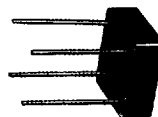
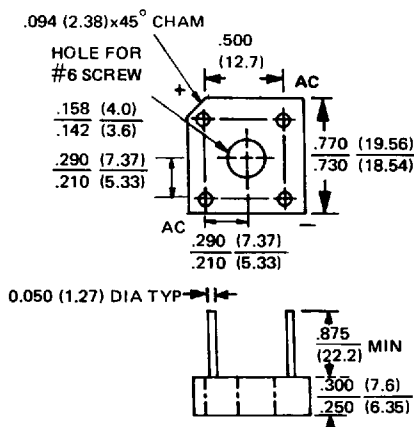


LITEON POWER
SEMICONDUCTORS**KBPC8005 thru 810**

VOLTAGE RANGE
50 to 1000 Volts
CURRENT
8.0 Amperes

FEATURES

- Rating to 1000V PRV
- Surge overload rating to 125 Amperes peak
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique results in inexpensive product
- Lead solderable per MIL-STD-202 Method 208
- Leads: silver plated copper
- Plastic material has U/L flammability classification 94V-0
- Weight: 0.18 ounce 5.4 grams
- Mounting: thru hole for #6 screw

PBPC-8

Polarity shown on side of case:
positive lead by beveled corner.
Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25° C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load,
For capacitive load, derate current by 20%.

		KBPC 8005	KBPC 801	KBPC 802	KBPC 804	KBPC 806	KBPC 808	KBPC 810	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Bridge Input Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	60	100	200	400	600	800	1000	V
Maximum Average Forward Output Current @ $T_C = 50^\circ\text{C}^*$ @ $T_A = 40^\circ\text{C}^{**}$	$I_{(AV)}$	8.0 3.0							A A
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	125							A
Maximum DC Forward Voltage drop per element at 4 A DC	V_F	1.2							V
Maximum DC Reverse Current at rated DC Blocking Voltage per element @ $T_A = 25^\circ\text{C}$ @ $T_A = 100^\circ\text{C}$	I_R	10 100							μA μA
Typical Junction Capacitance	C_J	30							pF
Typical Thermal Resistance	$R_{\theta JC}$	6							$^\circ\text{C/W}$
Operating Temperature Range	T_J	-55 to + 150							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to + 150							$^\circ\text{C}$

NOTE: *Unit mounted on metal chassis.

**Unit mounted on P.C. board.

Please specified if UL Recognition is necessary.

