

20.0A SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS 40V - 200V

DESCRIPTION:



The ALPMBRS2040CD Thru ALPMBRS20200CD is 20.0A Surface Mount Schottky Barrier Rectifiers 40V – 200V used on Power Supply output rectification.

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 drops.
- High surge capability.
- Guarding 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
- Compliant to Halogen-free

APPLICATIONS:

- Power Supply – Output Rectification
- Power Management
- Instrumentation

MECHANICAL CHARACTERISTICS

- Case: Molded plastic, TO-252AB/DPAK
- Epoxy: UL 94V-0 rate flame retardant.
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026.
- Mounting Position: Any.

TYPICAL DEVICE CHARACTERISTICS
MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	ALPMBR2040CD	ALPMBR2045CD	ALPMBR2050CD	ALPMBR2060CD	ALPMBR2080CD	ALPMBR20100CD	ALPMBR20150CD	ALPMBR20200CD	UNITS
Repetitive peak reverse voltage	V_{RRM}	40	45	50	60	80	100	150	200	Volts
RMS voltage	V_{RMS}	28	31.5	35	42	56	70	105	140	Volts
Continuous reverse voltage	V_R	40	45	50	60	80	100	150	200	Volts
Maximum forward voltage $I_F = 10.0\text{A}$, 25°C	V_F	0.70	0.70	0.80	0.80	0.85	0.85	0.92	0.92	Volts
Maximum of forward voltage $I_F = 20.0\text{A}$, 25°C		0.84	0.84	0.90	0.90	0.95	0.95	1.00	1.00	Volts
Operating temperature	T_J	-55 to +150						-55 to +175		$^\circ\text{C}$

PARAMETER	CONDITIONS.	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig. 1	I_O			20.0	Amps
Forward surge current	8.3ms single half sine-wave (JEDEC method)	I_{FSM}			120	Amps
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	$f = 1\text{ MHz}$ and applied 4V DC reverse voltage	C_J		560		pF
Storage temperature range		T_{STG}	-65		+175	$^\circ\text{C}$

TYPICAL DEVICE CHARACTERISTICS CURVES ($T_A = 25^\circ\text{C}$ unless otherwise noted)

