

MBR1040CD THRU MBR10200CD

10.0A Surface Mount Schottky Barrier Rectifiers - 40V-200V

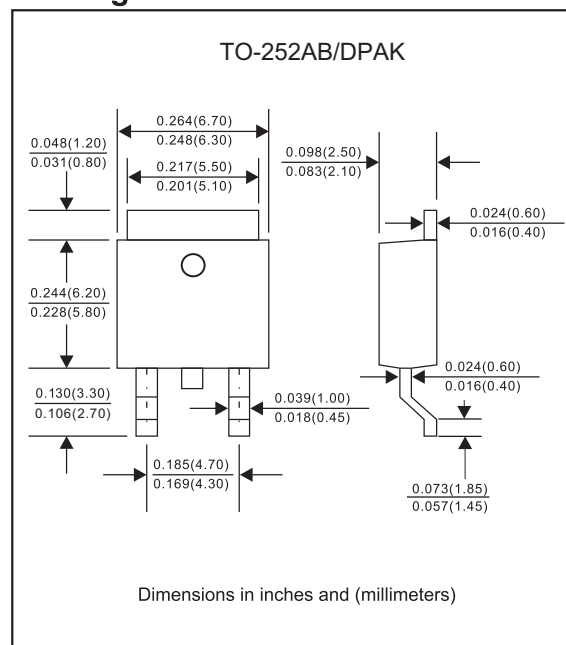
Features

- Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability.
- Guardring for overvoltage protection.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228
- Suffix "-H" indicates Halogen-free part, ex. MBR1040CD-H.

Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, TO-252AB/DPAK
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Mounting Position : Any
- Weight : Approximated 0.34 gram

Package outline



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

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	I_o			10.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I_{FSM}			100	A
Reverse current	$V_R = V_{RRM} T_J = 25^{\circ}\text{C}$	I_R			0.05	mA
	$V_R = V_{RRM} T_J = 125^{\circ}\text{C}$				10	
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		380		pF
Storage temperature		T_{STG}	-65		+175	$^{\circ}\text{C}$

SYMBOLS	V_{RRM}^{*1} (V)	V_{RMS}^{*2} (V)	V_R^{*3} (V)	V_F^{*4} (V)	V_F^{*5} (V)	Operating temperature $T_J, (^{\circ}\text{C})$
MBR1040CD	40	28	40	0.70	0.84	-55 to +150
MBR1045CD	45	31.5	45			
MBR1050CD	50	35	50	0.80	0.90	
MBR1060CD	60	42	60			
MBR1080CD	80	56	80	0.85	0.95	
MBR10100CD	100	70	100			
MBR10150CD	150	105	150	0.92	1.00	-55 to +175
MBR10200CD	200	140	200			

