G | 240 x 100 x 90 | 1,000 | 406 x 335 x 257 | 60,000 | 18.5 |
| FL | 230 x 230 x 50 | 500 | 495 x 245 x 180 | 3,000 | 18.4 |
| GBJ (TUBE) | 556 x 150 x 100 | 800 | 578 x 340 x 235 | 3,200 | 25.5 |
| GBJ (BOX) | 350 x 337 x 44 | 600 | 375 x 360 x 213 | 2,400 | 14.3 |
| GBL | 350 x 337 x 44 | 960 | 375 x 360 x 213 | 3,840 | 13.1 |
| GBP | 350 x 337 x 44 | 1,120 | 375 x 360 x 213 | 4,480 | 10.6 |
| GBPC | 193 x 193 x 46 | 50 | 405 x 210 x 265 | 500 | 17 |
| GBPCW | 193 x 193 x 46 | 50 | 405 x 210 x 265 | 500 | 17 |
| GBU (TUBE) | 488 x 150 x 100 | 800 | 510 x 310 x 235 | 3,200 | 22.6 |
| GBU (BOX) | 350 x 337 x 44 | 800 | 375 x 360 x 213 | 3,200 | 15.2 |
| KBJ | 220 x 176 x 45 | 200 | 375 x 230 x 260 | 2,000 | 15 |
| KBPF | 242 x 208 x 35 | 500 | 426 x 252 x 365 | 10,000 | 19.2 |
| KBU | 276 x 158 x 59 | 200 | 493 x 287 x 320 | 3,000 | 24 |
| P-600 | 208 x 90 x 83 | 500 | 459 x 214 x 256 | 5,000 | 11.3 |
| R-1 | 198 x 84 x 20 | 1,000 | 459 x 214 x 256 | 50,000 | 12.7 |
| TO-220 | 540 x 145 x 85 | 2,000 | 555 x 306 x 200 | 8,000 | 20.5 |
| ITO-220 | 540 x 145 x 85 | 2,000 | 555 x 306 x 200 | 8,000 | 22.9 |
| TO-251AB | 555 x 145 x 85 | 8,400 | 555 x 306 x 200 | 33,600 | 22 |
| TO-3P / TO-247AD | - | - | 536 x 243 x 100 | 1,500 | 13.9 |
| TO-3PS / TO-247S | - | - | 511 x 243 x 107 | 1,500 | 12.2 |



