

MBR2040CD THRU MBR20200CD

20.0A Surface Mount Schottky Barrier Rectifiers - 40V-200V

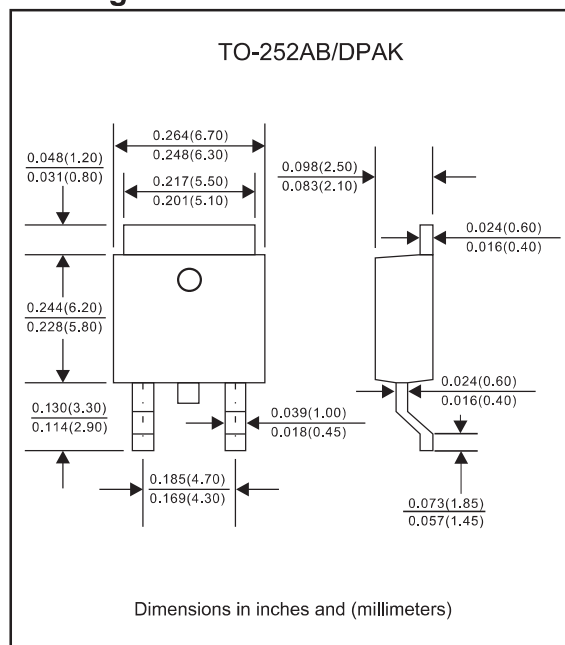
Features

- 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.MBR2040CD-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			20.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I_{FSM}			120	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		560		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 $T_J, (^{\circ}\text{C})$
MBR2040CD	40	28	40	0.70	0.84	-55 to +150
MBR2045CD	45	31.5	45			
MBR2050CD	50	35	50	0.80	0.90	
MBR2060CD	60	42	60			
MBR2080CD	80	56	80	0.85	0.95	
MBR20100CD	100	70	100			
MBR20150CD	150	105	150	0.92	1.00	-55 to +175
MBR20200CD	200	140	200			

