



Ultra-Fast Recovery Diodes

Reverse Voltage- 400V

Forward current-20A

Features

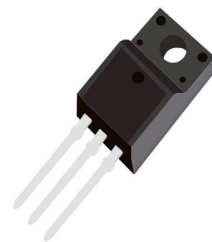
Ultra-Fast Recoveryt chip

Fast reverse recovery time

Ldeal for surface mounted applications

Low power loss, high efficiency

Plastic Case Material has UL Flammability



TO-220F

Mechanical Data

Package: TO-220F

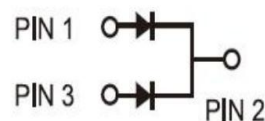
Terminals: Tin Plated leads, solderable per

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	MURF2040CTS	Umit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	400	V
Maximum RMS Voltage	V_{RMS}	280	V
Maximum DC Blocking Voltage	V_{DC}	400	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	150.0	A
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃		300.0	A
Current squared time @1ms≤t8.3≤ms Tj=25℃, Rating of per diode	I^2t	93.37	A ² S
Maximum Forward Voltage at10.0A DC	V_{FM}	1.5	V
Maximum Reverse Current TA = 25℃	IR	5	uA
at Rated DC Blocking Voltage TA = 100℃		200	
Reverse Recovery Time	Trr	35	ns
Typical Thermal Resistance Between junction and ambien Between Junction and Case	R_{QJa}	75	℃/W
	R_{QJc}	4.0	
Operating Junction Temperature Range	T _J	—55to+150	℃
Storage Temperature Range	T _{STG}	—55to+150	℃