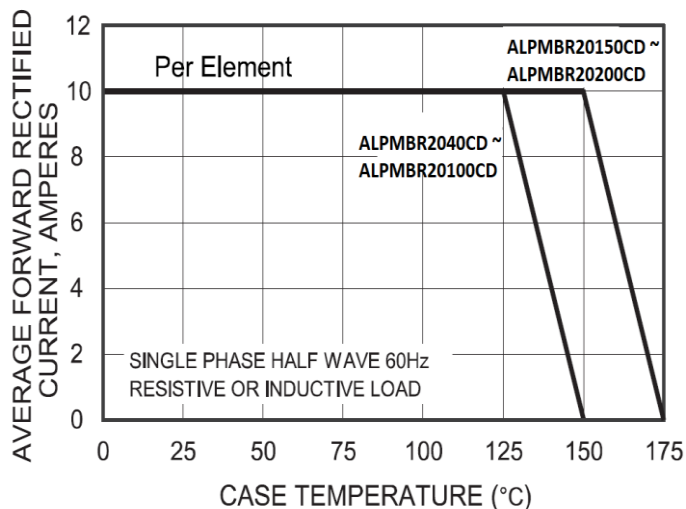


Fig.1 FORWARD DERATING CURVE

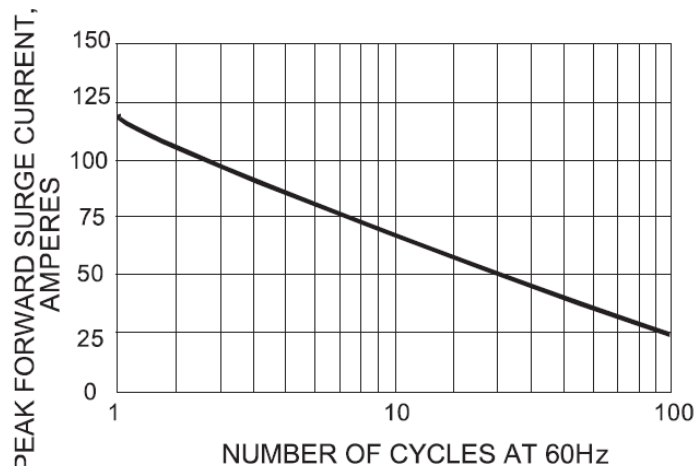


Fig.2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

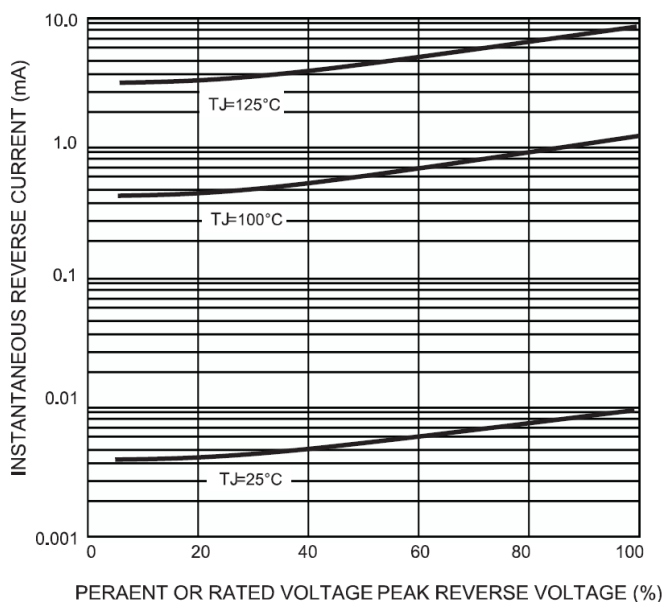


Fig.3 TYPICAL REVERSE CHARACTERISTICS

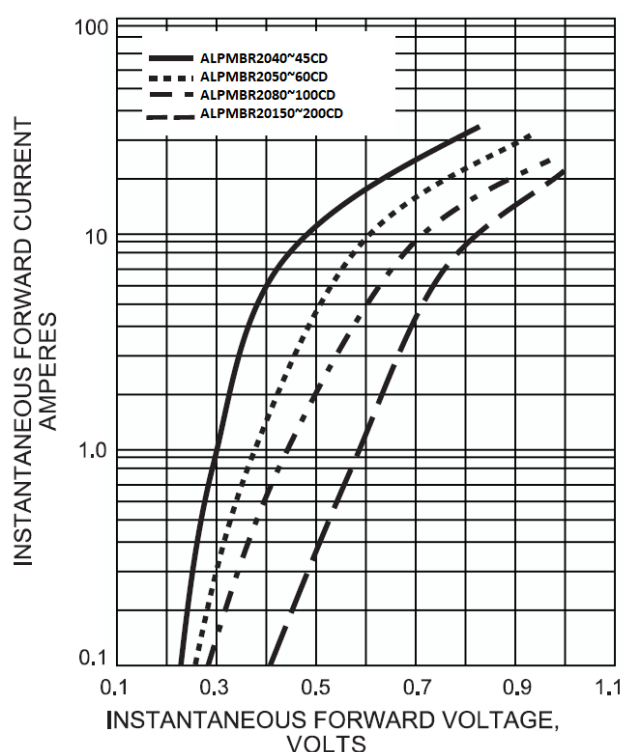
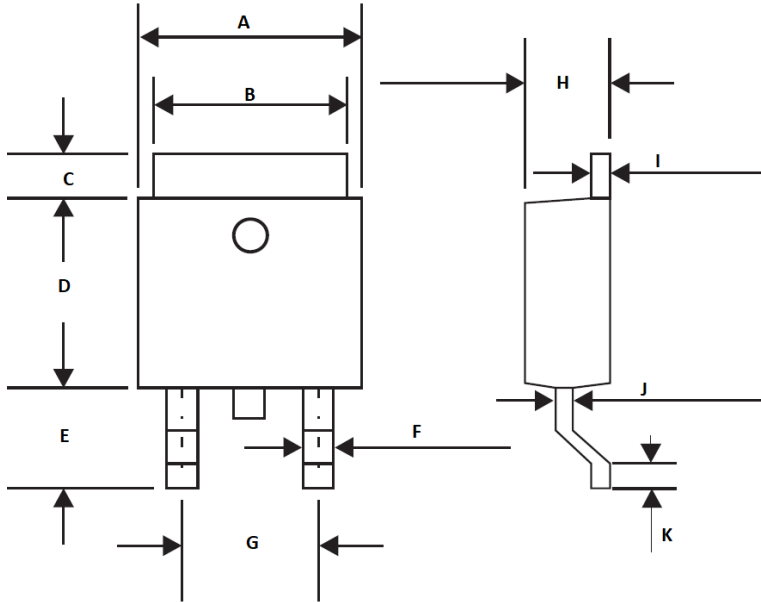


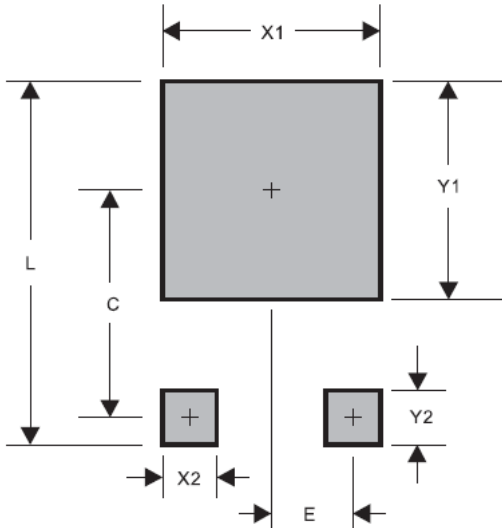
Fig.4 TYPICAL FORWARD CHARACTERISTICS PER LEG

PACKAGE INFORMATION
TO-252AB/DPAK

OUTLINE DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.30	6.70	0.248	0.264
B	5.10	5.50	0.201	0.217
C	0.80	1.20	0.031	0.048
D	5.80	6.20	0.228	0.244
E	2.90	3.30	0.114	0.130
F	0.45	1.00	0.018	0.039
G	4.30	4.70	0.169	0.185
H	2.10	2.50	0.083	0.098
I	0.40	0.60	0.016	0.024
J	0.40	0.60	0.016	0.024
K	1.45	1.85	0.057	0.073

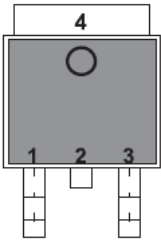
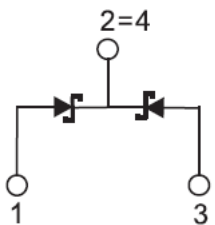
NOTES

1. Dimensions are exclusive of mold flash and metal burrs.


PAD LAYOUT DIMENSIONS

PACKAGE	MILLIMETERS	INCHES
	Typ.	Typ.
C	6.90	0.272
E	2.30	0.091
L	11.60	0.457
X1	7.00	0.276
X2	1.50	0.059
Y1	7.00	0.276
Y2	2.50	0.098

PINNING INFORMATION

PIN	SIMPLIFIED OUTLINE	SYMBOL
Pin1 Anode Pin2=4 Cathode Pin3 Anode		

CUSTOMER NOTE:

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