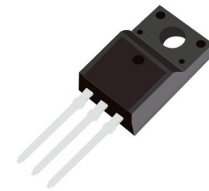




Schottky Diodes
Reverse Voltage-300v
Forward current-10A

Features

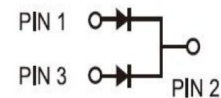
Schottky chip
Ideal for surface mounted applications
Low forward voltage drop, Low power loss, high efficiency
Plastic Case Material has UL Flammability



TO-220F

Mechanical Data

Package: TO-220F
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



Maximum Ratings (Ta=25℃ Unless otherwise)

Type Number	SYMBOL	MBR10300FCT	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	300	V
Maximum RMS Voltage	V_{RMS}	210	V
Maximum DC Blocking Voltage	V_{DC}	300	V
Maximum Average Forward Rectified Current at $T_L = 100^\circ\text{C}$	$I_{Q(AV)}$	10.0	A
Peak Forward Surge Current 8.3ms Single half-sine-wave superimposed on rated load(JEDEC Method) on rated	IFSM	120.0	A
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, $T_J=25^\circ\text{C}$		240.0	A
Current squared time @1ms≤t≤8.3ms $T_J=25^\circ\text{C}$, Rating of per diode	I^2t	49.8	A ² S
Maximum Forward Voltage at 10.0A DC	V_{FM}	0.92	V
Maximum Reverse Current $T_A = 25^\circ\text{C}$	IR	0.05	mA
at Rated DC Blocking Voltage $T_A = 125^\circ\text{C}$		20	
Typical Thermal Resistance Between junction to board	R_{QJB}	75	°C/W
	R_{QJC}	4.0	
Operating Junction Temperature Range	T_J	—55to+150	°C
Storage Temperature Range	T_{STG}	—55to+150	°C



