

SKFM1040YW-D Thru SKFM10200YW-D

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SKFM1040YW-D Thru SKFM10200YW-D

10A Surface Mount Schottky Barrier Rectifiers 40 ~ 200V

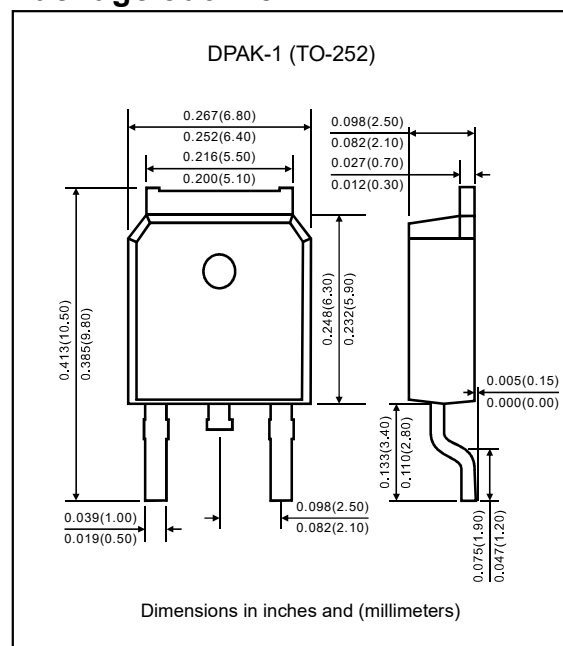
Features

- Construction utilizes void-free molded plastic technique.
- Low reverse leakage.
- High forward surge current capability.
- High temperature soldering guaranteed 260°C/10 seconds at terminals.
- Lead-free parts meet RoHS requirements.
- Suffix "-H" indicates Halogen free parts, ex. SKFM1040YW-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.
- Polarity : Indicated by cathode band.
- Mounting Position : Any.

Package outline



Maximum ratings and electrical characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

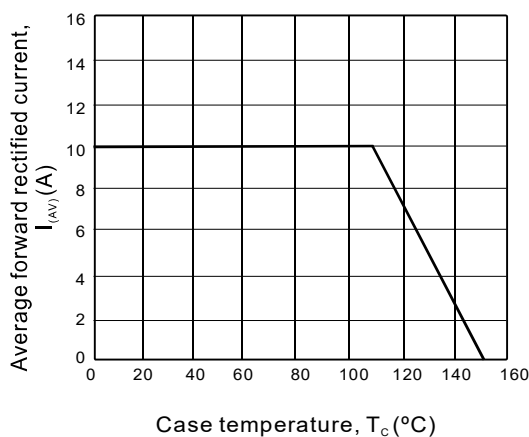
Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	Symbol	SKFM 1040YW-D	SKFM 1045YW-D	SKFM 1060YW-D	SKFM 10100YW-D	SKFM 10150YW-D	SKFM 10200YW-D	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	40	45	60	100	150	200	V
Maximum RMS voltage	V_{RMS}	28	31.5	42	70	105	140	V
Maximum DC blocking voltage	V_{DC}	40	45	60	100	150	200	V
Maximum average forward rectified current at $T_c=110^\circ\text{C}$	$I_{(AV)}$	10						A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150						A
Maximum instantaneous forward voltage at 10A	V_F	0.55	0.70	0.85	0.95			V
Maximum DC reverse current ($T_A=25^\circ\text{C}$) at rated DC blocking voltage ($T_A=125^\circ\text{C}$)	I_R	0.5 50			0.05 10			mA
Typical thermal resistance	$R_{\theta JC}$	1.5						$^\circ\text{C/W}$
Operating junction temperature range	T_J	-55 to +150						$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150						$^\circ\text{C}$

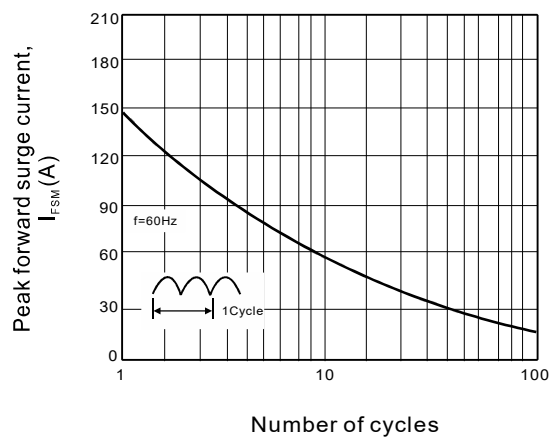
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Rating and characteristic curves

