

1. DATA SHEET

GLZJ2.0~GLZJ56

SURFACE MOUNT ZENER DIODES

VOLTAGE 2.0 to 56 Volts

POWER 500 mWatts

MINI-MELF/LL-34

Unit : inch (mm)

FEATURES

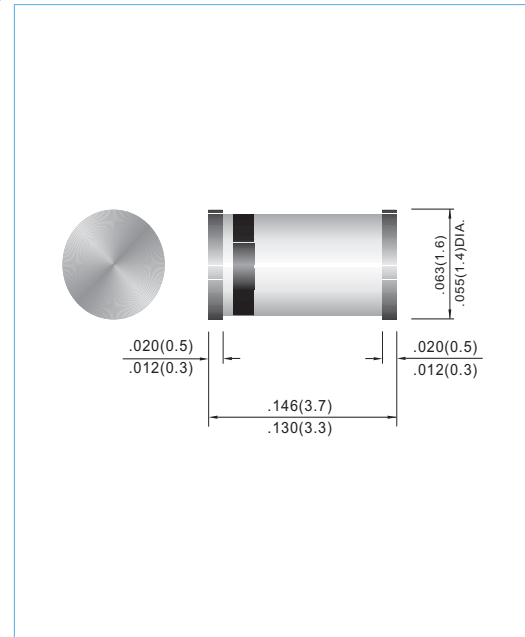
- Planar Die construction
- 500mW Power Dissipation
- Ideally Suited for Automated Assembly Processes
- Pb free product are available : 99% Sn above can meet RoHS environment substance directive request

MECHANICAL DATA

- Case: Molded Glass MINI-MELF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: See Diagram Below
- Approx. Weight: 0.03 grams
- Mounting Position: Any
- Packing information

T/R - 2.5K per 7" plastic Reel

T/R - 10K per 13" plastic Reel



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Value	Units
Power Dissipation at $T_{amb} = 25^{\circ}C$	P_{TOT}	500	mW
Junction Temperature	T_J	175	$^{\circ}C$
Storage Temperature Range	T_s	-65 to +175	$^{\circ}C$

Valid provided that leads at a distance of 10mm from case are kept at ambient temperature.

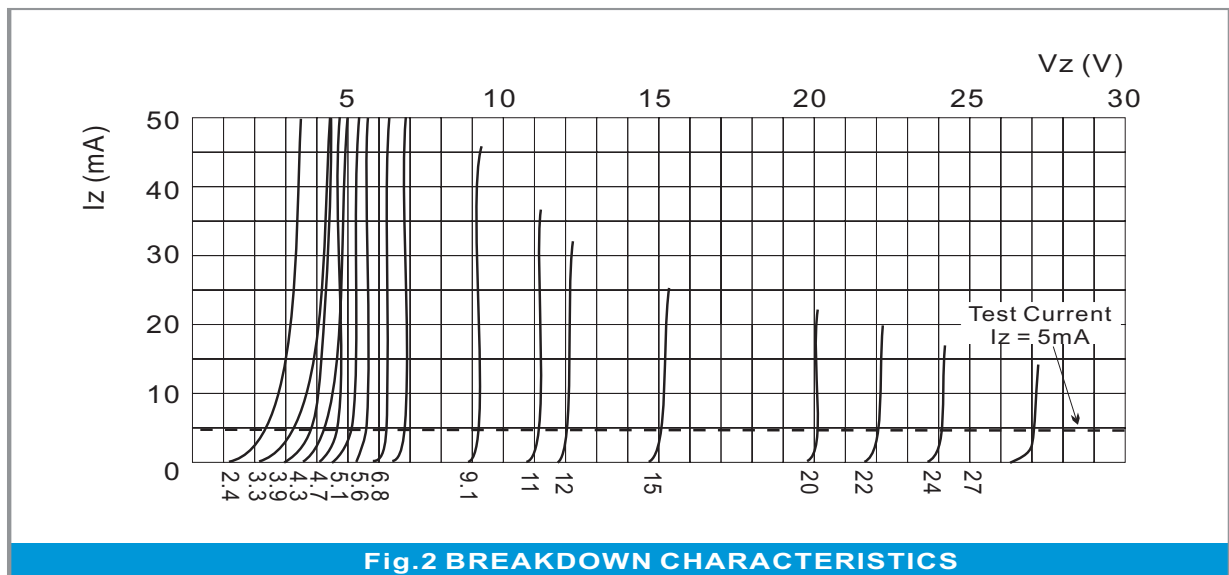
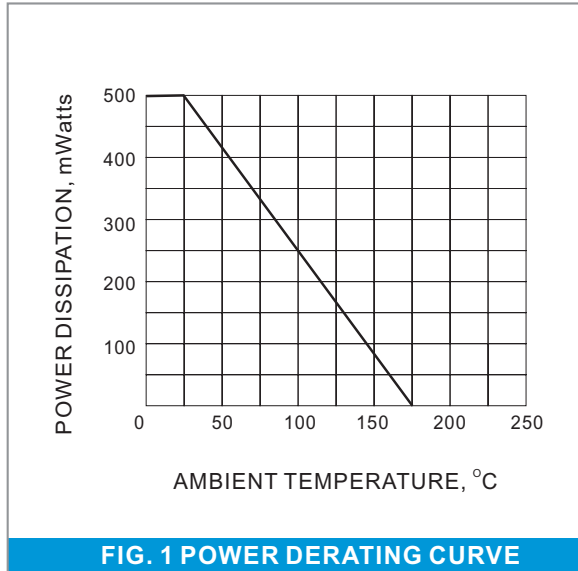
Parameter	Symbol	Min.	Typ.	Max.	Units
Thermal Resistance Junction to Ambient Air	R_{thA}	—	—	0.3	K/mW
Forward Voltage at $I_F = 100mA$	V_F	—	—	1	V

