

GPFM801YC-D Thru GPFM807YC-D

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GPFM801YC-D Thru GPFM807YC-D

8.0A General Purpose Rectifiers : 50V ~ 1000V

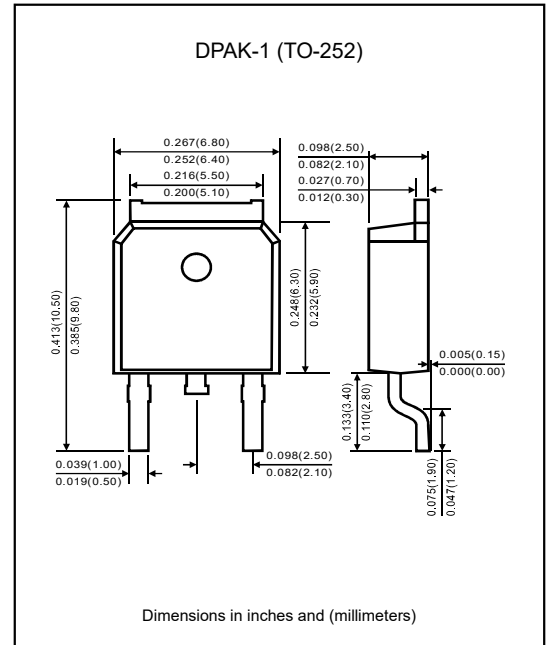
Features

- Low reverse leakage.
- High forward surge current capability.
- High temperature soldering guaranteed 260°C/10 seconds at terminals.
- Construction utilizes void-free molded plastic technique.
- Lead-free parts meet RoHS requirements.
- Suffix "-H" indicates Halogen-free parts, ex. GPFM801YC-D-H.

Mechanical data

- Epoxy:UL94-V0 rated flame retardant.
- Case : Molded plastic, DPAK-1(TO-252).
- Terminals : Solder plated, solderable per MIL-STD-750,Method 2026.
- Mounting Position : Any.