FIG. 1 MAXIMUM AVERAGE FORWARD CURRENT DERATING

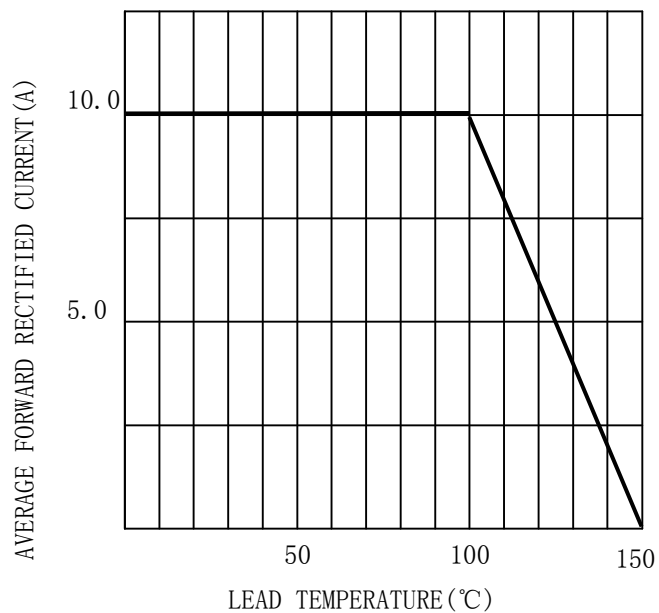


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

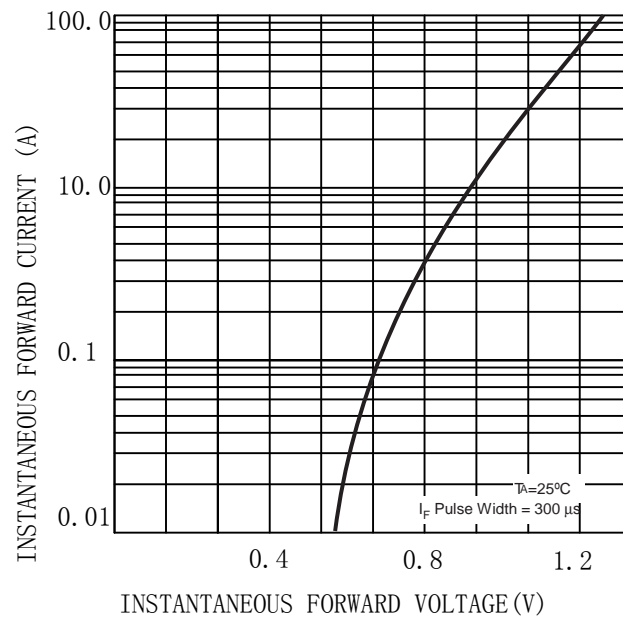


FIG. 3 MAXIMUM NON-REPEITIVE SURGE CURRENT

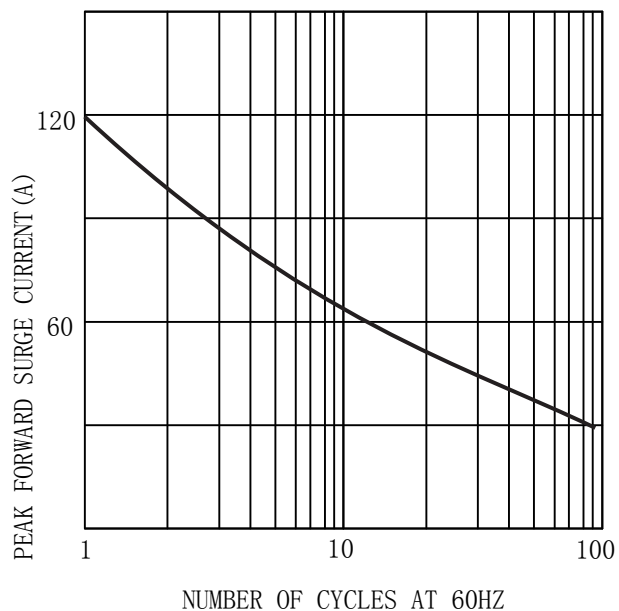
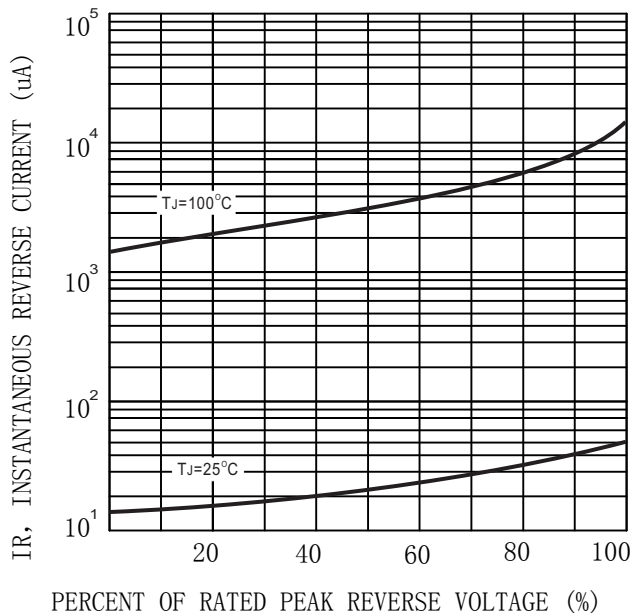


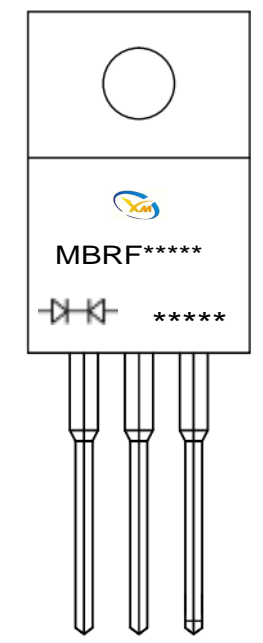
FIG. 4 TYPICAL REVERSE CHARACTERISTICS (per element)







MARKING INFORMATION

TO-220F/FCT



 = Polar line

 = Logo

***** = Date Code Marking

MBRF***** = 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 [•]A001

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-220F/FCT					
DIM	INCHES		MM		NOTE
	min	max	min	max	
A	—	0.41	—	10.30	
B	0.61	0.64	15.60	16.20	
C	0.18	0.19	4.50	4.90	
D	0.26	0.28	6.60	7.00	
E	0.50	0.53	12.80	13.40	
a	0.10	0.10	2.45	2.65	
b	—	0.16	—	4.10	
c	0.03	0.04	0.72	0.92	
d	0.02	0.02	0.40	0.60	
e	—	0.15	—	3.80	Ø
f	0.09	0.11	2.40	2.80	

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