Valid provided that leads at a distance of 10mm from case are kept at ambient temperature.

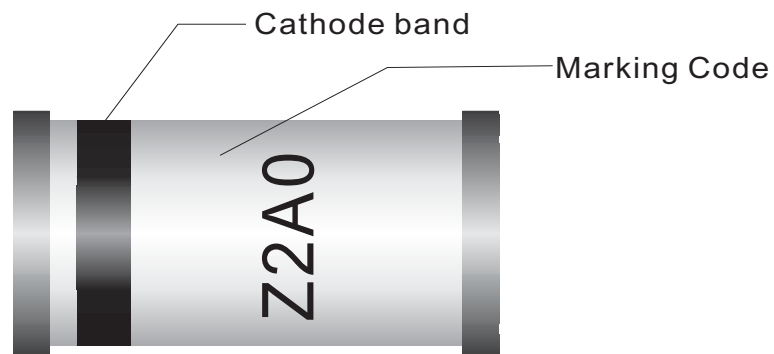
PART NUMBER	CLASS	Vz @ IZT		IZ (mA)	VR (V)	IR(μA) MAX	IzT (mA)	ZzT(Ω) MAX	Izk (mA)	Zzk(Ω) MAX	Marking Code
		MIN. V	MAX. V								
GLZJ 2.0	A	1.88	2.10	5	0.5	120	5	100	0.5	1000	Z2A0
	B	2.02	2.20								Z2B0
GLZJ 2.2	A	2.12	2.30	5	0.7	100	5	100	0.5	1000	Z2A2
	B	2.22	2.41								Z2B2
GLZJ 2.4	A	2.33	2.52	5	1.0	120	5	100	0.5	1000	Z2A4
	B	2.43	2.63								Z2B4
GLZJ 2.7	A	2.54	2.75	5	1.0	100	5	110	0.5	1000	Z2A7
	B	2.69	2.91								Z2B7
GLZJ 3.0	A	2.85	3.07	5	1.0	50	5	120	0.5	1000	Z3A0
	B	3.01	3.22								Z3B0
GLZJ 3.3	A	3.16	3.38	5	1.0	20	5	120	0.5	1000	Z3A3
	B	3.32	3.53								Z3B3
GLZJ 3.6	A	3.46	3.69	5	1.0	10	5	100	1	1000	Z3A6
	B	3.60	3.84								Z3B6
GLZJ 3.9	A	3.74	4.01	5	1.0	5	5	100	1	1000	Z3A9
	B	3.89	4.16								Z3B9
GLZJ 4.3	A	4.04	4.29	5	1.0	5	5	100	1	1000	Z4A3
	B	4.17	4.43								Z4B3
	C	4.30	4.57								Z4C3
GLZJ 4.7	A	4.44	4.68	5	1.0	5	5	90	1	900	Z4A7
	B	4.55	4.80								Z4B7
	C	4.68	4.93								Z4C7
GLZJ 5.1	A	4.81	5.07	5	1.5	5	5	80	1	800	Z5A1
	B	4.94	5.20								Z5B1
	C	5.09	5.37								Z5C1
GLZJ 5.6	A	5.28	5.55	5	2.5	5	5	60	1	500	Z5A6
	B	5.45	5.73								Z5B6
	C	5.61	5.91								Z5C6
GLZJ 6.2	A	5.78	6.09	5	3.0	5	5	60	1	300	Z6A2
	B	5.96	6.27								Z6B2
	C	6.12	6.44								Z6C2
GLZJ 6.8	A	6.29	6.63	5	3.5	2	5	20	0.5	150	Z6A8
	B	6.49	6.83								Z6B8
	C	6.66	7.01								Z6C8
GLZJ 7.5	A	6.85	7.22	5	4.0	0.5	5	20	0.5	120	Z7A5
	B	7.07	7.45								Z7B5
	C	7.29	7.67								Z7C5
GLZJ 8.2	A	7.53	7.92	5	5.0	0.5	5	20	0.5	120	Z8A2
	B	7.78	8.19								Z8B2
	C	8.03	8.45								Z8C2
GLZJ 9.1	A	8.29	8.73	5	6.0	0.5	5	25	0.5	120	Z9A1
	B	8.57	9.01								Z9B1
	C	8.83	9.30								Z9C1
GZLJ 10	A	9.12	9.59	5	7.0	0.2	5	30	0.5	120	Z10A
	B	9.41	9.90								Z10B
	C	9.70	10.20								Z10C
	D	9.94	10.44								Z10D
GLZJ 11	A	10.18	10.71	5	8.0	0.2	5	30	0.5	120	Z11A
	B	10.50	11.05								Z11B
	C	10.82	11.38								Z11C