Package outline



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

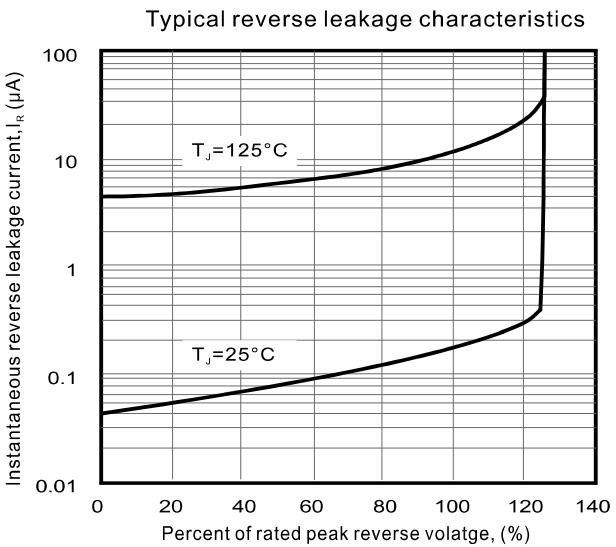
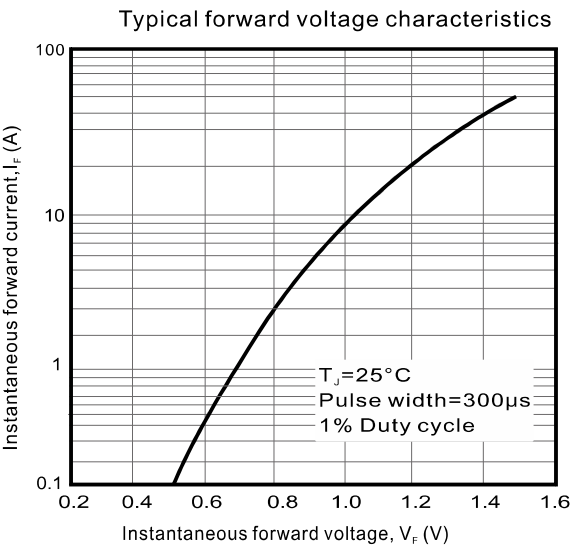
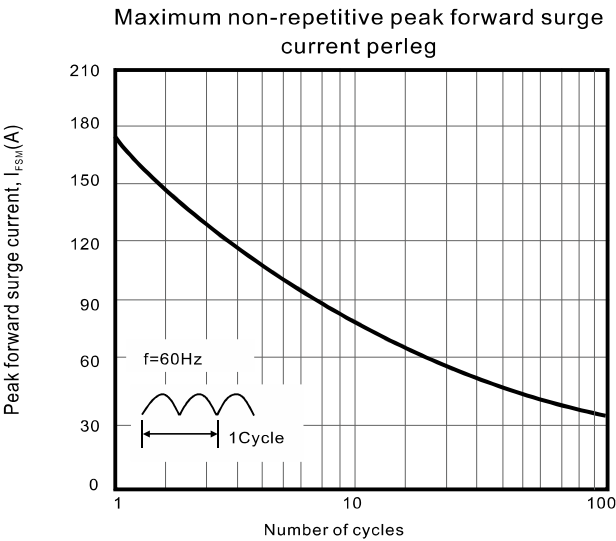
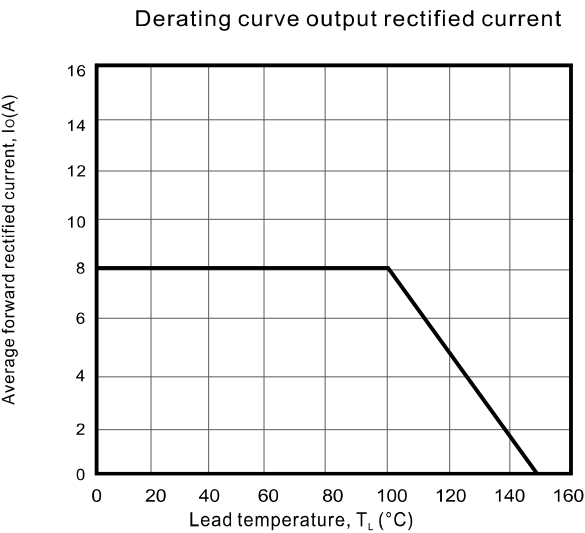
Parameter	Symbol	GPFM 801YC-D	GPFM 802YC-D	GPFM 803YC-D	GPFM 804YC-D	GPFM 805YC-D	GPFM 806YC-D	GPFM 807YC-D	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at $T_L=100^{\circ}\text{C}$	I_O	8							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	175							A
Maximum instantaneous forward voltage at $I_F=8.0\text{A}$	V_F	1.1							V
Maximum DC reverse current ($T_A=25^{\circ}\text{C}$) at rated DC blocking voltage ($T_A=125^{\circ}\text{C}$)	I_R	5.0 500							μA
Typical junction capacitance (Note 1)	C_J	68							pF
Thermal resistance, junction to case	$R_{\theta JC}$	2.5							$^{\circ}\text{C/W}$
Operating junction temperature	T_J	+150							$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 to +150							$^{\circ}\text{C}$

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

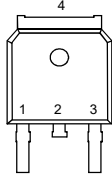
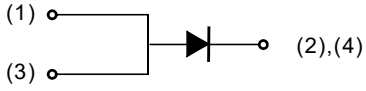
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Rating and characteristic curves



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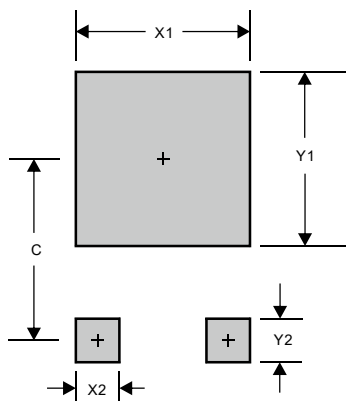
Pinning information