FIG. 1— PEAK FORWARD SURGE CURRENT

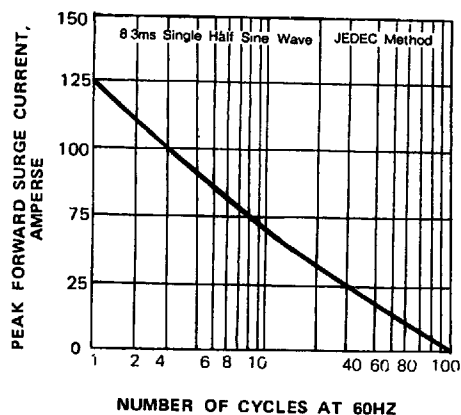


FIG. 3— TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

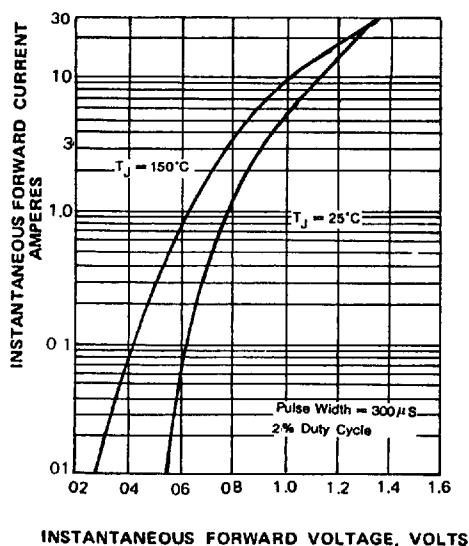


FIG. 2— FORWARD DERATING CURVE

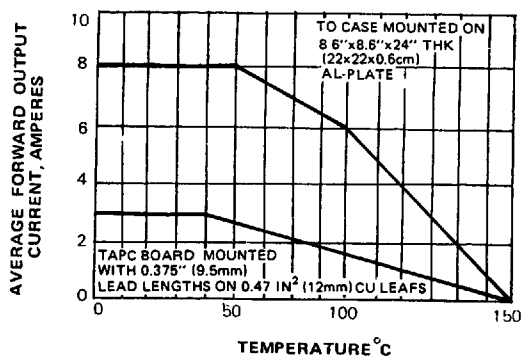


FIG. 4— TYPICAL JUNCTION CAPACITANCE PER ELEMENT

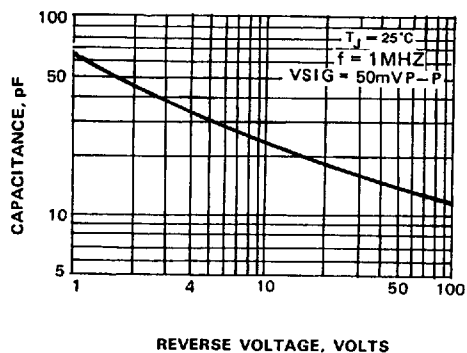
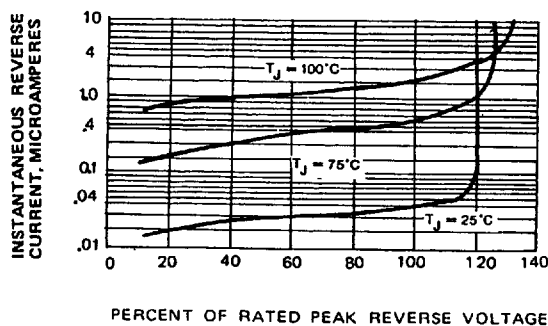


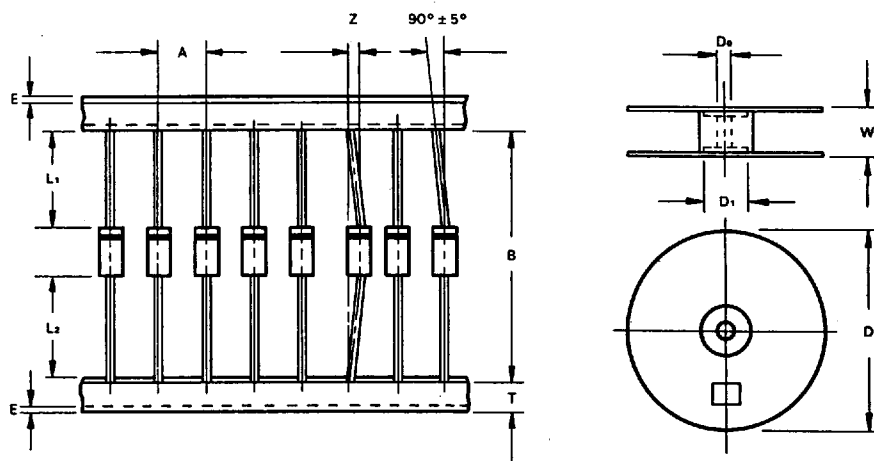
FIG. 5— TYPICAL REVERSE CHARACTERISTICS



Axial lead devices are packed in accordance with EIA standard RS-296-D and specifications given below.