Part Number	CLASS	Vz @ IZT		IZ (mA)	VR (V)	IR(μA) MAX	Izt (mA)	ZZT(Ω) MAX	Izk (mA)	ZZK(Ω) MAX	Marking code
		Min. V	Max. V								
GLZJ 12	A	11.13	11.71	5	9.0	0.2	5	30	0.5	110	Z12A
	B	11.44	12.03								Z12B
	C	11.74	12.35								Z12C
GLZJ 13	A	12.11	12.75	5	10	0.2	5	35	0.5	110	Z13A
	B	12.55	13.21								Z13B
	C	12.99	13.66								Z13C
GLZJ 15	A	13.44	14.13	5	11	0.2	5	40	0.5	110	Z15A
	B	13.89	14.62								Z15B
	C	14.35	15.09								Z15C
GLZJ 16	A	14.80	15.57	5	12	0.2	5	40	0.5	150	Z16A
	B	15.25	16.04								Z16B
	C	15.69	16.51								Z16C
GLZJ 18	A	16.22	17.06	5	13	0.2	5	45	0.5	150	Z18A
	B	16.82	17.70								Z18B
	C	17.42	18.33								Z18C
GLZJ 20	A	18.02	18.96	5	15	0.2	5	55	0.5	200	Z20A
	B	18.63	19.59								Z20B
	C	19.23	20.22								Z20C
	D	19.72	20.72								Z20D
GLZJ 22	A	20.15	21.20	5	17	0.2	5	30	0.5	200	Z22A
	B	20.64	21.71								Z22B
	C	21.08	22.17								Z22C
	D	21.52	22.63								Z22C
GLZJ 24	A	22.05	23.18	5	19	0.2	5	35	0.5	200	Z24A
	B	22.61	23.77								Z24B
	C	23.12	24.31								Z24C
	D	23.63	24.85								Z24D
GLZJ 27	A	24.26	25.52	5	21	0.2	5	45	0.5	250	Z27A
	B	24.97	26.26								Z27B
	C	25.63	26.95								Z27C
	D	26.29	27.64								Z27D
GLZJ 30	A	26.99	28.39	5	23	0.2	5	55	0.5	250	Z30A
	B	27.70	29.13								Z30B
	C	28.36	29.82								Z30C
	D	29.02	30.51								Z30D
GLZJ 33	A	29.68	31.22	5	25	0.2	5	65	0.5	250	Z33A
	B	30.32	31.88								Z33B
	C	30.90	32.50								Z33C
	D	31.49	33.11								Z33D
GLZJ 36	A	32.14	33.79	5	27	0.2	5	75	0.5	250	Z36A
	B	32.79	34.49								Z36B
	C	33.40	35.13								Z36C
	D	34.01	35.77								Z36D
GLZJ 39	A	34.68	36.47	5	30	0.2	5	85	0.5	250	Z39A
	B	35.36	37.19								Z39B
	C	36.00	37.85								Z39C
	D	36.63	38.52								Z39D
GLZJ 43		40.00	45.00	5	33	0.2	5	90	--	--	Z43
GLZJ 47		44.00	49.00	5	36	0.2	5	90	--	--	Z47
GLZJ 51		48.00	54.00	5	39	0.2	5	110	--	--	Z51
GLZJ 56		53.00	60.00	5	43	0.2	5	110	--	--	Z56