FIG. 1 MAXIMUM AVERAGE FORWARD CURRENT DERATING

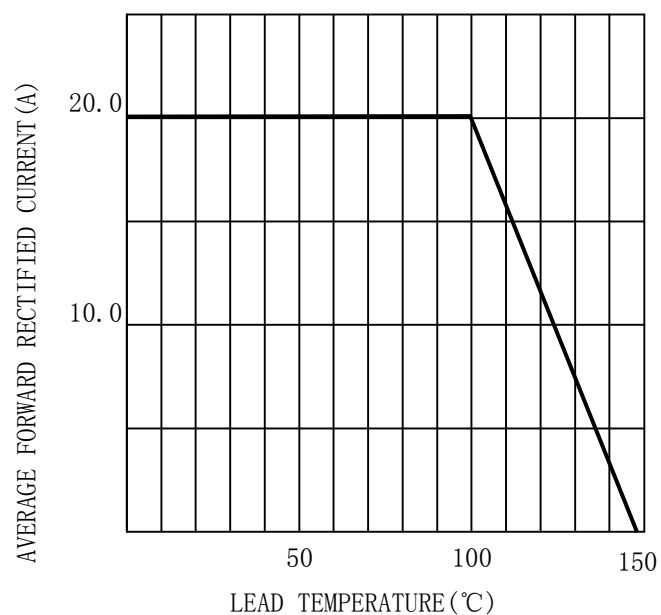


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

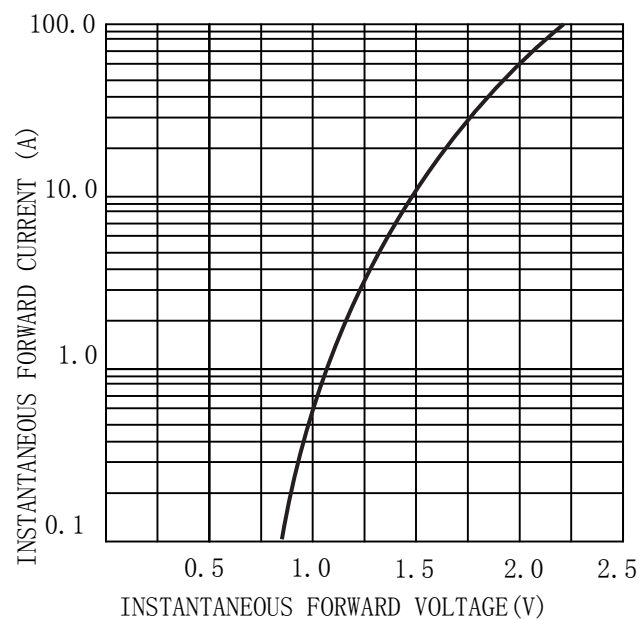


FIG. 3 MAXIMUM NON-REPEITIVE SURGE CURRENT

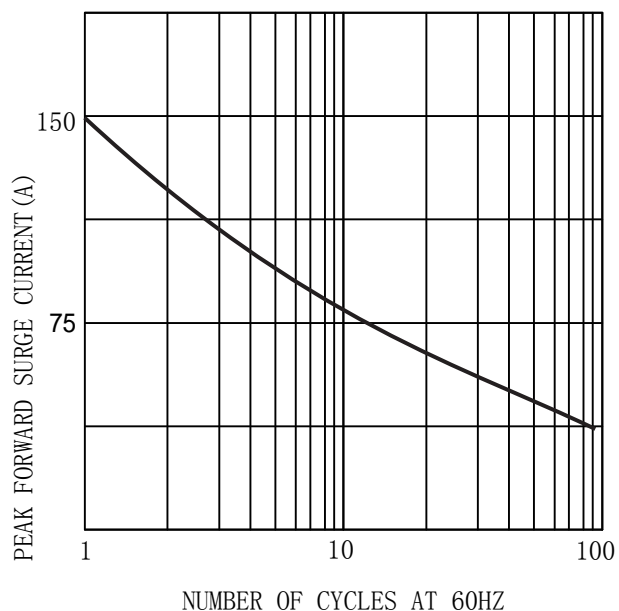
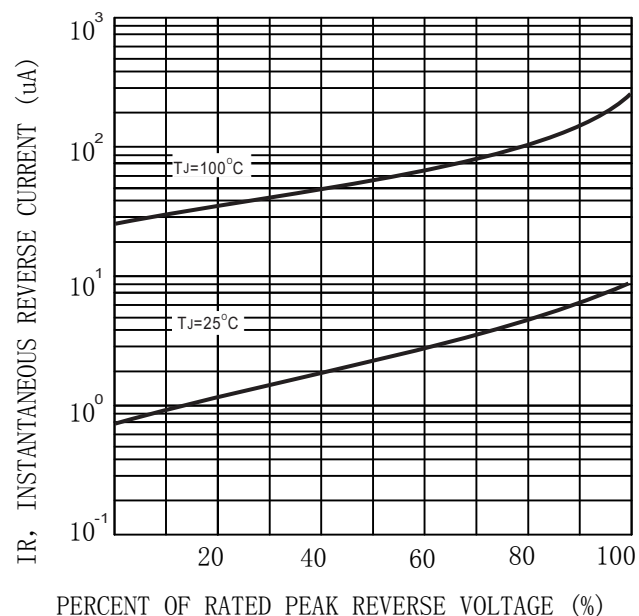


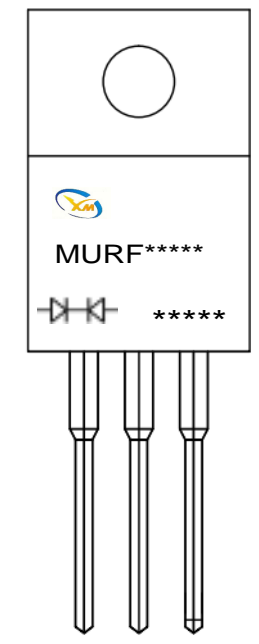
FIG. 4 TYPICAL REVERSE CHARACTERISTICS(per element)





MARKING INFORMATION

TO-220F/CTS



= Polar line

= Logo

***** = Date Code Marking

MURF***** = 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

T0-220F/CTS					
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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