



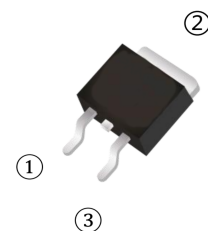
Schottky Diodes
Reverse Voltage-40v
Forward current-20A

Features

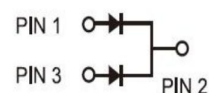
Schottky chip
Ideal for surface mounted applications
Low forward voltage drop, Low power loss, high efficiency
Plastic Case Material has UL Flammability

Mechanical Data

Package: TO-252
Terminals: Tin Plated leads, solderable per
Mil-STD-750 Method 2026
Polarity: As marked
Molding compound meets UL 94 V-0 flammability rating,
ROHS-compliant



TO-252



Maximum Ratings (Ta=25℃ Unless otherwise)

Type Number	SYMBOL	MBR2040DS	Umit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	40	V
Maximum RMS Voltage	V_{RMS}	28	V
Maximum DC Blocking Voltage	V_{DC}	40	V
Maximum Average Forward Rectified Current at TL = 100℃	$I_{O(AV)}$	20.0	A
Peak Forward Surge Current 8.3ms Single half-sine-wave superimposed on rated load(JEDEC Method) on rated	IFSM	130.0	A
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃		260.0	A
Current squared time @1ms≤t≤8.3ms Tj=25℃, Rating of per diode	I^2t	53.95	A ² S
Maximum Forward Voltage at 10.0A DC	V_{FM}	0.65	V
Maximum Reverse Current TA = 25℃	IR	0.1	mA
at Rated DC Blocking Voltage TA = 125℃		20	mA
Typical Thermal Resistance Between junction to board	R _{QJB}	50	℃/W
	R _{QJC}	2.0	
Operating Junction Temperature Range	T _J	—55to+150	℃
Storage Temperature Range	T _{STG}	—55to+150	℃