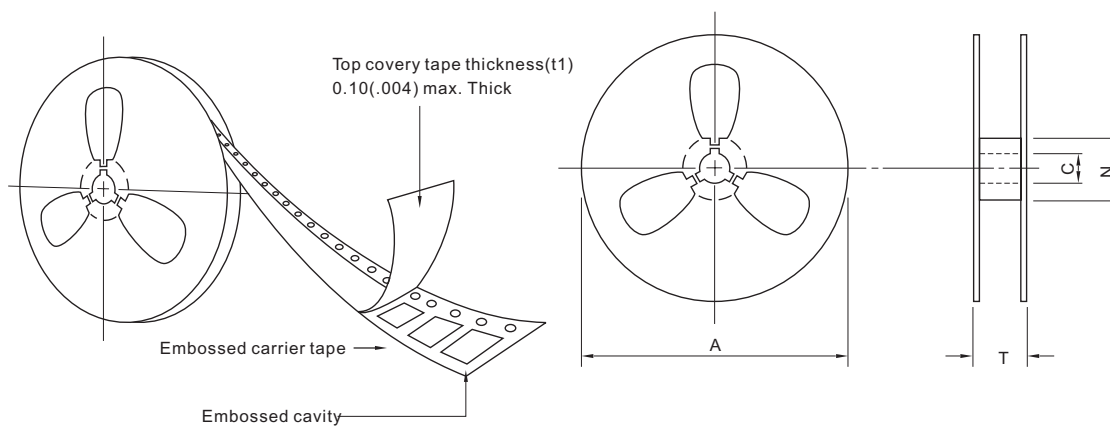
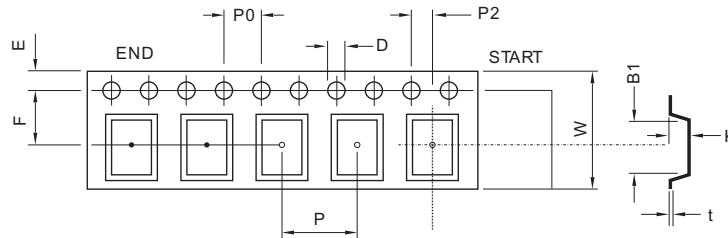
RATING AND CHARACTERISTIC CURVES



2. MARKING



3. TAPING



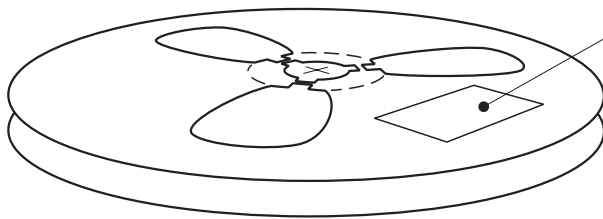
SYMBOL	mm(inch)
TYPE SIZE	8.00 (0.314)
B1	3.70 (0.146) max.
D	1.50 ± 0.10 (0.059 ± 0.004)
A	180.0 (7.0) max.
N	60.0 (2.362) min.
C	13.0 ± 0.5 (0.51 ± 0.02)
E	1.75 ± 0.10 (0.068 ± 0.003)
F	3.50 ± 0.05 (0.138 ± 0.002)
K	1.80 (0.017) max.
P	4.00 ± 0.10 (0.157 ± 0.003)
Po	4.00 ± 0.10 (0.157 ± 0.003)
P2	2.00 ± 0.10 (0.079 ± 0.003)
t	0.20 (0.008) max.
W	8.00 ± 0.30 (0.315 ± 0.012)
T	14.90 (0.587) max.

Note:

1. A₀, B₀, K₀ are determined by component size. The clearance between the component and The component and the cavity must be with in 0.05mm (0.002") min. to 0.65mm (0.025") max. For 12mm tape, 0.05mm (0.002") min. To 0.90mm (0.035") max. For 16mm tape.
2. In addition, the components cannot rotate more than 20° within the determined cavity, see sketch a below.

