

# KLFM07540-U

## List

List..... 1

Package outline..... 2

Features..... 2

Mechanical data..... 2

Maximum ratings ..... 2

Electrical characteristics ..... 2

Rating and characteristic curves..... 3

Pinning information..... 4

Marking.....4

Suggested solder pad layout..... 4

Packing information..... 5

Reel packing..... 6

Suggested thermal profiles for soldering processes..... 6

# KLFM07540-U

## 0.75A Surface Mount Low Leakage Schottky Barrier Rectifier- 40V

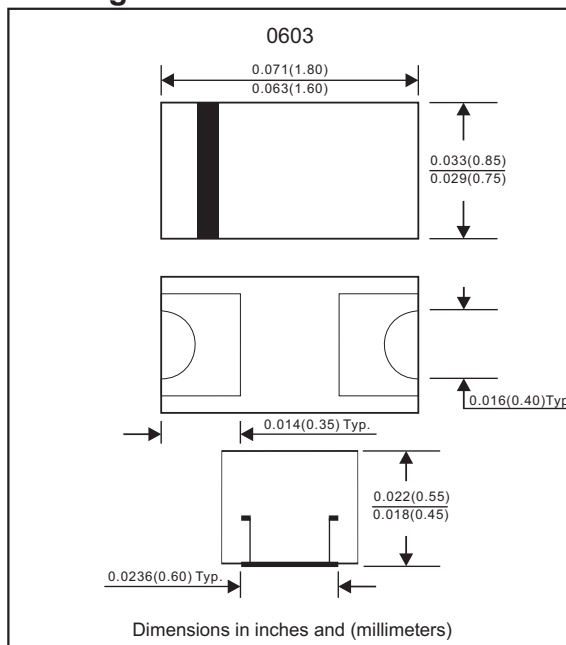
### Features

- Dual Flat No-lead.  
Small body outline dimensions:  
0.067" X 0.032" (1.7mm X 0.80mm).
- Low leakage current.
- Suffix "-H" indicates Halogen free part, ex. KLFM07540-U-H .

### Mechanical data

- Epoxy: UL94-V0 rated flame retardant
- Case: Molded plastic,0603
- Terminals: Golden Plated terminals,  
solderable per MIL-STD-750,Method 2026
- Polarity: Indicated by cathode band
- Mounting Position: Any
- Weight: Approximated 0.002gram

### Package outline



### Maximum ratings (at $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Repetitive peak reverse voltage		$V_{RRM}$			40	V
Average forward rectified current		$I_o$			0.75	A
Forward surge current	Non-Repetitive Peak Forward Surge Current at $t=8.3\text{ms}$	$I_{FSM}$			3.0	A
Operating junction temperature range		$T_J$	-55		+125	$^\circ\text{C}$
Storage temperature range		$T_{STG}$	-55		+125	$^\circ\text{C}$

### Electrical characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 10\text{mA DC}$ $I_F = 100\text{mA DC}$ $I_F = 200\text{mA DC}$ $I_F = 750\text{mA DC}$	$V_F$		0.29 0.37 0.41 0.55	0.4 0.7	V
Reverse current	$V_R = 30\text{V}, T_J = 25^\circ\text{C}$	$I_R$			10	$\mu\text{A}$
Diode junction capacitance	$f = 1\text{MHz}$ and applied 10V DC reverse voltage	$C_D$		17	20	pF