FIG. 1 MAXIMUM AVERAGE FORWARD CURRENT DERATING

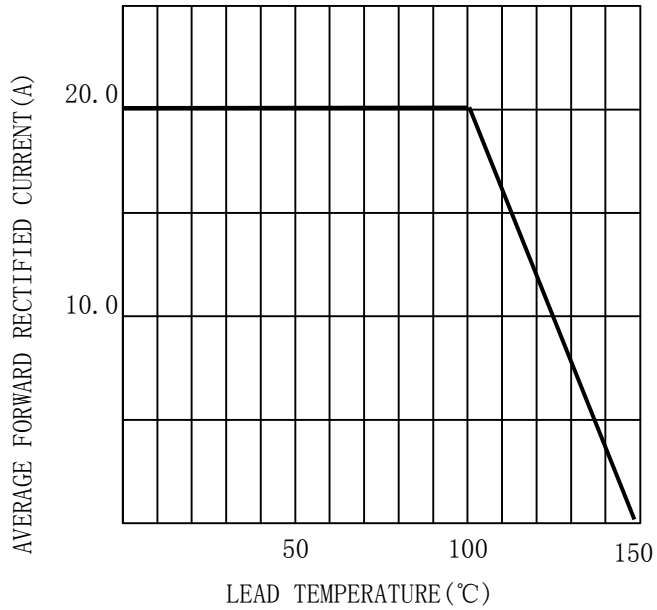


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

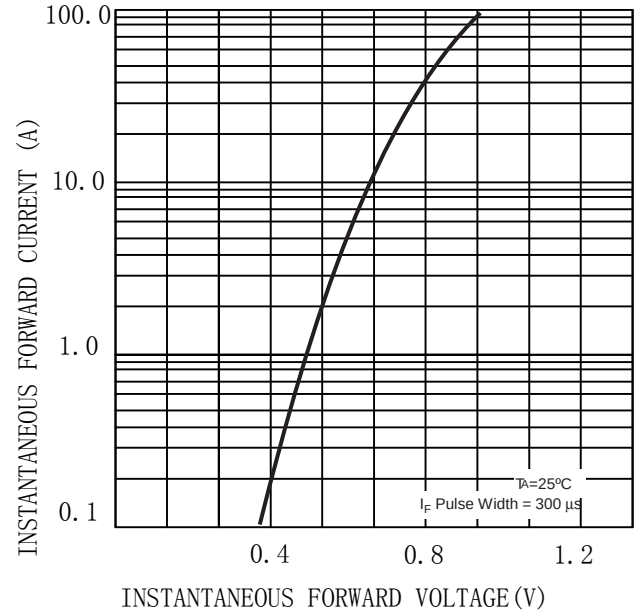


FIG. 3 MAXIMUM NON-REPEITIVE SURGE CURRENT

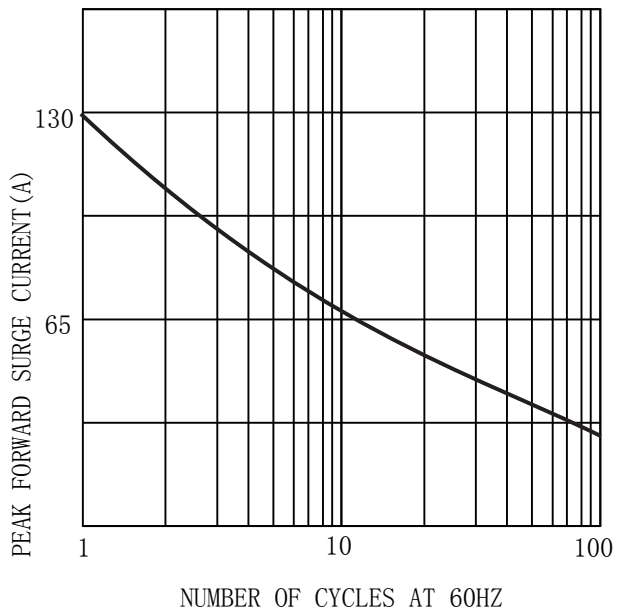
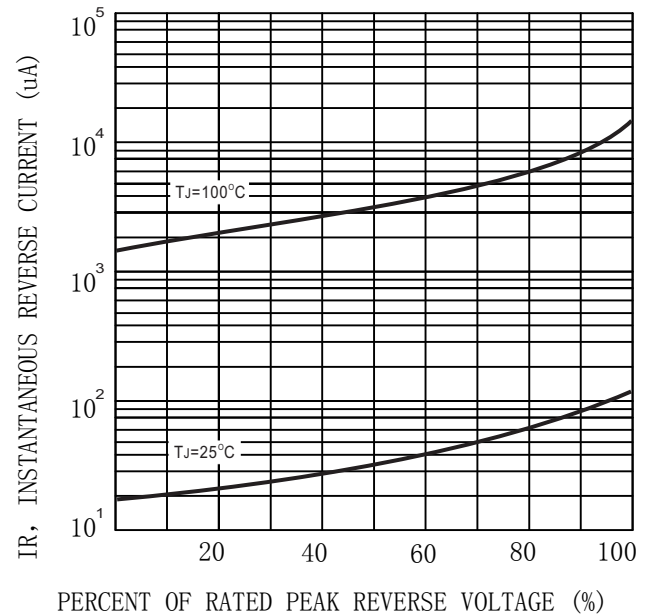


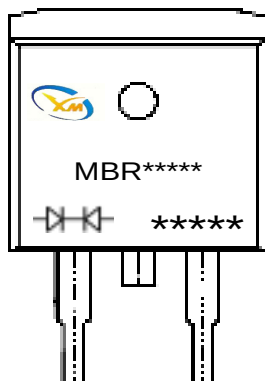
FIG. 4 TYPICAL REVERSE CHARACTERISTICS (per element)





MARKING INFORMATION

TO-252/DS



⏏ = Polar line

Logo = Logo

**** = Date Code Marking

MBR**** = Marking Code

Date Code Marking

<u>A</u>	<u>001</u>
Year/month code	Order serial number

Example: January 2023 order number is 001, period A001

January 2025 Order number is 001, period $\dot{A}$ 001

Period code year distinction					
2023/2024	2025/2026	2027/2028	2029/2030	2031/2032	remark
no	first	second	tertius	fourth	Dot above corresponding character

eriod code month code mapping table												
month	1	2	3	4	5	6	7	8	9	10	11	12
Single year (Example 2023)	A	B	C	D	E	F	G	H	I	J	K	L
Biennial (example 2024)	M	N	O	P	Q	R	S	T	U	V	W	X



Package Outline Dimensions millimeters

TO-252DS					
DIM	INCHES		MM		NOTE
	min	max	min	max	
A	0.25	0.27	6.3	6.9	
B	0.23	0.25	5.8	6.4	
C	0.08	0.10	2.1	2.5	
D	0.35	0.43	9.0	11.0	
E	0.21	0.22	5.3	5.5	
a	0.08	0.10	2.1	2.5	
b	0.06	0.06	1.4	1.6	
c	0.02	0.03	0.6	0.8	
d	0.02	0.02	0.4	0.6	
e	0.02	0.02	0.4	0.6	

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