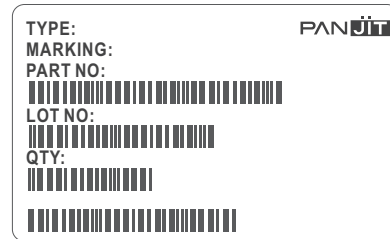
4. PACKING

REEL PACKING

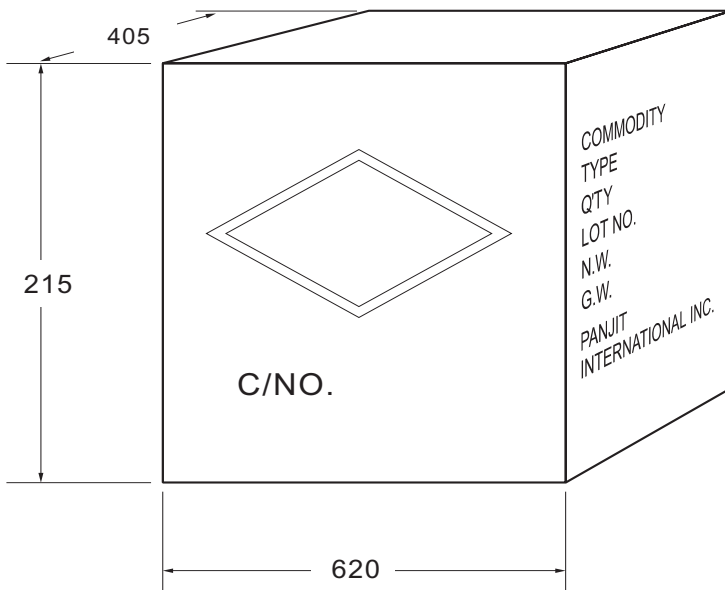


Quantity per Reel: 2,500 pcs

LABEL TYPE

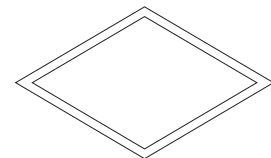


CARTON



Box Dimensions : mm
Quantity per Box: 200,000pcs

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					
R-1	198 x 84 x 20	1,000	459 x 214 x 256	50,000	12.4
A-405	198 x 84 x 20	1,000	459 x 214 x 256	50,000	13.4
DO-35	96 x 80 x 42	10,000	410 x 350 x 275	120,000	21.5
DO-34	96 x 80 x 42	10,000	410 x 350 x 275	120,000	21.5
DO-41G	240 x 100 x 100	5,000	410 x 350 x 275	60,000	26.5
DO-41	198 x 84 x 20	1,000	459 x 214 x 256	50,000	19.1
DO-15	200 x 85 x 25	1,000	459 x 214 x 256	40,000	17.5
DO-201AE	200 x 85 x 40	500	459 x 214 x 256	12,500	17.0
DO-201AD	200 x 85 x 40	500	459 x 214 x 256	12,500	17.3
P600	208 x 90 x 83	500	459 x 214 x 256	5,000	11.3
AM	195 x 195 x 40	1,000	400 x 273 x 415	10,000	16.8
DIP	-	-	459 x 214 x 256	12,000	10.2
SDIP	-	-	459 x 214 x 256	24,000	15.5
FL	230 x 230 x 50	500	495 x 245 x 180	3,000	25.0
GBU	350 x 337 x 44	800	510 x 340 x 235	3,200	18.9
ITO/TO-220	555 x 145 x 95	2,000	570 x 306 x 218	8,000	13.4
GL	260 x 190 x 75	72	460 x 215 x 260	864	15.8
KBU	230 x 230 x 50	200	495 x 245 x 180	3,000	21.5
GBJ	352 x 337 x 44	600	375 x 360 x 213	2,400	13.1
TO-251AB	560 x 210 x 79	8,000	577 x 226 x 196	16,000	6.5
GBL	352 x 337 x 44	960	375 x 360 x 213	3,840	13.0
GBP	352 x 337 x 44	1,120	375 x 360 x 213	4,480	11.3
TO-3P	-	-	536 x 243 x 100	1,500	12.7
GBPC/W	195 x 195 x 41	50	460 x 215 x 260	500	9.8 / 8.8

