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# PJSOT03C-05~PJSOT36C-05

## STANDARD CAPACITANCE TVS ARRAY

**VOLTAGE** 3 ~ 36 Volts **POWER** 500 Watts

### FEATURES

- 500 Watts Peak Pulse Power per Line (  $t_p=8/20 \mu s$  )
- Low Clamping Voltage
- Available in Multiple Voltage Types Ranging from 3V and 36V
- Unidirectional & Bidirectional Configurations
- In compliance with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case: SOT-23
- Terminals : Solderable per MIL-STD-750, Method 2026
- Weight: 0.0003 ounce, 0.0084 gram

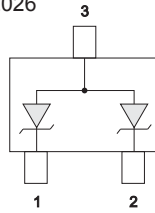
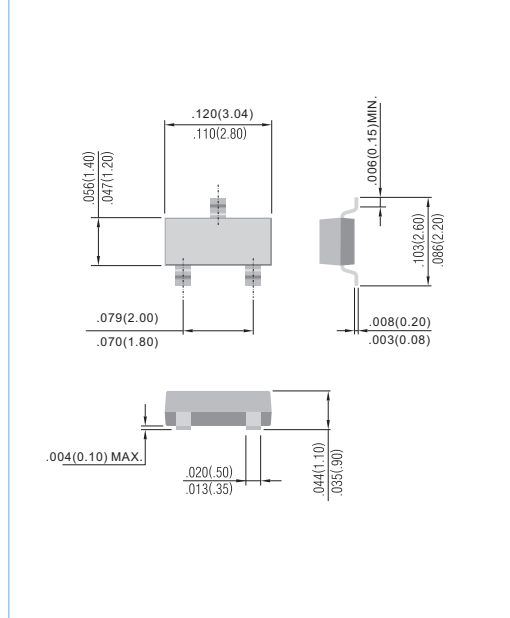


Fig.25

SOT-23 Unit: inch ( mm )



### DEVICE CHARACTERISTICS

Ratings at 25°C unless otherwise specified.