## Rating and characteristic curves (KLFM07540-U)

FIG.1- FORWARD CHARACTERISTICS

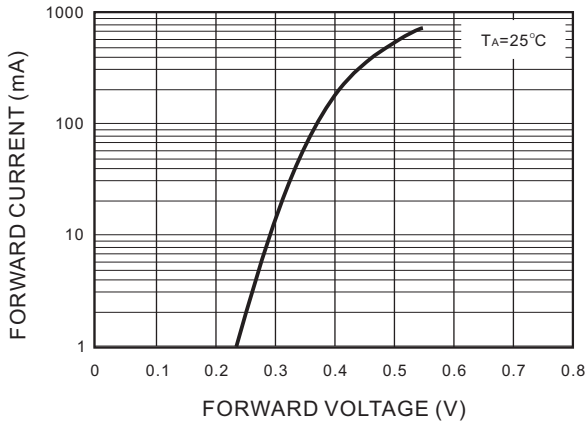


FIG.2- REVERSE CHARACTERISTICS

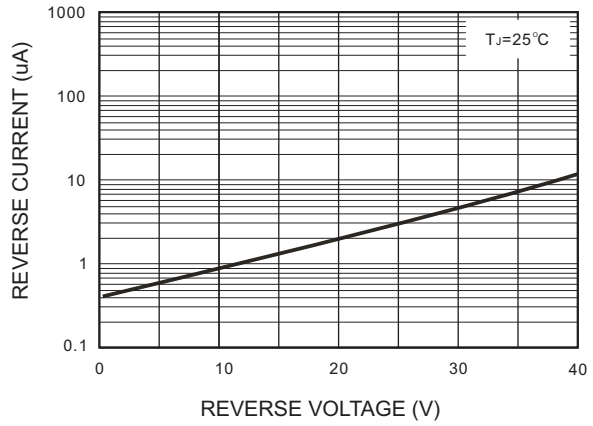


FIG.3- TERMINALS CHARACTERISTICS

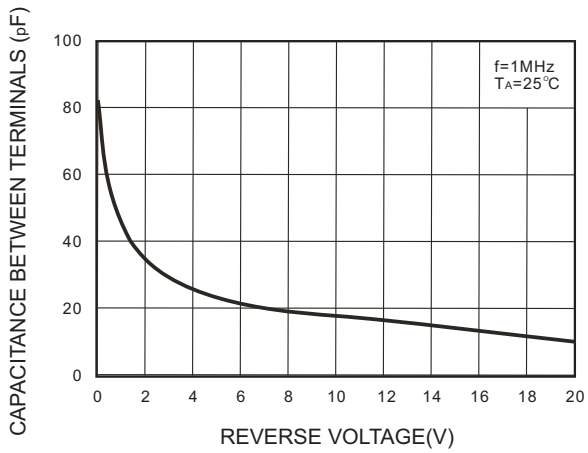
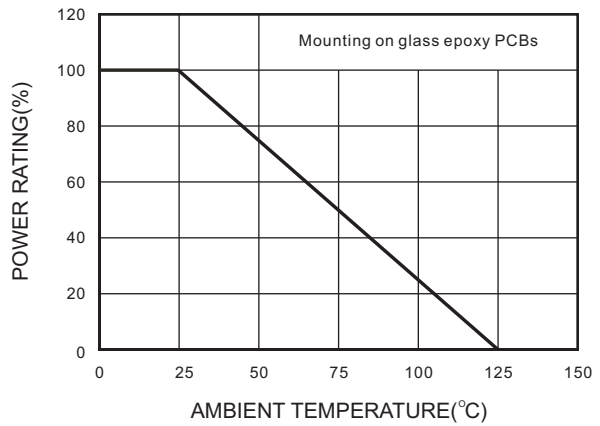


FIG.4- POWER RATING DERATING CURVE



# KLFM07540-U

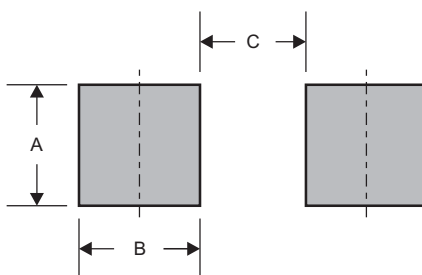
## Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