T-91-20

COMPONENT OUTLINE	COMPONENT PITCH A $\pm 0.5\text{mm}$ (.020")	INNER TAPE PITCH B $\pm 1.5\text{mm}$ (.059")	CUMULATIVE PITCH TOLERANCE
A-405	5.0mm	26.0mm	2.0mm/20pitch
A-405	5.0mm	52.4mm	2.0mm/10pitch
DO-41	5.0mm	26.0mm	2.0mm/20pitch
DO-41	5.0mm	52.4mm	2.0mm/10pitch
DO-15	5.0mm	52.4mm	2.0mm/10pitch
DO-201AD	10.0mm	52.4mm	2.0mm/10pitch
R-6	10.0mm	52.4mm	2.0mm/10pitch



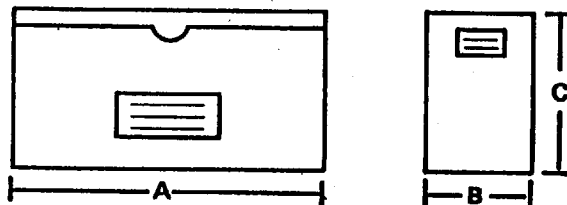
ITEM	SYMBOL	SPECIFICATIONS (mm)	SPECIFICATIONS (inch)
Component alignment	Z	1.2 max.	0.048 max.
Tape width	T	6.0 ± 0.4	0.236 ± 0.016
Exposed adhesive	E	0.8 max.	0.032 max.
Body eccentricity	$ L_1 - L_2 $	1.0 max.	0.040 max.
Reel outside diameter	D	330.0	13.0
Reel inner diameter	D ₁	85.7 ± 0.3	3.375 ± 0.012
Feed hole diameter	D ₀	16.6 ± 0.4	0.655 ± 0.016
Reel width	W	79.0 ± 1.0	3.110 ± 0.040

NOTE: 1. Each component lead shall be sandwiched between tapes for a minimum of 3.2mm (0.126").
 2. The reel width "W" for 26mm taping is $50.0 \pm 1.0\text{mm}$ (1.97" $\pm$ 0.040")

BULK PACKAGING

DEVICE TYPE	PACKAGING SIZE (MM)		QUANTITY (EA)		APPROX GROSS WEIGHT (KG)	
	BOX	CARTON	BOX	CARTON	BOX	CARTON
DO-41L	196 x 84 x 20	450 x 210 x 250	1000	50K	0.38	20
DO-41 DO-15	196 x 84 x 20	450 x 210 x 250	1000	50K	0.38	20
DO-201AD	305 x 93 x 59	355 x 355 x 355	1000	20K	1.35	28
R-6	305 x 93 x 59	355 x 355 x 355	500	10K	1.2	24.5
PBM	357 x 125 x 60	450 x 210 x 310	1000	10K	1.5	16.2
PBDF /DF	495 x 155 x 145	500 x 325 x 305	5000	20K	7.1	28.4
PBP	357 x 125 x 60	450 x 350 x 310	400	4K	1.08	11
PBL /KBL	375 x 220 x 155	450 x 210 x 310	300	3K	1.9	19.5
PBPC-3/PBPC-6	205 x 205 x 55	450 x 210 x 310	200	2K	0.885	8.9
PBPC-8	357 x 125 x 60	450 x 210 x 310	150	1.5K	1.7	7.5
KBPC/MP	205 x 205 x 55	450 x 210 x 310	50	0.5K	1.9	16
KBPC-W/MP-W	205 x 205 x 55	450 x 210 x 310	50	0.5K	1.8	15.5
TO-220	560 x 325 x 175	560 x 325 x 175	2000	8K	5.42	21.7
TO-3P	550 x 355 x 225	550 x 355 x 225	1240	4.96K	10.5	—
SMDF /DF-S	495 x 155 x 145	500 x 325 x 305	9000	36K	6.5	26.5

AMMO BOX PACKAGING



BOX SIZE

Unit: m. m.

Packaging	Products Outline	Dimension "A"	Dimension "B"	Dimension "C"	Q'ty per BOX
26MM Horizontal Ammo Pack	DO-41 DO-41L(0.6mm Lead)	255	50	95	3K 3K
52MM Horizontal Ammo Pack	DO-41 and DO-41L DO-201AD	250	75	92	3K 0.8K

CARTON SIZE

Unit: m. m.