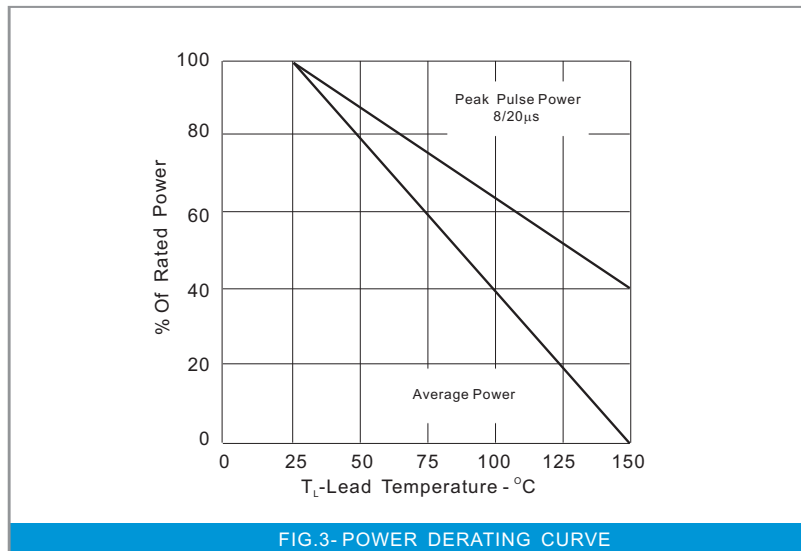
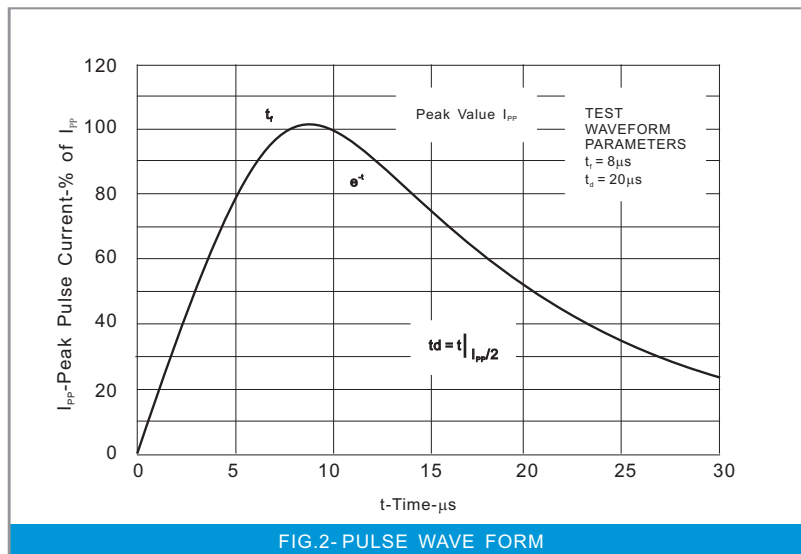
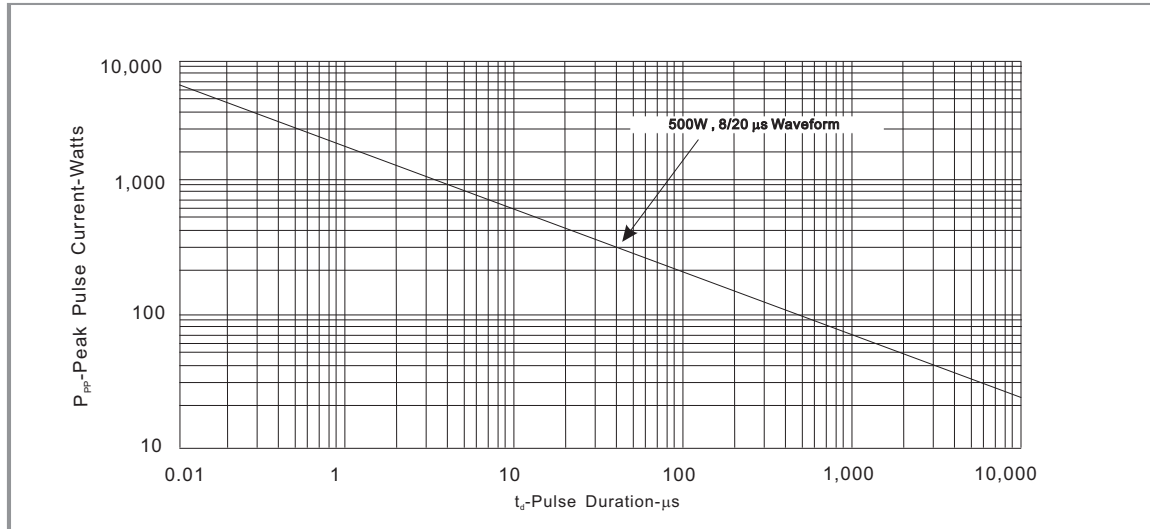
PARAMETER	Symbol	VALUE	Units
Peak Pulse Power ( $t_p=8/20 \mu s$ )	P <sub>PP</sub>	500	Watts
Operating Temperature	T <sub>J</sub>	-50 °C to 150 °C	°C
Storage Temperature	T <sub>STG</sub>	-50 °C to 150 °C	°C
Forward Voltage@ 100mA,300μs-Square Wave	V <sub>F</sub>	1.5	Volts

Part Number	Reverse Stand-off Voltage	Minum Breakdown Voltage	Max Clamping Voltage @ 8/20 μsec	Peak Pulse Current 8/20 μsec	Maximum Leakage Current	Off-State Capacitance, 1MHz Zero dc Bias Note 1	Marking Code
	V <sub>RWM</sub>	@1mA V <sub>BR</sub>	V <sub>CL</sub> @ I <sub>PP</sub>	I <sub>PP</sub>	@V <sub>RWM</sub> I <sub>D</sub>	C <sub>d</sub>	
	Max. V	V	V	Max. A	μA	Max. pF	
PJSOT03C-05	3	4	6.5	43	125	500	1EC
PJSOT05C-05	5	6	9.8	42	20	550	2EC
PJSOT08C-05	8	8.5	13.4	34	10	250	3EC
PJSOT12C-05	12	13.3	19	21	2	150	4EC
PJSOT15C-05	15	16.7	24	17	1	100	5EC
PJSOT24C-05	24	26.7	43	12	1	88	6EC
PJSOT36C-05	36	40	51	9	1	80	7EC

Note 1: Capacitance is measured between Pin 3 and either Pin 1 or 2 for the PJSOT03-05C and PJSOT36C-05 individual capacitance is measured between Pin 1 to Pin 3 or Pin2 to Pin 3.



