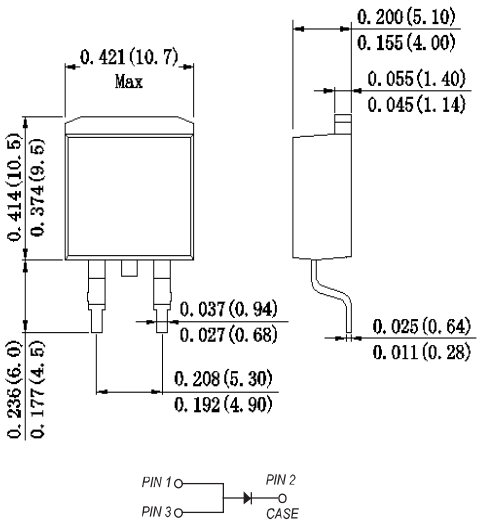
MBR3050Y

30.0A 50V Schottky Barrier Rectifiers

Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Construction utilizes void-free molded plastic technique
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed 260℃/10 seconds at terminals

TO-263



Dimensions in inches and (millimeters)

Mechanical Data

Case : Molded plastic body
Terminals : Solder plated, solderable per MIL-STD-750,Method 2026
Polarity : Polarity symbol marking on body
Mounting Position : Any

Maximum Ratings (Ta=25℃ unless otherwise specified)

PARAMETER	SYMBOLS	MBR3050Y	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	V
Maximum RMS voltage	V_{RMS}	35	V
Maximum DC blocking voltage	V_{DC}	50	V
Maximum average forward rectified current at Tc=110℃	$I_{(AV)}$	30.0	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	250.0	A
Typical thermal resistance	R_{qJC}	4.0	°C/W
Operating junction temperature range	T_J	-55 to +150	°C
Storage temperature range	T_{STG}	-55 to +150	°C

Electrical Characteristics (Ta=25℃ unless otherwise specified)

PARAMETER		SYMBOLS	TYPE	MAX	UNITS
Maximum instantaneous forward voltage per diode at 30.0A		V_F	0.56	0.63	V
Maximum DC reverse current at rated DC blocking voltage	T_A =25℃	I_R	50	200	u A
	T_A=100℃		2	20	mA

Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

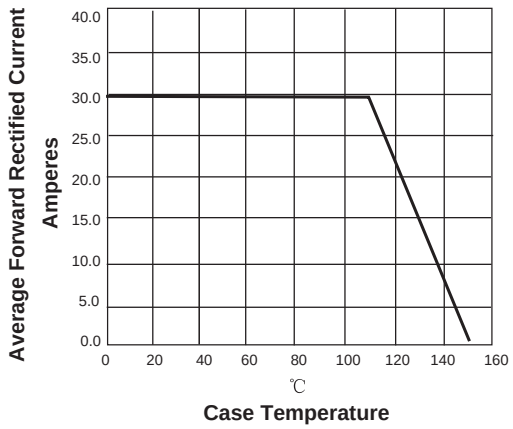


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PERLEG

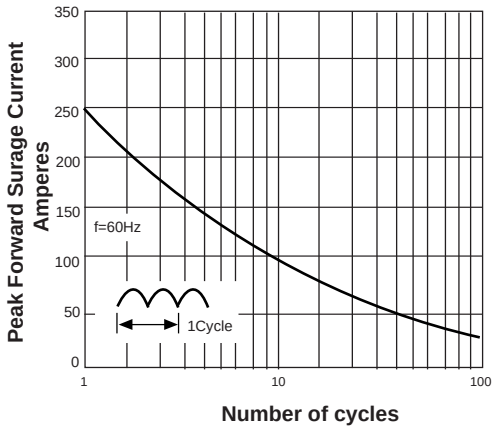


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

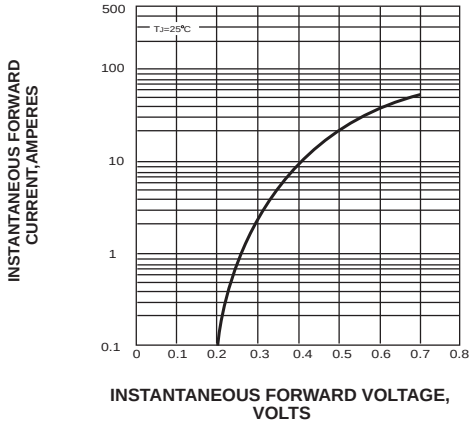
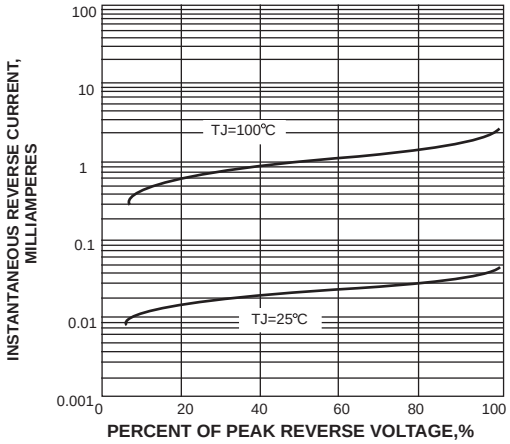
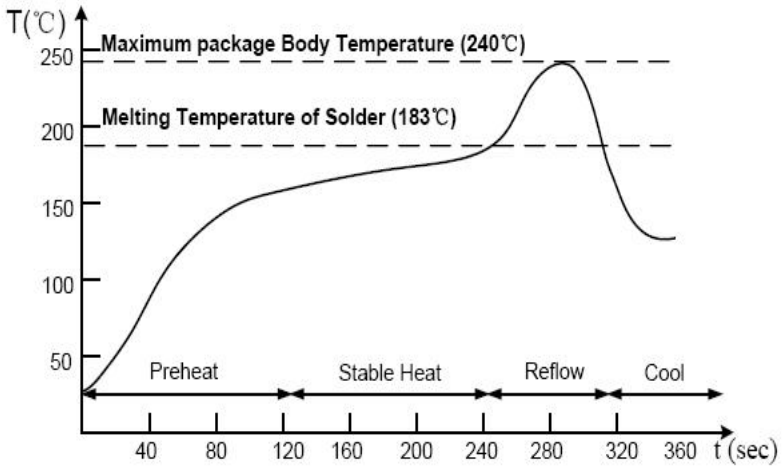


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



Suggested Soldering Temperature Profile



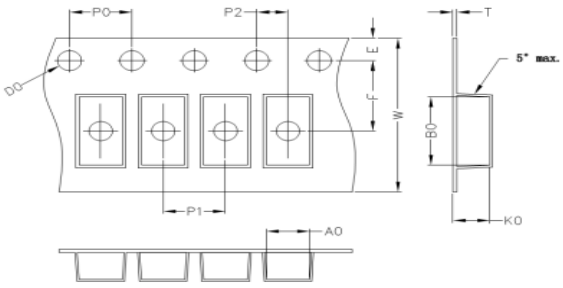
Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 265°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Package Information

- **Reel Package**

Carrier Dimension(mm)



A0	B0	K0	D0	E	F
10.5	15.55	4.90	1.50	1.75	11.5
P0	**P1**	**P2**	**T**	**W**	**Tolerance**
4.0	16.0	2.0	0.4	24	0.1

Package Specifications

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
TO-263	13'	330	0.8	340	0.8	360*360*360	6.4

- **Tube Package**

Package	Tube (mm)	Q'TY/Tube (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
TO - 263	525*31.9*6.4	0.05	545*150*45	1.0	575*245*170	5.0