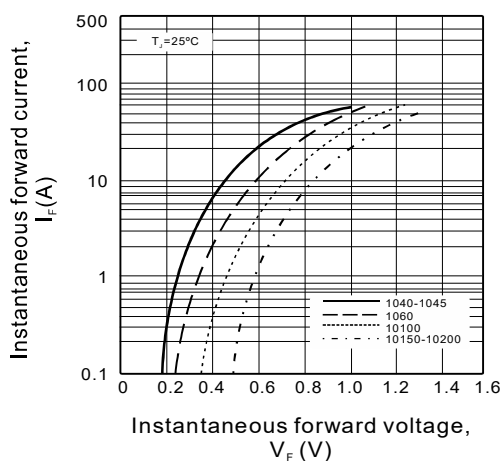
Derating curve output rectified current



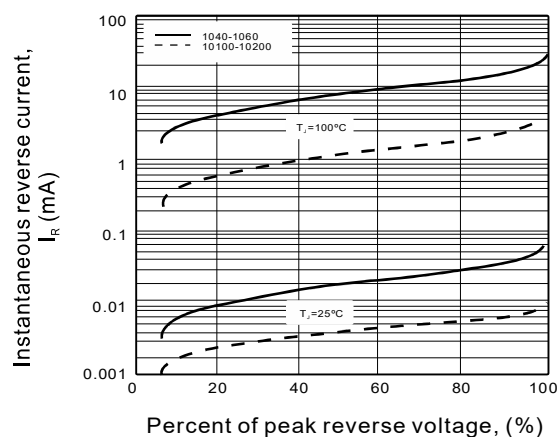
Maximum non-repetitive peak forward surge current per leg



Typical forward voltage characterist



Typical reverse leakage characteristics

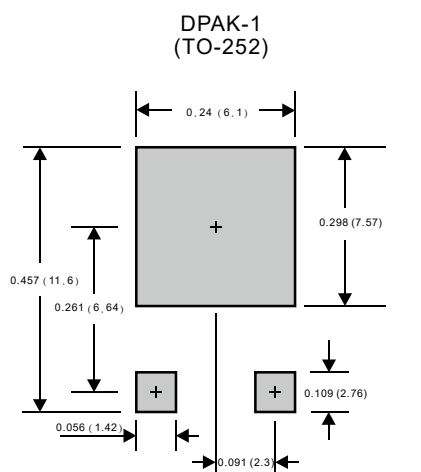


SKFM1040YW-D Thru SKFM10200YW-D**Pinning information**

Pin	Simplified outline	Symbol
Pin1, 3 Anode Pin2, 4 Cathode		

Marking

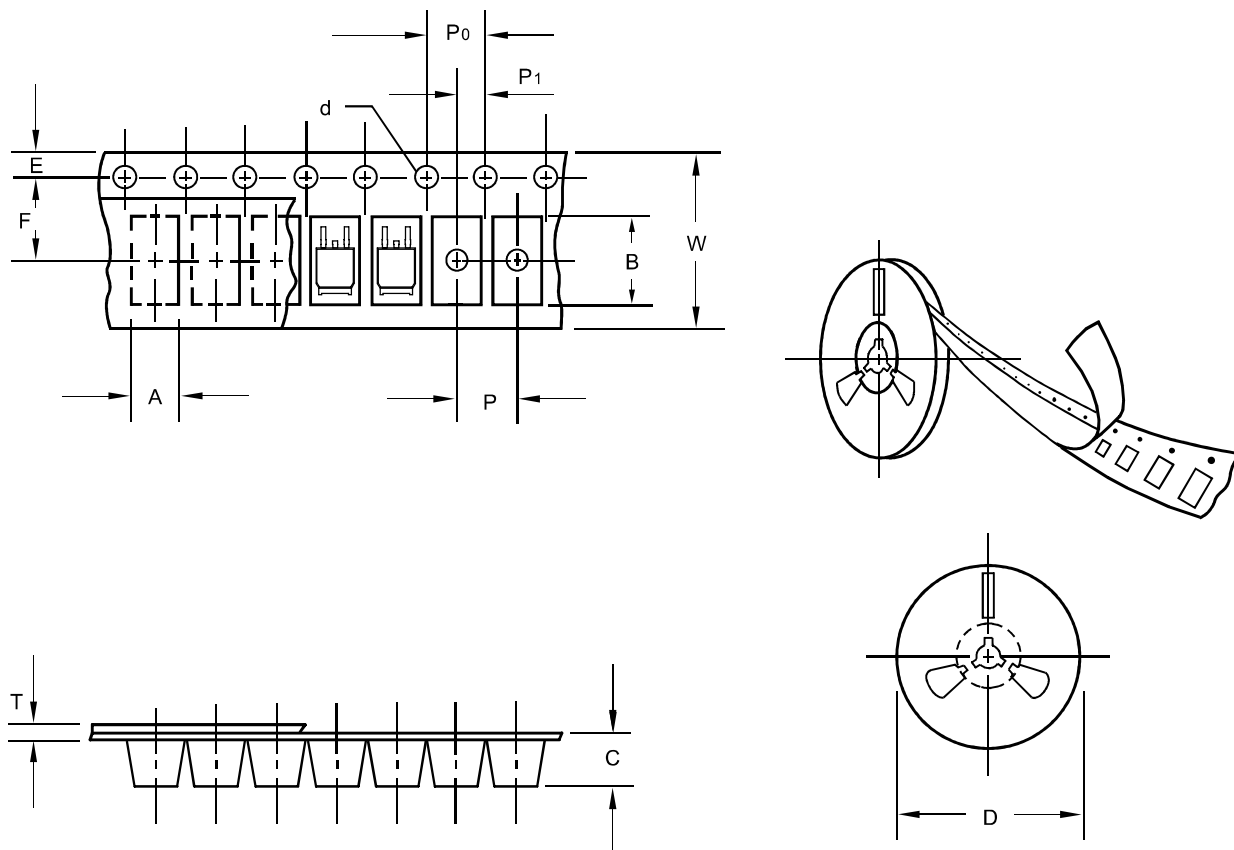
Type number	Marking code
SKFM1040YW-D	MBR1040YS
SKFM1045YW-D	MBR1045YS
SKFM1060YW-D	MBR1060YS
SKFM10100YW-D	MBR10100YS
SKFM10150YW-D	MBR10150YS
SKFM10200YW-D	MBR10200YS