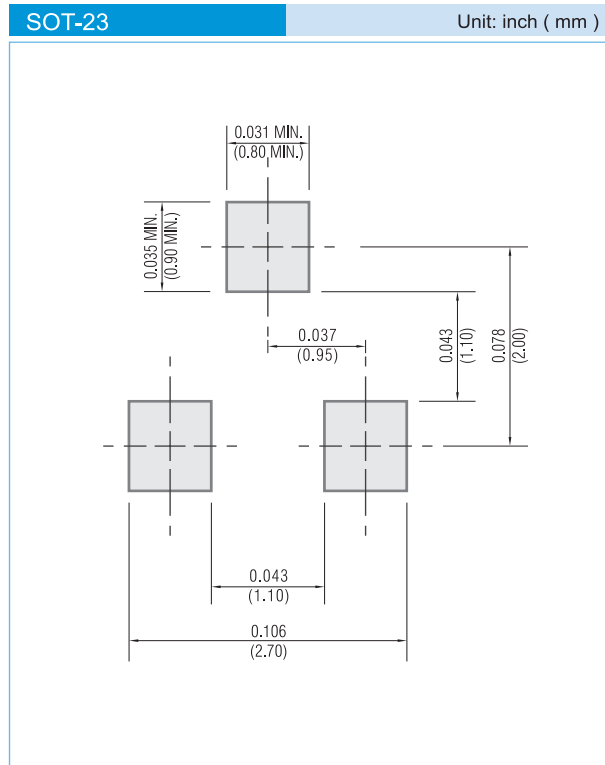
# PJSOT03C-05~PJSOT36C-05





# PJSOT03C-05~PJSOT36C-05

## MOUNTING PAD LAYOUT



## ORDER INFORMATION

- Packing information
  - T/R - 12K per 13" plastic Reel
  - T/R - 3K per 7" plastic Reel

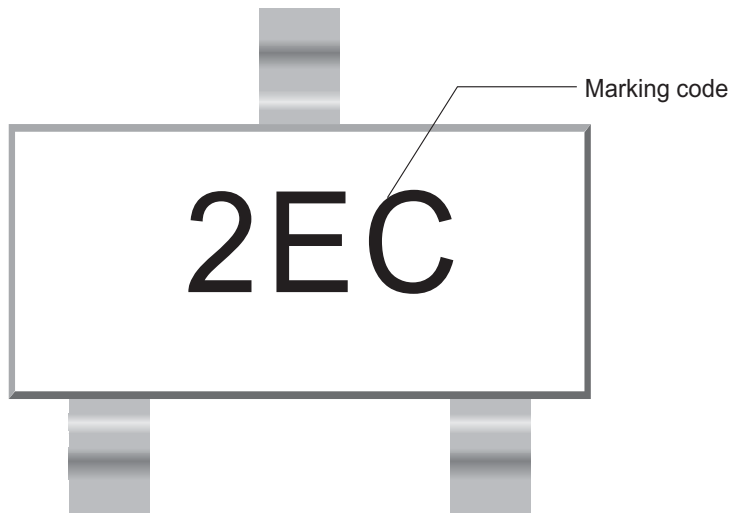
## LEGAL STATEMENT

### Copyright PanJit International, Inc 2010

The information presented in this document is believed to be accurate and reliable. The specifications and information herein are subject to change without notice. Pan Jit makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose. Pan Jit products are not authorized for use in life support devices or systems. Pan Jit does not convey any license under its patent rights or rights of others.

