

Ultra-Fast Recovery Diodes 8A FRED



Features

- Adopt FRED chip
- Low forward Voltage drop
- Fast reverse recovery time
- High frequency operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability

Typical Applications

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

Mechanical Data

Package: ITO-220AC

Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant

Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102

Polarity: As marked

Maximum Ratings (T_j=25 Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MURS860FL
Device marking code			MURS860FL
Repetitive Peak Reverse Voltage	V _{RRM}	V	600
Average Rectified Output Current @60Hz sine wave, R-load, T _c (FIG.1)	I _o	A	8
Surge(Non-repetitive) Forward Current @60Hz half sine-wave, 1 cycle, T _j =25	I _{FSM}	A	70
Current Squared Time @1ms t 8.3ms T _j =25	I ² t	A ² s	20.3
Storage Temperature	T _{stg}		-55 ~ +175
Junction Temperature	T _j		-55 ~ +175
Typical Junction capacitance @4V,1MHz	C _j	pF	42
Mounting torque @recommend torque 5kg cm	Tor	kg cm	8



MURS860FL

Electrical Characteristics

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Instantaneous forward voltage drop per diode	V_{FM}	V	$I_{FM}=8.0A @ T_j=25$	-	2.7	3.6
			$I_{FM}=8.0A @ T_j=150$	-	1.8	2.3
DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	uA	$V_{RM}=V_{RRM}$ $T_j=25$	-	-	10
	I_{RRM2}		$V_{RM}=V_{RRM}$ $T_j=150$	-	-	100
Reverse Recovery Time	T_{rr}	ns	$I_F=0.5A$ $I_{RM}=1A$ $I_{RR}=0.25A$ $T_j=25$	-	14	25
			$T_j=25$		39	
			$T_j=125$		50	
Peak recovery current	I_{RRM}	A	$T_j=25$	-	1.7	-
			$T_j=125$	-	4.55	-
Reverse recovery charge	Q_{rr}	nC	$T_j=25$	-	34	-
			$T_j=125$	-	113	-

Thermal Characteristics $T_j=25$ Unless otherwise specified

PARAMETER		SYMBOL	UNIT	MURS860FL
Thermal Resistance	Between junction and case	R_{J-C}	/W	4.0
Thermal Resistance	Between junction and Air	R_{J-A}	/W	50

Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MURS860FL	Approximate 1.6	50	1000	5000	Tube

Characteristics (Typical)

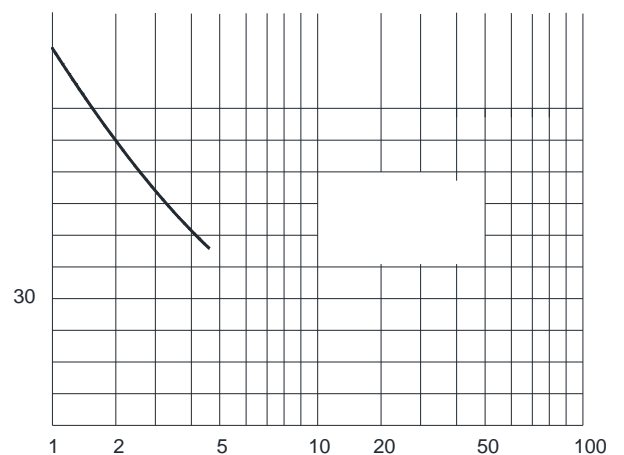
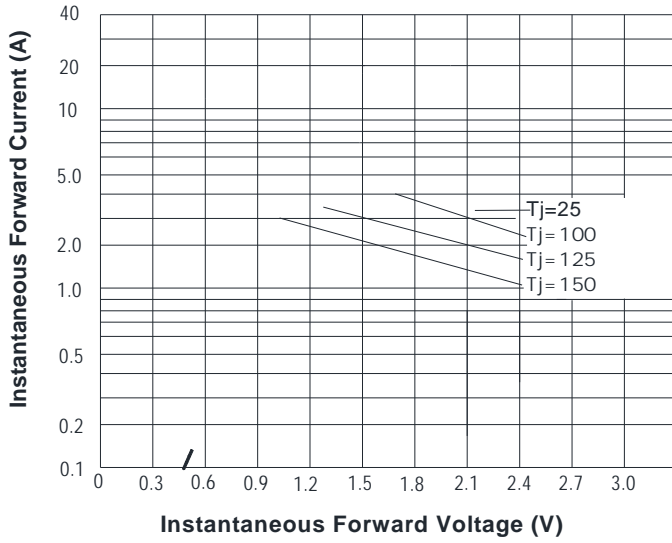
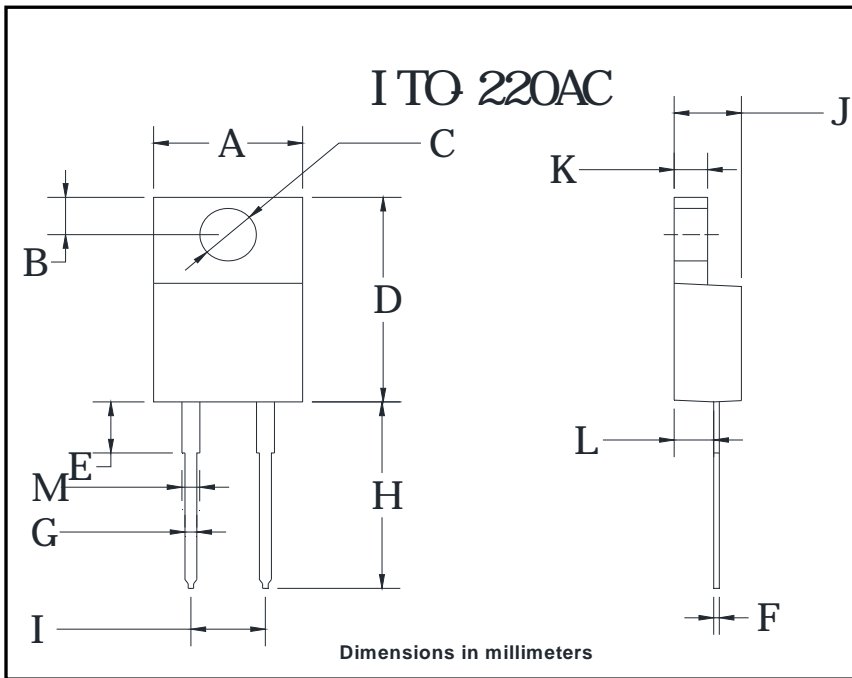


FIG3: Forward Voltage



Outline Dimensions



ITO-220AC		
Dim	Min	Max
A	9.8	10.2
B	2.25	2.75
C	2.95	3.45
D	14.75	15.25
E	3.5	4.1
F	0.45	0.75
G	0.45	0.75
H	13.35	14.15
I	4.97	5.23
J	4.3	4.8
K	2.5	2.74
L	2.58	2.82
M	1.03	1.43



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