Packaging	Products Outline	Length	Width	Height	Q'ty Per Carton
26MM Horizontal Ammo Pack	DO-41 DO-41L(0.6mm Lead)	330	310	268	42K
52MM Horizontal Ammo Pack	DO-41 and DO-41L DO-201AD	355	355	340	48K 12K

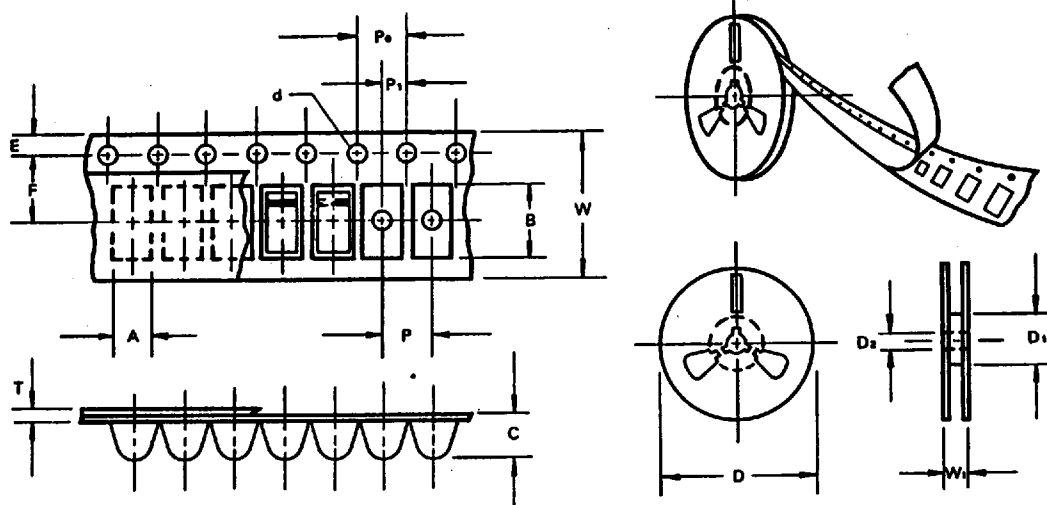
LITE-ON supplies these SMD components in 8-mm or 12-mm blister tapes depending on type of case.

The tape and reel dimensions used for packaging MELF (DL-41) devices are shown in the following figures.

The packaging units for taped devices are

type of case	qty/reel	reel ϕ
MELF (DL-41)	5,000	330 mm
MiniMELF (DL-35)	5,000 10,000	250 mm 330 mm