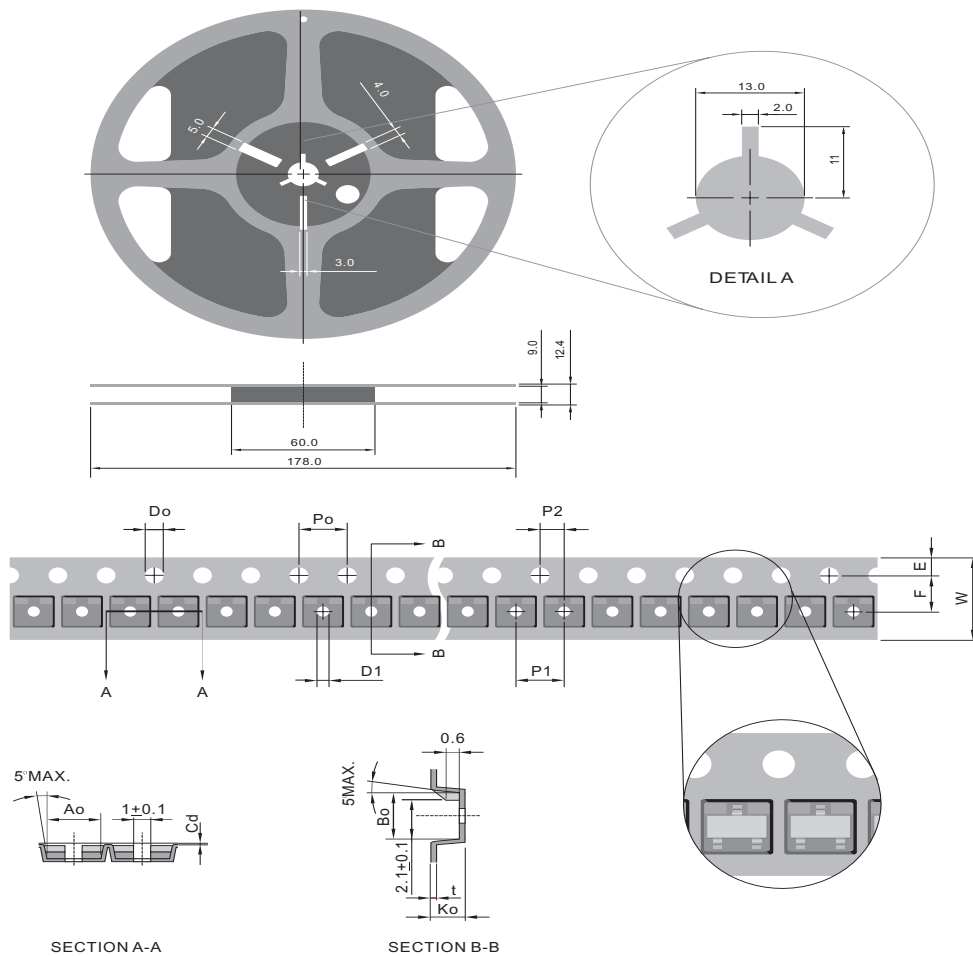


## 2. MARKING





### 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	1.27 ± 0.10(0.050 ± 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 ± 0.10(0.008 ± 0.004)
W	8.00 ± 0.15(0.314 ± 0.006)
Ao'	3.00 ± 0.10(0.118 ± 0.004)
Bo'	2.55 ± 0.10(0.100 ± 0.004)

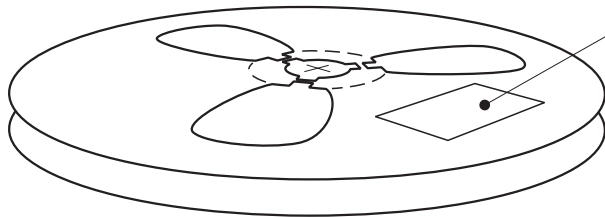
**NOTE:**

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.