Suggested solder pad layout

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.

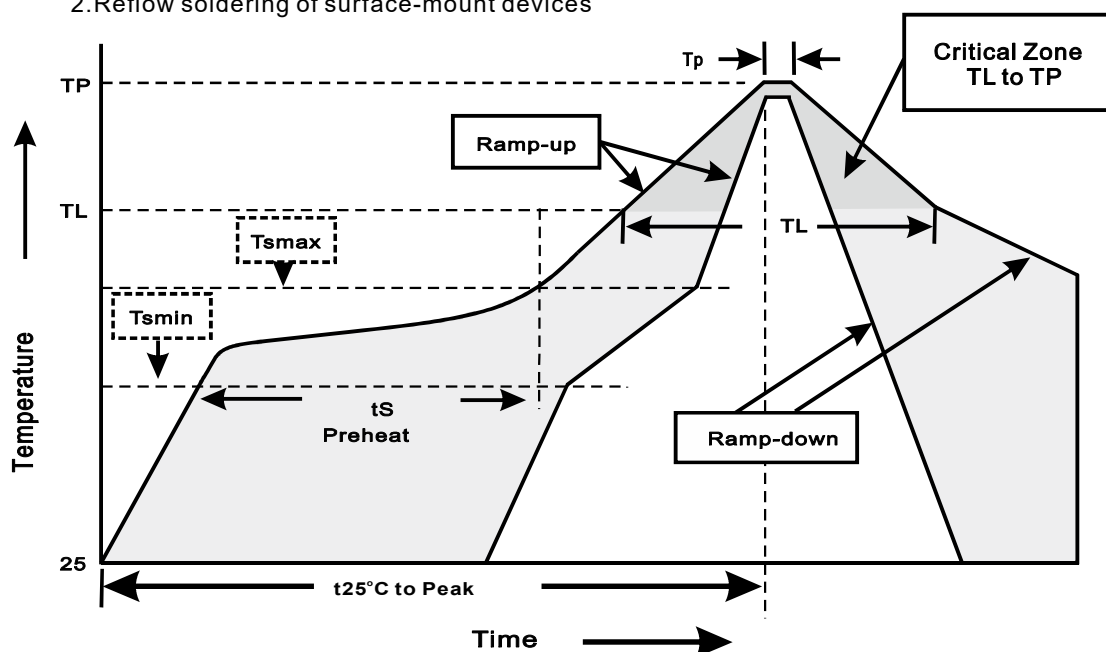
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Reel packing

Package	Reel size	Reel (pcs)	Box (pcs)	Inner Box (m/m)	Reel DIA (m/m)	Carton size (m/m)	Carton (pcs)
DDPAK-1 / TO-252	13"	2,500	5,000	340	330	360 x 360 x 360	40,000

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 _{smín}) -Temperature Max(T _{smáx}) -Time(min to max)(t _S)	150°C 200°C 60~120sec
T _{smáx} 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