## Marking

Type number	Marking code	Example
KLFM07540-U	C	

## Suggested solder pad layout

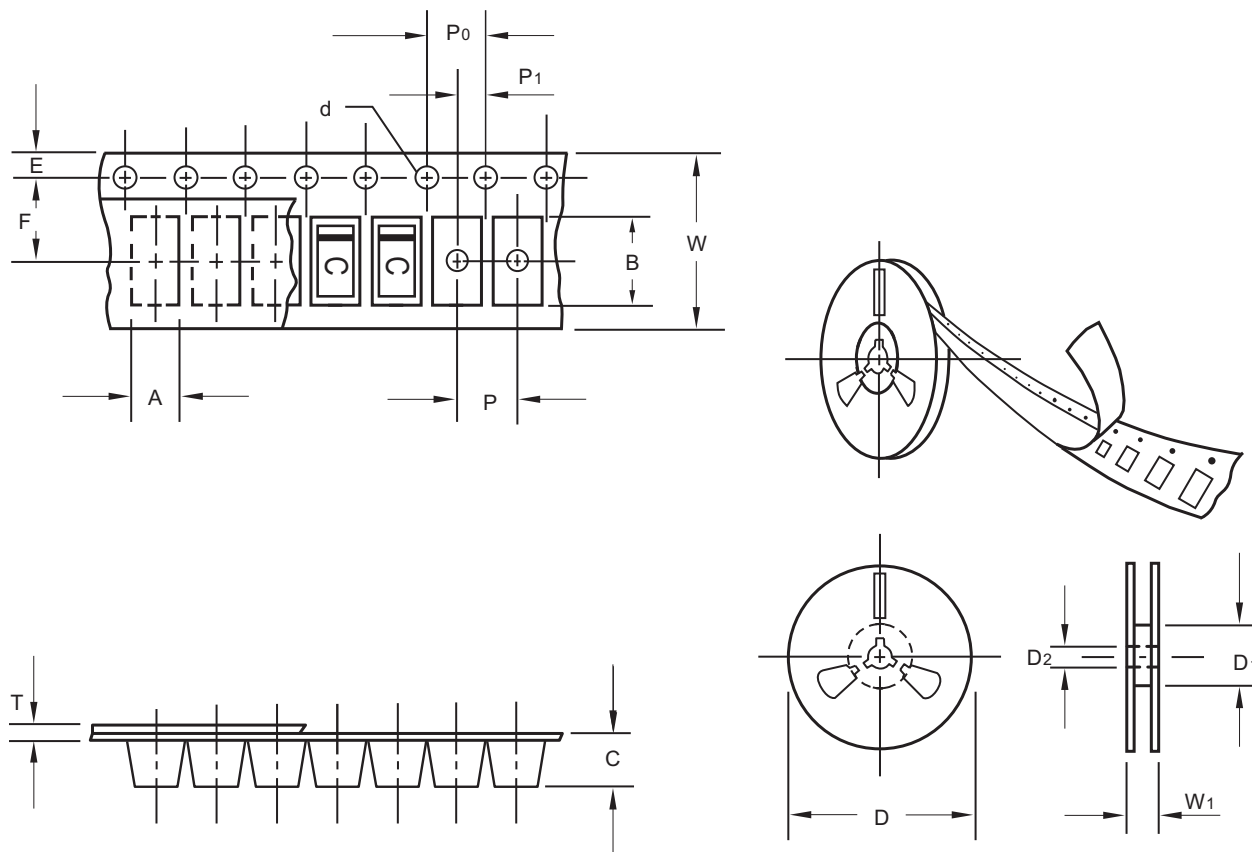


Dimensions in inches and (millimeters)

PACKAGE	A	B	C
0603	0.032 (0.80)	0.028 (0.70)	0.036 (0.90)

# KLFM07540-U

## Packing information



unit:mm

Item	Symbol	Tolerance	0603
Carrier width	A	0.1	1.00
Carrier length	B	0.1	1.80
Carrier depth	C	0.1	0.65
Sprocket hole	d	0.1	1.50
13" Reel outside diameter	D	2.0	-
13" Reel inner diameter	D1	min	-
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D1	min	62.00
Feed hole diameter	D2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.05	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P0	0.1	4.00
Embossment center	P1	0.05	2.00
Overall tape thickness	T	0.1	0.23
Tape width	W	0.1	8.00
Reel width	W1	1.0	11.40

Note: Devices are packed in accordance with EIA standard 481-D and specifications listed above.

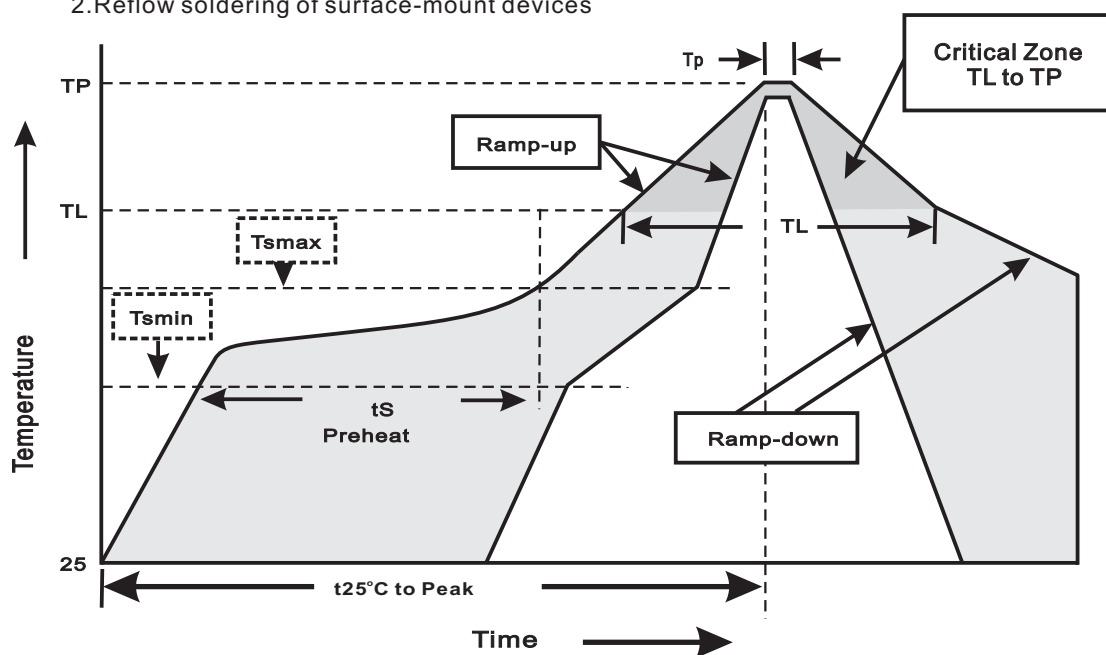
# KLFM07540-U

## Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
0603	7"	5,000	4.0	50,000	183*123*183	178	382*257*387	400,000	9.0

## Suggested thermal profiles for soldering processes

- 1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
- 2.Reflow soldering of surface-mount devices



### 3.Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(T <sub>L</sub> to T <sub>P</sub> )	<3°C/sec
Preheat -Temperature Min(T <sub>smin</sub> ) -Temperature Max(T <sub>smax</sub> ) -Time(min to max)(t <sub>s</sub> )	150°C 200°C 60~120sec
T <sub>smax</sub> to T <sub>L</sub> -Ramp-upRate	<3°C/sec
Time maintained above: -Temperature(T <sub>L</sub> ) -Time(t <sub>L</sub> )	217°C 60~260sec
Peak Temperature(T <sub>P</sub> )	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(t <sub>P</sub> )	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes