

Formosa MS

FM40C40PTW-H Thru FM40C200PTW-H

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FM40C40PTW-H Thru FM40C200PTW-H

40A Power Schottky Barrier Rectifiers : 40V ~ 200V

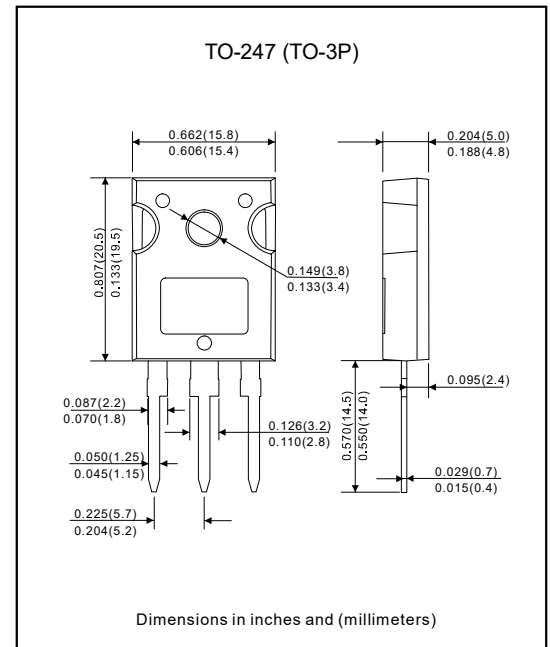
Features

- Construction utilizes void-free molded plastic technique.
- Low reverse leakage.
- High forward surge current capability.
- High temperature soldering guaranteed 250°C/10 seconds at terminals.
- Lead-free parts meet RoHS requirements.
- Halogen-free (IEC61249-2-21).

Mechanical data

- Epoxy:UL94-V0 rated flame retardant.
- Case : Molded plastic, TO-247 (TO-3P) .
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026.
- Mounting Position : Any.

Package outline



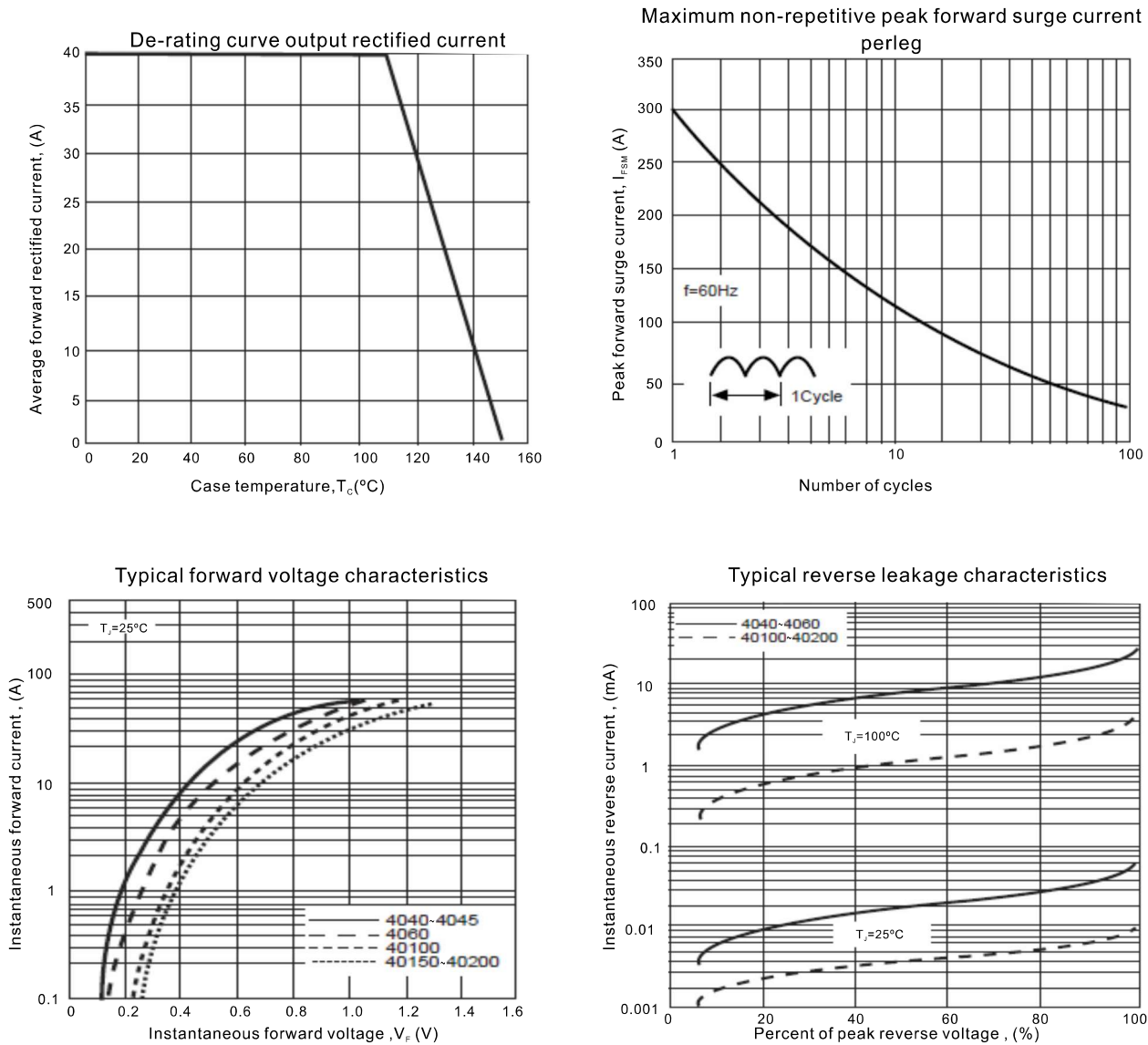
Maximum ratings and Electrical characteristics (At $T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	FM40C40 PTW-H	FM40C45 PTW-H	FM40C60 PTW-H	FM40C100 PTW-H	FM40C150 PTW-H	FM40C200 PTW-H	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 (Per device) at T _c =110°C (Per diode)	I _(AV)	40 20						A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	250						A
Maximum instantaneous forward voltage per diode at 20.0A	V _F	0.65		0.78	0.85	0.95		V
Maximum DC reverse current (T _A =25°C)	I _R	0.5			0.05			mA
at rated DC blocking voltage (T _A =100°C)		50			10			
Thermal resistance, junction to case	R _{θJC}	2.8						°C/W
Operating junction temperature	T _J	+150						°C
Storage temperature range	T _{STG}	-55 to +150						°C

Note: 1. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derated by 20%.

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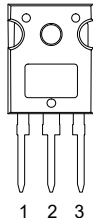
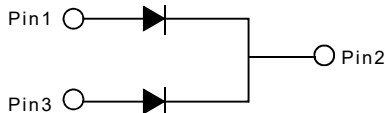
Rating and characteristic curves



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Pinning information

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

Marking

Type number	Marking code
FM40C40PTW-H	MBR4040PTS
FM40C45PTW-H	MBR4045PTS
FM40C60PTW-H	MBR4060PTS
FM40C100PTW-H	MBR40100PTS
FM40C150PTW-H	MBR40150PTS
FM40C200PTW-H	MBR40200PTS

Tube packing

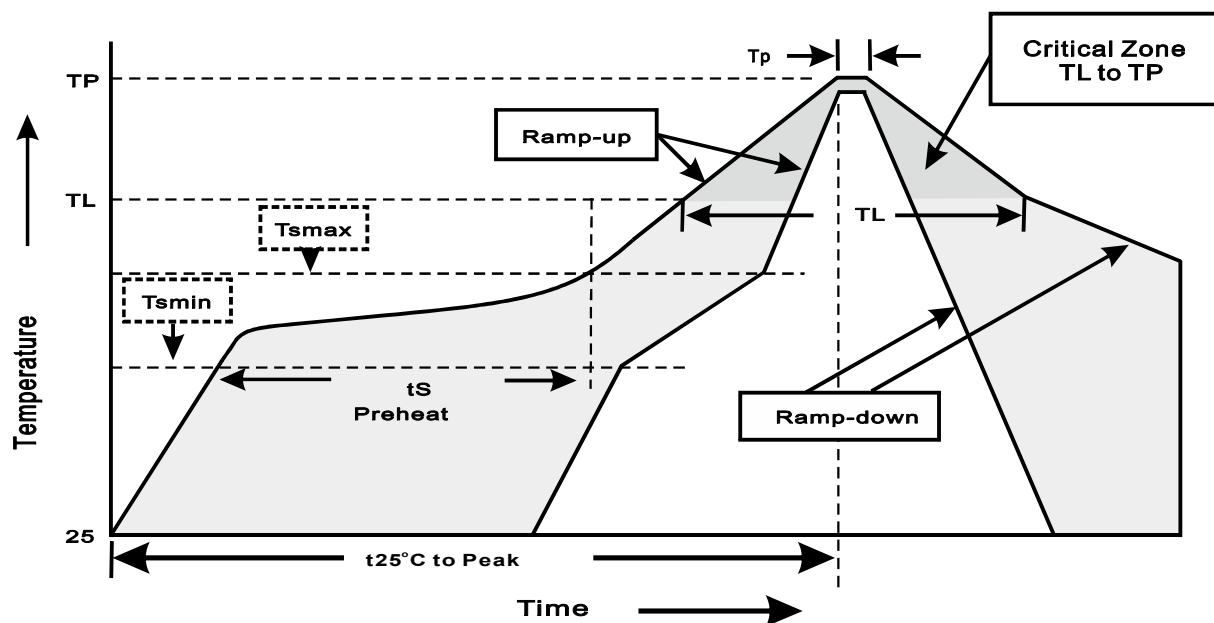
TYPE NUMBER	PACKAGE	TUBE (pcs)	TUBE SIZE (mm)
FM40C40PTW-H Thru FM40C200PTW-H	TO-247 (TO-3P)	30	510*45.5*7.8

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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 _{smin}) -Temperature Max(T _{smax}) -Time(min to max)(t _s)	150°C 200°C 60~120sec
T _{smax} 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	<3°C/sec
Time 25°C to Peak Temperature	<6minutes