Pin	Simplified outline	Symbol
Pin 1, 3 Anode Pin 2, 4 Cathode		

Marking

Type number	Marking code
GPFM801YC-D	GS805YS
GPFM802YC-D	GS810YS
GPFM803YC-D	GS820YS
GPFM804YC-D	GS840YS
GPFM805YC-D	GS860YS
GPFM806YC-D	GS880YS
GPFM807YC-D	GS8100YS

Suggested solder pad layout

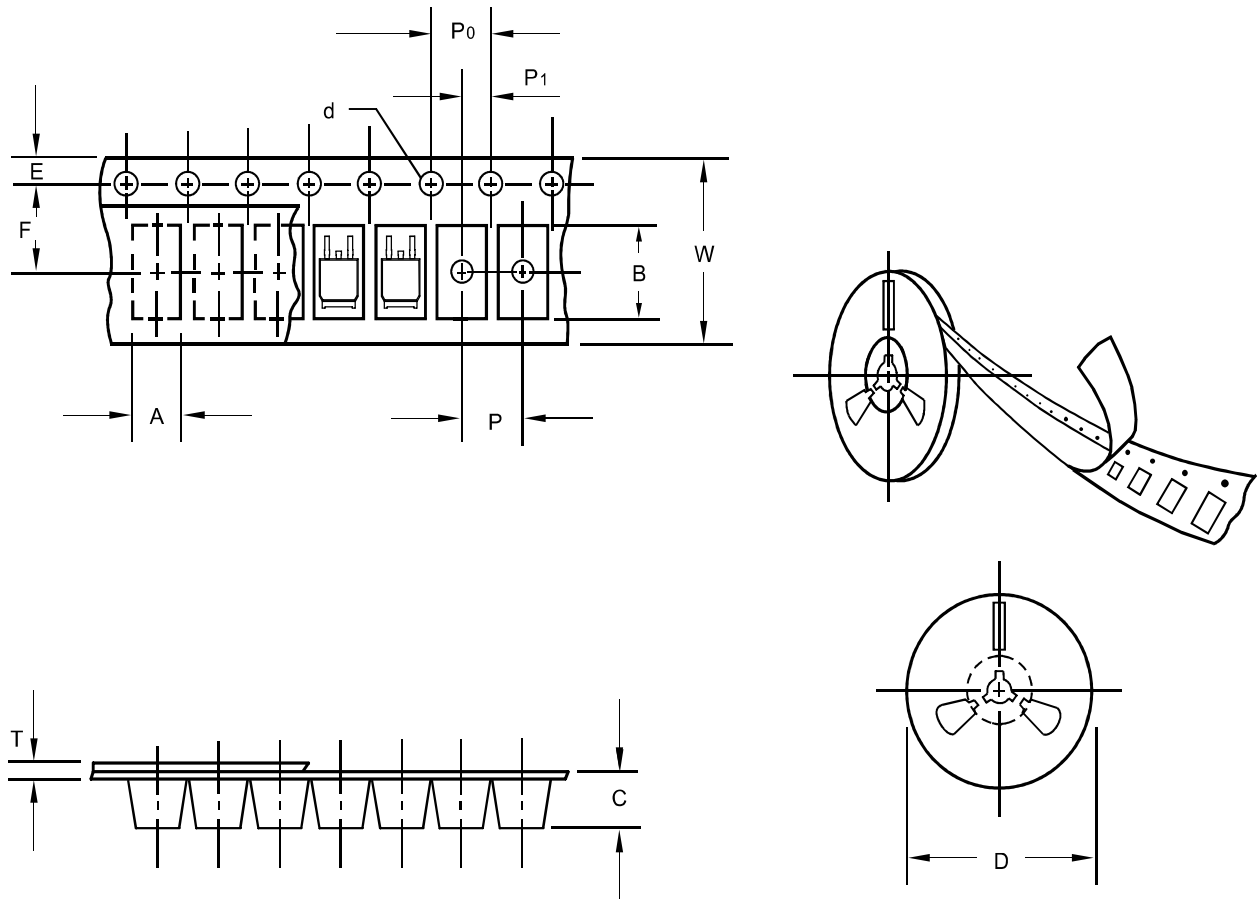


PACKAGE	DPAK-1
C	0.261(6.64)
X1	0.240(6.10)
X2	0.056(1.42)
Y1	0.298(7.57)
Y2	0.109(2.76)