Reel Packing

| PACKAGE | REEL SIZE | REEL | COMPONENT SPACE | TAPE SPACE | REEL DIA | CARTON SIZE | CARTON | APPROX. GROSS WEIGHT |
|---------------------|-----------|--------|-----------------|------------|----------|-----------------|---------|----------------------|
| | (inch) | (pcs) | (m/m) | (m/m) | (m/m) | (m/m) | (EA) | (Kg) |
| Reel Packing | | | | | | | | |
| R-1 | - | 5,000 | 5.0 | 52 | 330 | 340 x 340 x 410 | 25,000 | 7.8 |
| A-405 | - | 5,000 | 5.0 | 52 | 330 | 340 x 340 x 410 | 25,000 | 11 |
| DO-15 | - | 4,000 | 5.0 | 52 | 330 | 340 x 340 x 410 | 20,000 | 11.4 |
| DO-201AD | - | 1,250 | 10.0 | 52 | 330 | 340 x 340 x 410 | 6,250 | 9.2 |
| DO-201AE | - | 1,250 | 10.0 | 52 | 330 | 340 x 340 x 410 | 6,250 | 9.2 |
| DO-34 | 15 | 10,000 | 5.0 | 52 | 360 | 360 x 360 x 395 | 50,000 | 10.1 |
| DO-35 | 15 | 10,000 | 5.0 | 52 | 360 | 360 x 360 x 395 | 50,000 | 11.2 |
| DO-41 | - | 5,000 | 5.0 | 52 | 330 | 340 x 340 x 410 | 25,000 | 11.8 |
| DO-41G | 15 | 5,000 | 5.0 | 52 | 360 | 360 x 360 x 395 | 25,000 | 10.9 |
| P-600 | - | 800 | 10.0 | 52 | 330 | 340 x 340 x 410 | 4,000 | 9.8 |
| DPAK/TO-252 | 13 | 3,000 | 8.0 | 16 | 330 | 375 x 360 x 390 | 42,000 | 18.8 |
| D2PAK/TO-263 | 13 | 800 | 16.0 | 24 | 330 | 375 x 360 x 390 | 6,400 | 14.4 |
| MDI | 13 | 3,000 | 8.0 | 12 | 330 | 375 x 360 x 390 | 48,000 | 14.7 |
| SDIP | 13 | 1,500 | 12.0 | 16 | 330 | 375 x 360 x 390 | 21,000 | 14.3 |
| QUADRO-MELF | 13 | 10,000 | 4.0 | - | 330 | 360 x 360 x 395 | 200,000 | 14.9 |
| QUADRO-MELF | 7 | 2,500 | 4.0 | - | 178 | 385 x 380 x 260 | 200,000 | 13.3 |
| MELF/DL-41 | 13 | 5,000 | 4.0 | - | 330 | 360 x 360 x 395 | 100,000 | 23.5 |
| MELF/DL-41 | 7 | 1,500 | 4.0 | - | 178 | 385 x 380 x 260 | 84,000 | 18.3 |
| MICRO-MELF | 13 | 10,000 | 4.0 | - | 330 | 360 x 360 x 395 | 200,000 | 11.5 |
| MICRO-MELF | 7 | 2,500 | 4.0 | - | 178 | 385 x 380 x 260 | 200,000 | 9.3 |
| MINI-MELF | 13 | 10,000 | 4.0 | - | 330 | 360 x 360 x 395 | 200,000 | 14.6 |
| MINI-MELF | 7 | 2500 | 4.0 | - | 178 | 385 x 380 x 260 | 200,000 | 12.7 |
| SMA | 13 | 7,500 | 4.0 | 12 | 330 | 375 x 360 x 390 | 120,000 | 17.3 |
| SMA | 7 | 1,800 | 4.0 | 12 | 178 | 390 x 240 x 420 | 72,000 | 10 |
| SMB | 13 | 3,000 | 8.0 | 12 | 330 | 375 x 360 x 390 | 48,000 | 13.2 |
| SMB | 7 | 500 | 8.0 | 12 | 178 | 390 x 240 x 420 | 20,000 | 6.5 |
| SMC | 13 | 3,000 | 8.0 | 16 | 330 | 375 x 360 x 390 | 42,000 | 18 |
| SMC | 7 | 500 | 8.0 | 16 | 178 | 390 x 240 x 420 | 15,000 | 8.3 |
| SOD-123 | 13 | 10,000 | 4.0 | 8 | 330 | 375 x 360 x 213 | 120,000 | 6.5 |
| SOD-123 | 7 | 3,000 | 4.0 | 8 | 178 | 390 x 270 x 400 | 240,000 | 9.9 |
| SOD-123FL | 13 | 10,000 | 4.0 | 8 | 330 | 375 x 360 x 213 | 120,000 | 7.2 |
| SOD-123FL | 7 | 3,000 | 4.0 | 8 | 178 | 390 x 270 x 400 | 240,000 | 10.6 |



Reel Packing

| PACKAGE | REEL SIZE | REEL | COMPONENT SPACE | TAPE SPACE | REEL DIA | CARTON SIZE | CARTON | APPROX. GROSS WEIGHT |
|---------------------|-----------|--------|-----------------|------------|----------|-----------------|---------|----------------------|
| | (inch) | (pcs) | (m/m) | (m/m) | (m/m) | (m/m) | (EA) | (Kg) |
| Reel Packing | | | | | | | | |
| SOD-323 | 13 | 12,000 | 4.0 | 8 | 330 | 375 x 360 x 213 | 144,000 | 5.9 |
| SOD-323 | 7 | 5,000 | 4.0 | 8 | 178 | 390 x 270 x 400 | 400,000 | 9.4 |
| SOD-523 | 13 | 12,000 | 4.0 | 8 | 330 | 375 x 360 x 213 | 144,000 | 5.4 |
| SOD-523 | 7 | 5,000 | 4.0 | 8 | 178 | 390 x 270 x 400 | 400,000 | 9.1 |
| SOD-723 | 7 | 8,000 | 2.0 | 8 | 178 | 390 x 270 x 400 | 640,000 | 8.5 |
| SOD-923 | 7 | 8,000 | 2.0 | 8 | 178 | 390 x 270 x 400 | 640,000 | 7.7 |
| SOT-23 | 13 | 12,000 | 4.0 | 8 | 330 | 375 x 360 x 213 | 144,000 | 7 |
| SOT-23 | 7 | 3,000 | 4.0 | 8 | 178 | 390 x 270 x 400 | 240,000 | 8.3 |
| SOT-323 | 13 | 12,000 | 4.0 | 8 | 330 | 375 x 360 x 213 | 144,000 | 6.1 |
| SOT-323 | 7 | 3,000 | 4.0 | 8 | 178 | 390 x 270 x 400 | 240,000 | 7.9 |
| SOT-363 | 13 | 10,000 | 4.0 | 8 | 330 | 375 x 360 x 213 | 120,000 | 7.1 |
| SOT-363 | 7 | 3,000 | 4.0 | 8 | 178 | 390 x 270 x 400 | 240,000 | 10.2 |
| SOT-23 (ESD) | 7 | 3,000 | 4.0 | 8 | 178 | 455 x 270 x 440 | 240,000 | 9.5 |
| SOT-323 (ESD) | 7 | 3,000 | 4.0 | 8 | 178 | 455 x 270 x 440 | 240,000 | 9.1 |
| SOT-363 (ESD) | 7 | 3,000 | 4.0 | 8 | 178 | 455 x 270 x 440 | 240,000 | 10 |
| SOT-353 | 13 | 10,000 | 4.0 | 8 | 330 | 375 x 360 x 213 | 120,000 | 7.2 |
| SOT-353 | 7 | 3,000 | 4.0 | 8 | 178 | 390 x 270 x 400 | 240,000 | 10 |
| SOT-553 | 13 | 10,000 | 4.0 | 8 | 330 | 375 x 360 x 213 | 120,000 | 5.2 |
| SOT-553 | 7 | 4,000 | 4.0 | 8 | 178 | 390 x 270 x 400 | 320,000 | 9.4 |
| SOT-563 | 13 | 10,000 | 4.0 | 8 | 330 | 375 x 360 x 213 | 120,000 | 5.2 |
| SOT-563 | 7 | 4,000 | 4.0 | 8 | 178 | 390 x 270 x 400 | 320,000 | 9.4 |
| SOT23-5L | 13 | 10,000 | 4.0 | 8 | 330 | 375 x 360 x 213 | 120,000 | 7.9 |
| SOT23-5L | 7 | 3,000 | 4.0 | 8 | 178 | 390 x 270 x 400 | 240,000 | 14.5 |
| SOT23-6L | 13 | 10,000 | 4.0 | 8 | 330 | 375 x 360 x 213 | 120,000 | 7.9 |
| SOT23-6L | 7 | 3,000 | 4.0 | 8 | 178 | 390 x 270 x 400 | 240,000 | 14.5 |
| SOT-143 | 13 | 10,000 | 4.0 | 8 | 330 | 375 x 360 x 213 | 120,000 | 7 |
| SOT-143 | 7 | 3,000 | 4.0 | 8 | 178 | 390 x 270 x 400 | 240,000 | 12.8 |
| SOIC-08 | 13 | 3,000 | 8.0 | 12 | 330 | 375 x 360 x 213 | 48,000 | 14.2 |
| QFN 1.2 x 1.5 | 7 | 3,000 | 4.0 | 8 | 178 | 390 x 270 x 400 | 240,000 | 7.1 |
| QFN 1.6 x 1.6 | 7 | 4,000 | 4.0 | 8 | 178 | 390 x 240 x 420 | 200,000 | 7.8 |
| QFN 2.0 x 2.0 | 7 | 3,000 | 4.0 | 8 | 178 | 390 x 270 x 400 | 240,000 | 7.1 |



Ammunition Packing

| PACKAGE | AMMO | COMPONENT SPACE | TAPE SPACE | BOX SIZE | CARTON | CARTON | APPROX. GROSS WEIGHT |
|---------------------------|-------|-----------------|------------|----------------|-----------------|---------|----------------------|
| | (PCS) | (m/m) | (m/m) | (m/m) | (m/m) | (E/A) | (Kg) |
| Ammunition Packing | | | | | | | |
| A-405 | 5,000 | 5 | 26 | 255 x 47 x 150 | 339 x 276 x 330 | 60,000 | 12.4 |
| A-405 | 5,000 | 5 | 52 | 255 x 75 x 150 | 339 x 276 x 330 | 40,000 | 16 |
| DO-15 | 3,000 | 5 | 52 | 255 x 75 x 150 | 339 x 276 x 330 | 24,000 | 13.3 |
| DO-201AD | 1,250 | 10 | 52 | 255 x 47 x 122 | 339 x 276 x 330 | 10,000 | 13.4 |
| DO-201AE | 1,250 | 10 | 52 | 255 x 47 x 122 | 339 x 276 x 330 | 10,000 | 13.4 |
| DO-34 | 5,000 | 5 | 26 | 248 x 80 x 48 | 406 x 335 x 257 | 150,000 | 14.6 |
| DO-34 | 5,000 | 5 | 52 | 248 x 80 x 75 | 406 x 335 x 257 | 100,000 | 12.7 |
| DO-35 | 5,000 | 5 | 26 | 248 x 80 x 48 | 406 x 335 x 257 | 150,000 | 16.7 |
| DO-35 | 5,000 | 5 | 52 | 248 x 80 x 75 | 406 x 335 x 257 | 100,000 | 15.2 |
| DO-41 | 5,000 | 5 | 52 | 255 x 75 x 150 | 339 x 276 x 330 | 40,000 | 16 |
| DO-41G | 2,500 | 5 | 26 | 248 x 80 x 48 | 406 x 335 x 257 | 75,000 | 17.1 |
| DO-41G | 2,500 | 5 | 52 | 248 x 80 x 75 | 406 x 335 x 257 | 50,000 | 15.7 |
| P-600 | 400 | 10 | 52 | 255 x 47 x 122 | 339 x 276 x 330 | 3,200 | 8.1 |
| R-1 | 3,000 | 5 | 26 | 255 x 47 x 73 | 310 x 268 x 170 | 36,000 | 6.3 |
| R-1 | 3,000 | 5 | 52 | 256 x 73 x 73 | 310 x 268 x 170 | 24,000 | 6.4 |
| R-1 | 5,000 | 5 | 52 | 255 x 73 x 122 | 339 x 276 x 274 | 40,000 | 10.3 |