*1 Repetitive peak reverse voltage

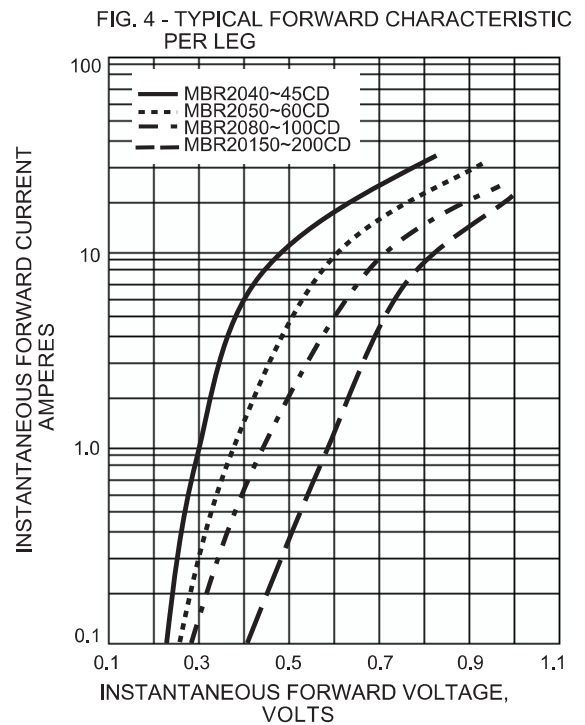
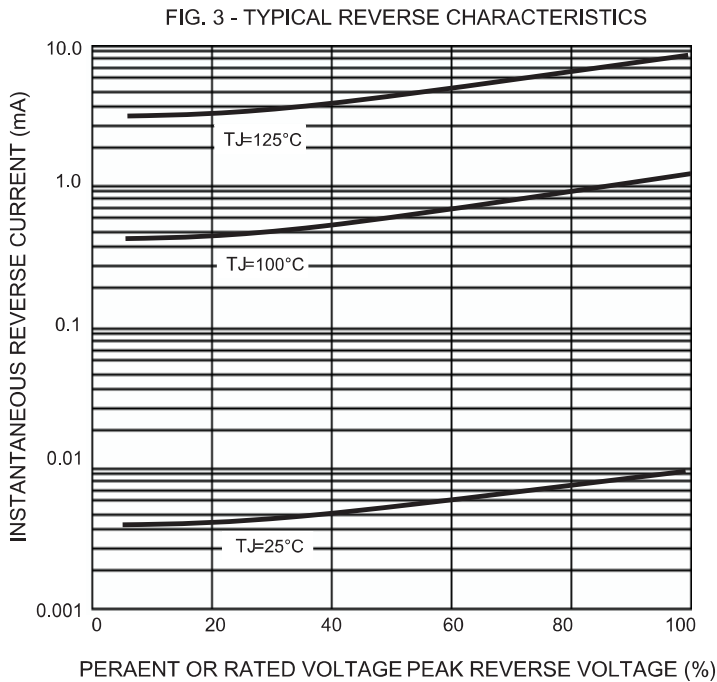
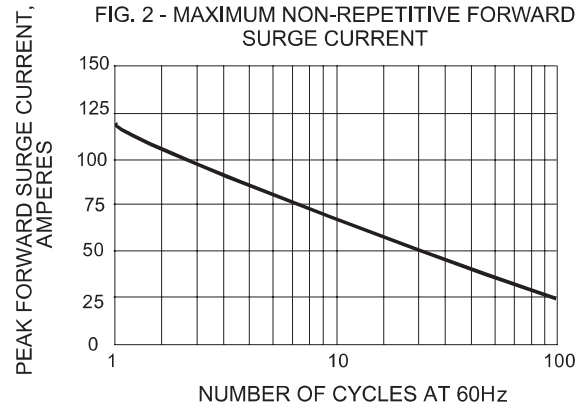
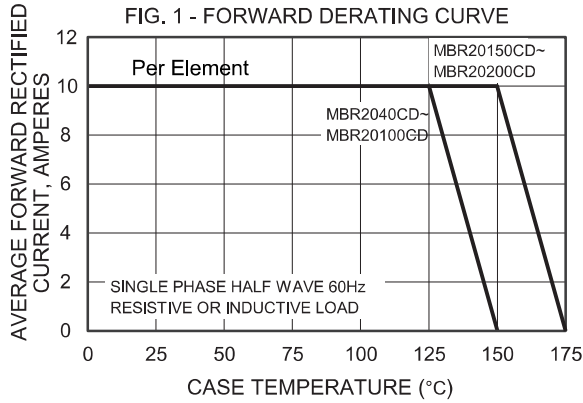
*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage
 $I_F = 10.0\text{A}, 25^{\circ}\text{C}$

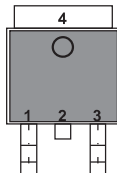
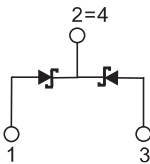
*5 Maximum of forward voltage
 $I_F = 20.0\text{A}, 25^{\circ}\text{C}$

Rating and characteristic curves (MBR2040CD THRU MBR20200CD)



MBR2040CD THRU MBR20200CD

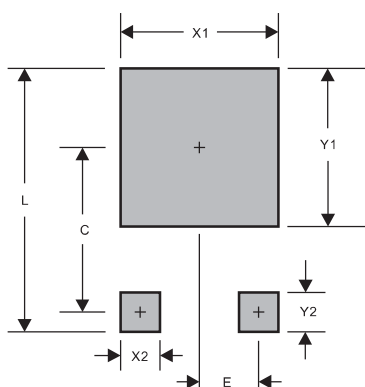
Pinning information

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

Marking

Type number	Marking code
MBR2040CD	SK2040
MBR2045CD	SK2045
MBR2050CD	SK2050
MBR2060CD	SK2060
MBR2080CD	SK2080
MBR20100CD	SK20100
MBR20150CD	SK20150
MBR20200CD	SK20200

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)