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							
R-1	5,000	5.0	26	255 x 50 x 150	339 x 276 x 330	60,000	12.4
R-1	5,000	5.0	52	255 x 75 x 150	339 x 276 x 330	40,000	12.4
A-405	5,000	5.0	26	255 x 50 x 150	339 x 276 x 330	60,000	13.4
A-405	5,000	5.0	52	255 x 75 x 150	339 x 276 x 330	40,000	13.4
DO-35	5,000	5.0	52	255 x 80 x 80	410 x 350 x 275	100,000	20.0
DO-34	5,000	5.0	26	248 x 80 x 48	410 x 335 x 265	150,000	15.5
DO-34	5,000	5.0	52	248 x 80 x 75	410 x 335 x 265	5,000	14.1
DO-41G	2,500	5.0	52	255 x 80 x 80	410 x 350 x 275	50,000	22.0
DO-41	5,000	5.0	52	255 x 75 x 150	339 x 276 x 330	40,000	19.1
DO-15	3,000	5.0	52	255 x 75 x 150	339 x 276 x 330	24,000	17.5
DO-201AE	1,250	10.0	52	255 x 75 x 150	339 x 276 x 330	10,000	17.0
DO-201AD	1,250	10.0	52	255 x 75 x 150	339 x 276 x 330	10,000	17.3
P600	400	10.0	52	255 x 75 x 150	339 x 276 x 330	3,200	11.3

PACKAGE	REEL	COMPONENT SPACE	TAPE SPACE	REEL DIA	CARTON SIZE	CARTON	APPROX. GROSS WEIGHT
	(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	9.0
A-405	5,000	5.0	52	330	340 x 340 x 410	25,000	9.1
DO-34	10,000	5.0	52	360	360 x 360 x 395	50,000	9.5
DO-35	10,000	5.0	52	360	360 x 360 x 395	50,000	12.0
DO-41G	5,000	5.0	52	360	380 x 380 x 420	25,000	14.5
DO-41	5,000	5.0	52	330	360 x 360 x 395	25,000	13.0
DO-15	4,000	5.0	52	330	340 x 340 x 410	20,000	11.8
DO-201AE	1,250	10.0	52	330	340 x 340 x 410	6,250	11.0
DO-201AD	1,250	10.0	52	330	340 x 340 x 410	6,250	11.6
P600	800	10.0	52	330	340 x 340 x 410	4,000	11.4
SMA	7,500 / 1,800	4.0	-	330 / 178	375 x 360 x 390 / 390 x 240 x 420	120,000 / 72,000	17.5 / 8.3
SMB	3,000 / 500	4.0	-	330 / 178	375 x 360 x 390 / 390 x 240 x 420	48,000 / 20,000	13.6 / 7.5
SMC	3,000 / 500	12.0	-	330 / 178	375 x 360 x 390 / 390 x 240 x 420	42,000 / 15,000	16.2 / 7.3
SDIP	1,500	12.0	-	330	375 x 360 x 390	21,000	16.3
MDI	3,000 / 500	8.0	-	330 / 178	375 x 360 x 390	48,000 / 30,000	14.4
D ² PCK	800	16.0	-	330	375 x 360 x 390	6,400	15.6
TO-252	3,000	8.0	-	330	375 x 360 x 390	42,000	16.5
QFN 1.6 x 1.6	12,000 / 4,000	4.0	8	330/178	375 x 360 x 213 / 390 x 240 x 420	144,000 / 200,000	9.2 / 9.6
SOD-123	10,000 / 3,000	4.0	8	330 / 178	375 x 360 x 213 / 390 x 240 x 420	120,000 / 150,000	8.0 / 10.0
SOD-123FL	10,000 / 3,000	4.0	8	330 / 178	375 x 360 x 213 / 390 x 240 x 420	120,000 / 150,000	10.4 / 11.0
SOD-323	12,000 / 5,000	4.0	8	330 / 178	375 x 360 x 213 / 390 x 240 x 420	144,000 / 250,000	9.6 / 10.0
SOT-23	12,000 / 3,000	4.0	8	330 / 178	375 x 360 x 213 / 390 x 240 x 420	144,000 / 150,000	9.6 / 10.0
SOT-323	12,000 / 3,000	4.0	8	330 / 178	375 x 360 x 213 / 390 x 240 x 420	144,000 / 150,000	9.6 / 10.0
SOT-363	3,000	4.0	-	178	438 x 438 x 220	120,000	-
SOT-23-6L	3,000	4.0	-	178	438 x 438 x 220	120,000	-
MICRO-MELF	2,500	4.0	-	178	385 x 380 x 260	25,000	13.5
QUADRO-MELF	2,500	4.0	-	178	640 x 405 x 150	200,000	15.7
MINI-MELF	2,500	4.0	-	178	385 x 380 x 260	25,000	13.5
DL-41	1,500 / 5,000	4.0	-	330	385 x 380 x 260 / 360 x 360 x 395	100,000	14.0