5. HIGH RELIABILITY TESTING SPEC.

| NO | TEST ITEM | TEST CONDITION | REFERENCE DOCUMENT | LOT QUALITY LEVEL | REMARK |
|----|---|--|-------------------------------|---|--------|
| 1 | TEMPERATURE CYCLING (T.C.T) | Ta = -55 + 0, -3 °C 10min Ta = + 150 +/- °C 10min FOR 20 CYCLE | MIL-STD-750D METHOD-1051.5 | LTPD 10 S.s. = 22 ACCEPT FOR 0 FAILURE ONLY. | |
| 2 | HIGH TEMPERATURE STORAGE LIFE (H.T.S.L) | Ta = 150 +/- 5 °C TESTING TIME: 168 HRS 500 HRS | MIL-STD-750D METHOD-1031.2 | LTPD10 S.s. = 22 ACCEPT FOR 0 FAILURE ONLY. | |
| 3 | SOLDERABILITY TEST | TEMPERATURE OF SOLDER POT = 245 +/- 5 °C TIME FOR DIPPING FLUX = 5 -10 SEC TIME FOR DIPPING IN SOLDER = 5 +/- 0.5 SEC DIPPING DEPTH = 0.05 inch max FOR ONE CYCLE | MIL-STD-750D | METHOD-2026.10 LTPD 7 S.s. = 32 ACCEPT FOR 0 FAILURE ONLY. | |
| 4 | HIGH TEMPERATURE REVERSE BIAS (H.T.R.B) | Ta = 150 +/- 5 °C VR = 80 % VR (CUSTOM SECP) TESTING TIME: 168 HRS 500 HRS | MIL-STD-750D METHOD-1038.3 | LTPD10 S.s. = 22 ACCEPT FOR 0 FAILURE ONLY. | |
| 5 | CONTINUE FORWARD OPERATING LIFE (C.F.O.L) | Ta = 55 °C I = IO +/- 10 % TESTING TIME: 168 HRS 500 HRS | MIL-STD-750D METHOD-1027.3 | LTPD10 S.s. = 22 ACCEPT FOR 0 FAILURE ONLY. | |
| 6 | THERMAL SHOCK (T.S.T) | HOT TANK T = 100 °C + 10 / -2 °C t = 5 min COLD TANK T = 0 °C + 2 / -10 °C t = 5 min 15 CYCLE TIME BETWEEN TRANSFERRING DO'NOT EXCEED 10 SECOND. | MIL-STD-750D METHOD-1056.7 | LTPD10 S.s. = 22 ACCEPT FOR 0 FAILURE ONLY. | |
| 7 | PRESSURE COOKER (P.C.T) | Ta = 121 °C P = 1.2 kg / cm ² TIME = 96 HRS | JEDEC JESD22-A102-C | LTPD10 S.s. = 22 ACCEPT FOR 0 FAILURE ONLY. | |
| 8 | INTERMITTENT FORWARD OPERATING LIFE (I.F.O.L) | I = Io x 1.0 POWER ON : 30 SEC POWER OFF : 50 SEC TESTING TIME: 2000 CYCLES | MIL-STD-750D METHOD 1036.3 | LTPD10 S.s. = 22 ACCEPT FOR 0 FAILURE ONLY. | |
| 9 | FORWARD SURGE CURRENT (I.F.S.M) | SQ WAVE OR SINE WAVE IFSM=DATE SHEET SPEC. TIME = 8.3 Msec T = 1 CYCLE | MIL-STD-750D METHOD 4066.3 | LTPD10 S.s. = 22 ACCEPT FOR 0 FAILURE ONLY. | |
| 10 | HUMIDITY | Ta = 85 °C RH = 85 % TESTING TIME: 168 HRS 500 HRS | MIL-STD-750D METHOD 1021.1 | LTPD10 S.s. = 22 ACCEPT FOR 0 FAILURE ONLY. | |
| 11 | SOLDERABILITY RESISTANCE | TEMPERATURE OF SOLDER POT = 260 +/- 5 °C TIME FOR DIPPING IN SOLDER = 10 + 2 / -0 SEC DIPPING DEPTH = 1.57 +/- 0.79 mm BELOW BODY FOR ONE CYCLE | MIL-STD-750D METHOD 2031.1 | LTPD10 S.s. = 22 ACCEPT FOR 0 FAILURE ONLY. | |

SCHOTTKY PRODUCT TESTING TEMPERATURE 100 °C +/- 5°C MAX(NORMAL)