*1 Repetitive peak reverse voltage

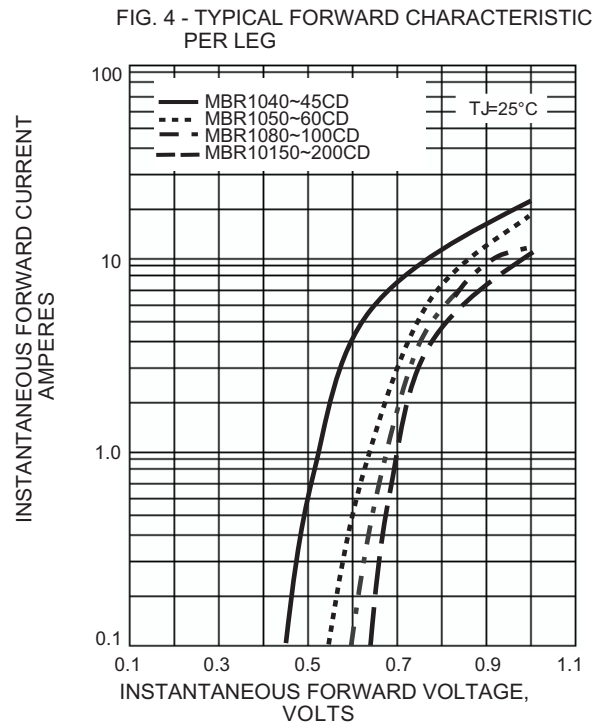
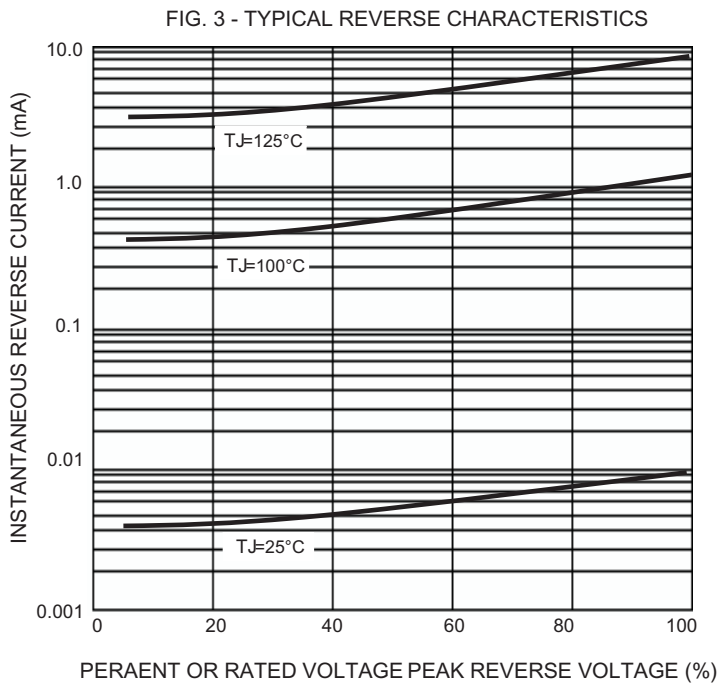
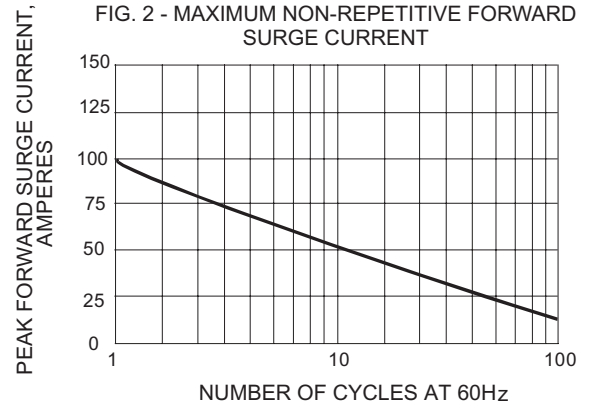
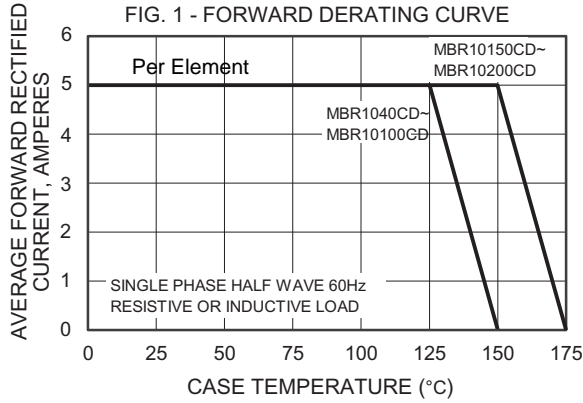
*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage
IF = 5.0A, 25°C

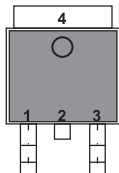
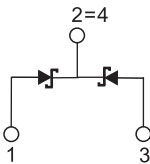
*5 Maximum of forward voltage
IF=10.0A, 25°C

Rating and characteristic curves (MBR1040CD THRU MBR10200CD)



MBR1040CD THRU MBR10200CD

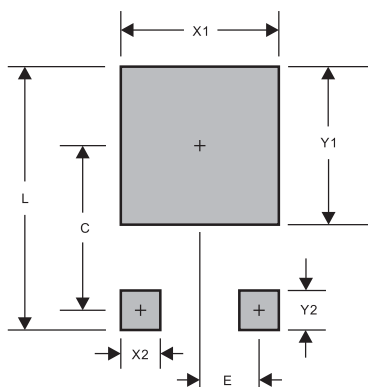
Pinning information

Pin	Simplified outline	Symbol
Pin1 anode Pin2=4 cathode Pin3 anode		

Marking

Type number	Marking code
MBR1040CD	SK1040
MBR1045CD	SK1045
MBR1050CD	SK1050
MBR1060CD	SK1060
MBR1080CD	SK1080
MBR10100CD	SK10100
MBR10150CD	SK10150
MBR10200CD	SK10200

Suggested solder pad layout



PACKAGE	DPAK
C	0.272(6.90)
E	0.091(2.30)
L	0.457(11.60)
X1	0.276(7.00)
X2	0.059(1.50)
Y1	0.276(7.00)
Y2	0.098(2.50)

Dimensions in inches and (millimeters)

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