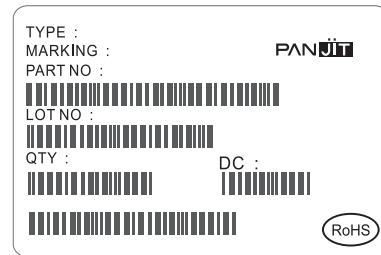
## 4. PACKING

### REEL PACKING

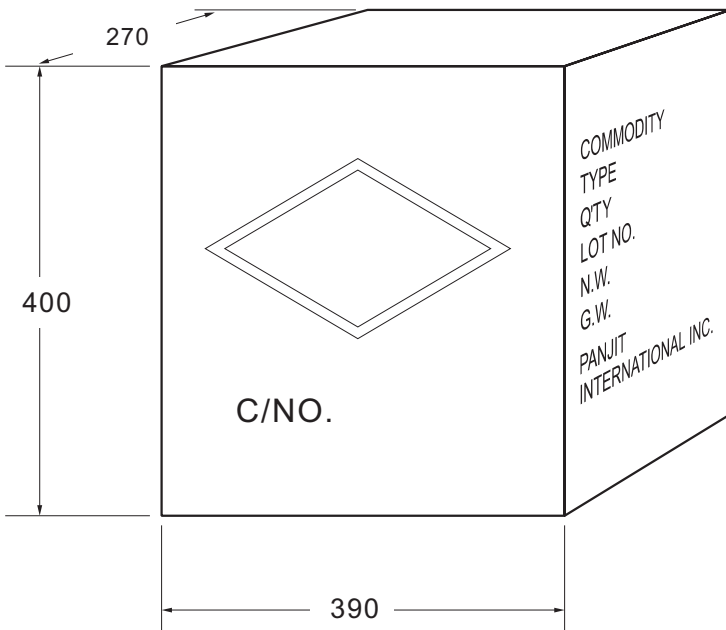


Quantity per Reel: 3,000 pcs

#### LABEL TYPE

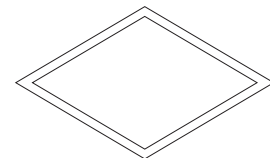


### CARTON



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)
<b>Bulk Packing</b>					
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	-	-	459 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	459 x 214 x 256	12,500	16
DO-201AE	200 x 85 x 40	500	459 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)
<b>Reel Packing</b>								
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)
<b>Reel Packing</b>								
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)
<b>Ammunition Packing</b>							
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

# HIGH RELIABILITY TEST SPEC ( Zener & TVS )

Date : 2010.07.05 rev.01

NO.	TEST ITEM	TEST CONDITION	REFERENCED DOCUMENT	LOT QUALITY LEVEL
1	TEMPERATURE CYCLING (T.C.T) 溫度循環試驗	Ta = -55+0°C / -10°C 10min(Min) Ta = +150+15°C / -0°C 10min(Min) FOR 20CYCLES	MIL-STD-750D METHOD-1051.5 Condition G	LTPD 10 S.S =22 ACCEPT FOR 0 FAILURE ONLY.
2	HIGH TEMPERATURE STORAGE LIFE (H.T.S.L) 高溫儲存壽命試驗	Ta = Storage Temperature Range (device specified maximum temperature)	MIL-STD-750D METHOD-1032.2	LTPD 10 S.S =22 ACCEPT FOR 0 FAILURE ONLY.
3	SOLDERABILITY TEST 錫錫性試驗	Temperature of Solder TEMPERATURE OF SOLDER POT = 245 +/- 5°C TIME FOR DIPPING IN SOLDER = 5 +/- 0.5 SEC DIPPING DEPTH = 0.05inch max from the body 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) 高溫逆向偏壓	Tj ≤ Tj max VR = 0.8VR (CUSTOMER SPEC.) DC supply	MIL-STD-750D METHOD-1038.3	LTPD 10 S.S =22 ACCEPT FOR 0 FAILURE ONLY.
6	THERMAL SHOCK (T.S.T) 冷熱衝擊試驗	HOT TANK Ta = 100 + 10 / - 2°C t = 5min COLD TANK Ta = 0 + 2 / - 10°C t = 5min 15 CYCLES TIME BETWEEN TRANSFERRING DO NOT EXCEED 10 SEC	MIL-STD-750D METHOD 1056.7	LTPD 10 S.S =22 ACCEPT FOR 0 FAILURE ONLY.
7	PRESSURE COOKER (P.C.T) 壓力鍋試驗	Ta = 121°C P = 29.7psia / 205kPa or 2.088kg/cm <sup>2</sup> Relative Humidity = 100%	JEDEC JESD22-A102-C	LTPD 10 S.S =22 ACCEPT FOR 0 FAILURE ONLY.
8	HUMIDITY 恆溫濕試驗	Ta = 85 +/- 2°C RH = 85 +/- 5%	EIAJ ED-4701 METHOD 103	LTPD 10 S.S =22 ACCEPT FOR 0 FAILURE ONLY.
9	SOLDER RESISTANCE 錫錫耐熱性試驗	TEMPERATURE OF SOLDER POT = 260 +/- 5°C TIME FOR DIPPING IN SOLDER = 10 + 2 / - 0 SEC DIPPING DEPTH = 1.57 +/- 0.79mm FROM THE BODY FOR ONE CYCLE	MIL-STD-750D METHOD 2031.2	LTPD 10 S.S =22 ACCEPT FOR 0 FAILURE ONLY.