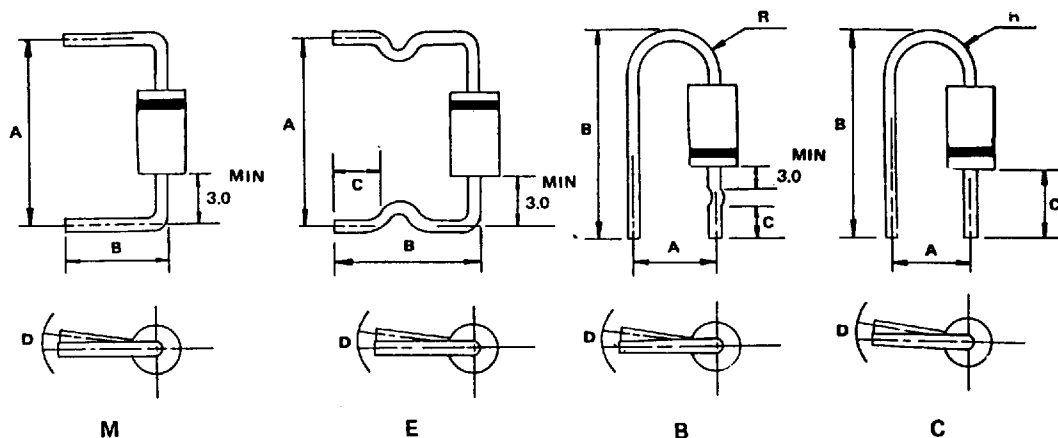
MELF (DL41) OUTLINES



ITEM	SYMBOL	8 - mm Carrier Type	12 - mm Carrier Type
Carrier width	A	2.2 max. (.086 max.)	3.2 max (.126 max.)
Carrier length	B	4.2 max. (.165 max.)	8.2 max (.323 max.)
Carrier depth	C	2.4 max. (.094 max.)	4.5 max (.177 max.)
Sprocket hole	d	1.5 $\pm$ 0.1 (.059 $\pm$.004)	1.5 $\pm$ 0.1 (.059 $\pm$.004)
Reel outside diameter	D	178 $\pm$ 2.0 (7.00 $\pm$.079)	330 max (130 max.)
Reel inner diameter	D ₁	50 min. (1.969 min.)	50 min (1.969 min.)
Feed hole diameter	D ₂	13.0 $\pm$ 0.5 (.512 $\pm$.020)	13.0 $\pm$ 0.5 (.512 $\pm$.020)
Sprocket hole position	E	1.75 $\pm$ 0.1 (.069 $\pm$.004)	1.75 $\pm$ 0.1 (.069 $\pm$.004)
Punch hole position	F	3.5 $\pm$ 0.1 (.138 $\pm$.004)	5.5 $\pm$ 0.1 (.217 $\pm$.004)
Punch hole pitch	P	4.0 $\pm$ 0.1 (.157 $\pm$.004)	4.0 $\pm$ 0.1 (.157 $\pm$.004)
Sprocket hole pitch	P ₀	4.0 $\pm$ 0.1 (.157 $\pm$.004)	4.0 $\pm$ 0.1 (.157 $\pm$.004)
Embossment center	P ₁	2.0 $\pm$ 0.05 (.079 $\pm$.002)	2.0 $\pm$ 0.05 (.079 $\pm$.002)
Overall tape thickness	T	1.1 max. (.043 max.)	1.1 max. (.043 max.)
Tape width	W	8.0 $\pm$ 0.3 (.315 $\pm$.012)	12.0 $\pm$ 0.3 (.412 $\pm$.012)
Reel width	W ₁	18.4 max. (.724 max.)	18.4 max. (.724 max.)

NOTE: All Dimensions in Millimeters and (inches)

PREFORMED LEAD DRAWING



Case type	Performed Type	A —(mm)		B —(mm)		C —(mm)		D —(mm)		R (M00)	
		range	tolerance	range	tolerance	range	tolerance	range	tolerance	range	tolerance
DO-41 DO-41L	M	9.0—20.0	±0.5	8.0—22.0	±0.5	—	—	1.5	max.	—	—
	E	11.0—20.0	±0.5	11.0—16.0	±1.0	4.0—5.0	±0.5	1.5	max.	—	—
	B	7.5	±0.5	19.0—22.0	±0.5	7.5	±0.5	1.5	max.	2.5—4.0	Typ
	C	4.5	±0.8	18.0—19.0	±0.5	90	±0.5	1.5	max.	2.5—4.0	Typ
DO-15	M	9.0—20.0	±0.5	8.0—22.0	±0.5	—	—	1.5	max.	—	—
	E	11.0—20.0	±0.5	11.0—16.0	±1.0	4.0—5.0	±0.5	1.5	max.	—	—
DO201AD	M	15.0—20.0	±1.0	8.0—22.0	±1.0	—	—	2.0	max.	—	—
	E	15.0—20.0	±1.0	10.0—22.0	±1.0	3.0—15.0	±0.5	2.0	max.	—	—
R-6	M	15.0—20.0	±1.0	8.0—22.0	±1.0	—	—	2.0	max.	—	—

*Press Forming Also Available.