Dimensions in inches and (millimeters)

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Packing information



unit:mm

Item	Symbol	Tolerance	DPAK-1 (TO-252)
Carrier width	A	0.1	6.90
Carrier length	B	0.1	10.50
Carrier depth	C	0.1	2.70
Sprocket hole	d	0.1	1.55
13" Reel outside diameter	D	2.0	330.00
7" Reel outside diameter	D	2.0	-
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	7.50
Punch hole pitch	P	0.1	8.00
Sprocket hole pitch	P ₀	0.1	4.00
Embossment center	P ₁	0.1	2.00
Overall tape thickness	T	0.1	0.30
Tape width	W	0.3	16.00

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

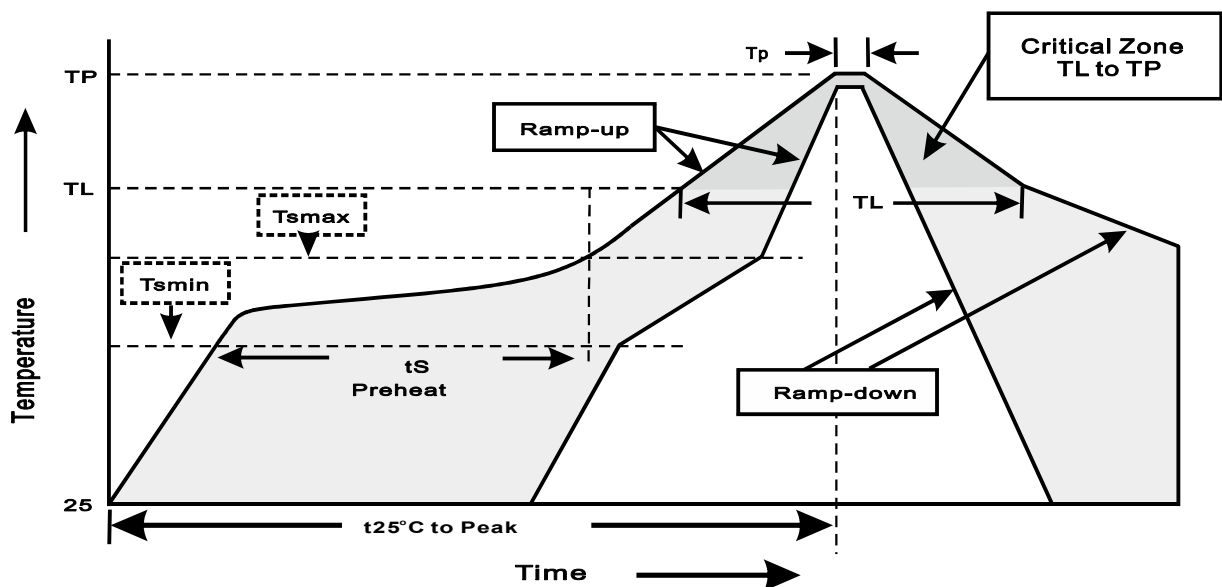
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Reel packing

PACKSGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	Box (pcs)	INNER BOX (m/m)	REEL DIA (m/m)	CARTON SIZE (m/m)	CARTON (pcs)
DKA-1 / TO-252	13"	2,500	4.0	5,000	335*335*38	330	350*350*225	25,000

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 _L to T _P)	<3°C/sec
Preheat -Temperature Min(T _{smmin}) -Temperature Max(T _{smmax}) -Time(min to max)(t _s)	150°C 200°C 60~120sec
T _{smmax} to T _L -Ramp-upRate	<3°C/sec
Time maintained above: -Temperature(T _L) -Time(t _L)	217°C 60~260sec
Peak Temperature(T _P)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(t _P)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes